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Los Angeles

Language Ideologies, Conservation Ideologies:

Communication and Collaboration at a Cameroonian Wildlife Sanctuary

A dissertation submitted in partial satisfaction of the requirements

for the degree Doctor of Philosophy

in Anthropology

by

Rosalie Beth Edmonds

2019

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ABSTRACT OF THE DISSERTATION

Language Ideologies, Conservation Ideologies:

Communication and Collaboration at a Cameroonian Wildlife Sanctuary

by

Rosalie Beth Edmonds

Doctor of Philosophy in Anthropology

University of California, Los Angeles, 2019

Professor Paul V Kroskrity, Chair

This dissertation investigates the politics of multilingual communication at a renowned wildlife sanctuary through the analysis of how Cameroonian animal keepers, French NGO workers, and foreign volunteers work together to rehabilitate chimpanzees. For over twenty-five years, the Limbe Wildlife Centre (LWC) has been caring for hundreds of animals confiscated from the illegal wildlife trade in addition to serving as a popular tourist destination. Due to both Cameroon's inherent linguistic diversity and the transnational nature of wildlife conservation, this work involves three main *lingua francas*: English, French, and Cameroonian Pidgin English ('Pidgin'), alongside several other African and European languages. Despite ideological, cultural, and linguistic differences, as well as the historical, cultural, and (neo)colonial baggage they entail, the LWC maintains an international reputation for success, and every day, its staff are able to carry out the physical and communicative work involved in feeding animals, cleaning cages,

maintaining enclosures, and rehabilitating animals.

Drawing from fieldwork in Limbe between 2017 and 2018, this dissertation utilizes approaches in linguistic and sociocultural anthropology as well as conversation analysis to explore the collaboration and communication involved in the rehabilitation of a group of young chimpanzees, and how this work is accomplished in the midst of great inequalities and ideological contestation. Combining ethnography with in-depth analysis of video-recorded workplace interactions, this dissertation examines language ideologies in action, as participants' beliefs about both communication and conservation intersect in, are reflected by, and contested through the multilingual, multimodal communicative practices involved in creating knowledge, making decisions, and caring for chimpanzees. Through the analysis of how animal keepers, NGO managers, and foreign volunteers work together in trainings, meetings, and interactions with animals, this dissertation argues that the conservation of Cameroon's biological diversity requires a negotiation of its linguistic diversity, as different linguistic abilities and ideologies serve to magnify racial, neocolonial, and epistemic divides. By clarifying the pragmatic and ideological processes at play at the LWC, this dissertation offers a new perspective on how global environmental problems are negotiated in transnational, multilingual, multipolitical settings.

The dissertation of Rosalie Beth Edmonds is approved.

Hannah C Appel

Marjorie Harness Goodwin

John Heritage

Paul V Kroskrity, Committee Chair

University of California, Los Angeles

2019

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List of Transcription Symbols

[overlapping speech

= latching speech

- speech is cut off

(0.0) duration of pause

:: lengthening

word emphasis

CAPS increased volume

. falling intonation

, rising then falling intonation

? rising intonation

$ smile voice

>word< rapid speech

<word> slower speech

(…) unintelligible speech

[word] phonetic transcription of the previous word

((word)) transcriber’s description

ACKNOWLEDGMENTS

This dissertation is the product of thousands of conversations – conversations that occurred across Cameroon and the United States, in offices, classrooms, living rooms, chimpanzee enclosures, bars, and boukarous. I am tremendously thankful for everyone who has shared their time, expertise, insights, and hospitality with me throughout this journey.

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VITA

EDUCATION

2015	M.A., Anthropology, University of California Los Angeles. Thesis: *The Multilingual Zoo: Animals, Languages, and Symbolic Capital in Yaoundé, Cameroon.* Professor Norma Mendoza-Denton, Chair.
2009	B.A. with highest honors, Anthropology and Linguistics, University of Michigan. Thesis: *"They'll be doing away with those buffalo:" Language, Culture, and History in a Salish-Pend d'Oreille Narrative.*

HONORS & AWARDS

2018	UCLA Dissertation Year Fellowship
2017	Wenner-Gren Foundation Dissertation Fieldwork Grant
2016	National Science Foundation Doctoral Dissertation Research Improvement Grant
	UCLA International Institute Fieldwork Fellowship
2015	UCLA Graduate Research Mentorship
	UCLA Graduate Summer Research Mentorship
2014	Honorable Mention, NSF Graduate Research Fellowship Program
	UCLA Graduate Summer Research Mentorship

PUBLICATIONS AND PRESENTATIONS

2018 "Students as Language Experts: Collaboration and Correction in a Bilingual Cameroonian Classroom." International Journal of Bilingual Education and Bilingualism. DOI: 10.1080/13670050.2018.1456513

'Problems of Communication': Institutional English and Decision-Making in Wildlife Conservation. Panel presentation "The Politics of Language in NGOs: Communicative and Ideological Practices" at the American Anthropological Association Annual Meeting. San Jose, CA. 17 November.

2017 Multilingual, Multinational, Multispecies: The Politics of Communication at a Cameroonian Wildlife Sanctuary. Panel presentation "Beyond the Human, Beyond the Subfield: Integrating Linguistic and Environmental Anthropology" at the American Anthropological Association Annual Meeting. Washington D.C. 30 November.

2016 Students as Language Experts: Collaboration and Correction in a Bilingual Cameroonian Classroom. Panel presentation "Expertise and Evaluation: Engaging Language Ideologies" at the American Anthropological Association Annual Meeting. Minneapolis, Minnesota. 19 November.

The Role of Language Ideologies in Environmental Work in Cameroon. Panel presentation "Institutionally Speaking" at the University of Wisconsin Center for

Culture, History, and the Environment Graduate Symposium. Madison, Wisconsin. 5 March.

2015 The Multilingual Zoo (Yaoundé, Cameroon). Presentation at the Georgetown University Roundtable on Linguistic Diversity and Superdiversity. Washington D.C. 13 March.

TEACHING EXPERIENCE

Teaching Fellow, UCLA Department of Anthropology

Language and Identity	Summer 2018
Language Development and Socialization	Spring 2018
Human-Nonhuman Communication	Winter 2017
Language in Culture	Fall 2017

Teaching Assistant/Associate, UCLA Department of Anthropology

Field Methods in Cultural Anthropology	Summer 2016
Culture and Communication	Fall 2014, Fall 2015, Fall 2016
Language in Culture	Winter 2015

RESEARCH AND SELECTED WORK EXPERIENCE

Limbe, Cameroon

Ethnographic and linguistic research at the Limbe Wildlife Centre. 2017-2018

UCLA, Research Assistant to Prof. Norma Mendoza-Denton

Project development and data management for L.A. Speaks (perceptual dialectology of Los Angeles county). 2015-2016

Yaoundé, Cameroon

Ethnographic and linguistic research at Mvog-Betsi Zoo-Botanical Gardens. 2014

U.S. Peace Corps, Cameroon

English Education Volunteer 2010-2012

MEMBERSHIPS AND SERVICE

American Anthropological Association, Member 2014-present

UCLA Center for Language, Interaction, and Culture Graduate Student Association

Conference Chair	2015-2016
Editor, *Crossroads Journal*	2014-2016
Head of Registration Committee	2013-2014

CHAPTER ONE
Introduction

On a sunny, humid morning in May of 2017, the Limbe Wildlife Centre's staff arrived and began their morning routine. They filtered through the tall green gates of the sanctuary in small groups, shaking hands and exchanging greetings in Pidgin, English, and French before taking a seat on low wooden benches, or perching on the handful of cement stairs leading up to the LWC's meeting hall. There, they waited for a bell to ring, announcing the start of the morning staff meeting.

As usual, a half dozen European volunteers arrived in a pack, having walked over together from their nearby lodging. Unlike staff, who normally wore dress casual polos or button-down shirts when arriving to work, volunteers were already in their dirty work clothes – heavy duty hiking pants, sweat-stained t-shirts, and knee-high rubber work boots.

As the volunteers arrived, Wilson,[1] an experienced animal keeper in his 50s, walked up to greet Sara, a volunteer and aspiring primatologist from France. Sara had arrived in Limbe only a couple of weeks ago, and would spend the next two months helping monitor the social rehabilitation of a group of young chimpanzees.

"Another day," Wilson greeted Sara, shaking her hand. Sara frowned.

"Analade?" She repeated, confused.

"A-noth-er day," Wilson said, more slowly. Sara looked to the other French volunteers standing nearby, and one of them translated Wilson's greeting into French.

---

[1] While many of the names I use throughout the dissertation are pseudonyms, I use participants' actual names in the case that they have requested I do so.

"Oh! Another day!" Sara announced in English, finally having understood. Everyone laughed. *"J'ai pensé que c'était le Pidgin,"* she said to the French group. I thought he was speaking Pidgin.

In Cameroon, one of the most biologically and linguistically diverse countries in the world, logging, unsustainable forms of agriculture, and wildlife trafficking are leading to the loss of some of Africa's oldest rainforest and the extinction of numerous threatened species. For over twenty years, the Limbe Wildlife Centre (LWC) has rescued, cared for, and reintroduced hundreds of animals back into the wild, while also serving as a popular tourist destination. The daily work involved in caring for the LWC's 250 animals requires close collaboration between Cameroonian animal keepers and government officials, French NGO workers, and foreign volunteers. Each of these groups bring with them to the sanctuary their own ideas about animals, environmental conservation, and what it means to do good work.

Each of these groups also bring with them different linguistic repertoires, different language ideologies, and different norms for communication. Staff use some of Cameroon's 250 indigenous languages alongside English, French, and Cameroonian Pidgin English, while international volunteers and visitors bring other languages and varieties to the already fraught work of wildlife conservation. These multilingual, cross-cultural interactions occur under time-sensitive and often dangerous conditions, as, for example, a French-speaking volunteer like Sara assists a senior animal keeper like Wilson in the care of aggressive and unpredictable chimpanzees. In these circumstances, misunderstandings have the potential to reinforce power imbalances and negative stereotypes. In the worst case, misunderstandings have the potential to cause physical harm to both humans and the animals that they care for. However, these misunderstandings may also be humorous, creating opportunities for teasing, joking, and play.

In light of these ideological, cultural, and linguistic differences, and the historical, cultural, and (neo)colonial baggage they entail – not to mention difficult and unpredictable weather conditions, and a consistent shortage of equipment and financial resources – it often struck me as somewhat miraculous that anything at the LWC gets done at all. However, every day at the sanctuary, people feed hundreds of animals, clean cages, maintain enclosures, and provide animals with physical and social rehabilitation. Additionally, each year, the LWC trains nearly one hundred foreign volunteers in care and monitoring techniques, hosts 50,000 tourists, and conducts dozens of conservation education programs in nearby schools. Not only is the sanctuary able to accomplish all of these activities, but it is widely regarded as accomplishing them *well* – the LWC maintains a very positive international reputation, is certified through the Pan-African Sanctuary Alliance (PASA), and its education programs are used as models by other conservation efforts across Cameroon and elsewhere in Africa.

Despite the longevity of its programs, international reputation, and numerous accomplishments, the staff and volunteers of the LWC carry out their work in the midst of deep-seated inequalities – racialized inequalities where the labor of black workers is treated as menial while white novices are treated as experts; colonial inequalities where French citizens decide for Cameroonian citizens how they should care for animals and manage Cameroon's natural resources; and neocolonial, transnational inequalities where NGOs and their representatives have the power to intervene and make decisions in state affairs.

In light of these issues, this dissertation asks *how* does collaboration take place, despite all of the linguistic, cultural, and ideological contestation and inequality that exist within the Limbe Wildlife Centre? I answer this question through an examination of the daily work practices involved in rehabilitating a group of young chimpanzees – a lengthy, high-stakes process which

exemplifies many of the contradictions and complexities in relation to collaboration, communication, knowledge, and expertise through which this institution operates. In answering this question, I place environmental anthropology in conversation with linguistic anthropology by using ethnographically embedded conversation analysis to examine the politics of environmental conservation. Ultimately, this dissertation argues that the conservation of Cameroon's biological diversity requires a negotiation of its linguistic diversity, as different linguistic abilities and ideologies frequently serve to magnify racial, neocolonial, and epistemic divides.

Environmental Conservation in 'Bilingual' Cameroon

The Republic of Cameroon, located in Central Africa, is often referred to as 'Africa in Miniature' because of its great ecological, cultural, and linguistic diversity. Ethnologue identifies more than 250 distinct indigenous languages within Cameroon, originating from four distinct language families (Lewis et. al. n.d.). Due to its colonial history, French and English are both official languages, although they are used predominantly in separate regions of the country. In addition to its linguistic diversity, Cameroon contains every type of biome found on the African continent, from the desert and Sahel in the north, to rainforests in the south, to Mount Cameroon, the tallest peak in West-Central Africa. Cameroon is home to over 900 species of birds and 300 species of mammals, including chimpanzees, gorillas, and several critically endangered monkeys such as the Preuss monkey.

Similar to many biodiversity hotspots around the world, Cameroon is facing rapid environmental changes stemming from the large-scale repercussions of deforestation, wildlife trafficking, and unsustainable agricultural practices. Efforts to combat these problems involve government agencies, transnational NGOs, and, of course, local people who live and work in areas

undergoing conservation. In Cameroon, the state's exploitation of cultural difference at ethnic and regional levels (Nyamnjoh 1999) combine with the ideologies of North American and European-based NGOs to form the terrain in which conservation work transpires. In this context, understanding how collaboration between these different groups occurs (or does not) requires understanding the larger historical, political, and linguistic context in which this work takes place.

A Brief History of Cameroon

In Cameroon, the colonial policies and languages of three separate European nations – Germany, Britain, and France – intersected with the local politics and communicative practices of over 250 distinct ethnic groups. Cameroon became a European colony in 1884, when an area roughly the size of California was carved out of West-Central Africa between British Nigeria (to the West) and the French Congo (to the East), although few natural boundaries separated it from the other colonies. Germany controlled this area between 1884 and 1915, using a harsh style of direct rule and dealing with almost constant violent uprisings from 1888 onward. Despite the brevity and brutality of their rule, the Germans are often favorably remembered by Cameroonians and are credited with creating infrastructure (particularly in the form of roads and buildings) which still exists today (Eyongetah and Brain 1974, 93). At this time, Cameroonian Pidgin English had already been evolving in southern Cameroon since early 18th century encounters with British traders (Biloa & Echu 2008), and the German language did not spread widely. However, German is still popular as an elective foreign language (alongside Spanish and, in some schools, Arabic) in Cameroonian high schools (Nforgwei 2009).

In 1915, after Germany lost World War I, the German 'Kameruns' were split between the British (who claimed the area to the West, nearest Nigeria and including the large port city of

Douala), and the French (who claimed the much larger eastern portion). This division between Britain and France ran along natural rather than ethnic boundaries, and so many ethnic groups in the South found one half of their population under the indirect, exploitative rule of the British, while the other half faced the direct, assimilationist rule of the French. European linguists and administrators undertook the project of documenting and classifying ethnic groups at this time, operating under the Eurocentric folk assumption that distinguishing between languages would allow them to distinguish between ethnic groups (Irvine 2008, Dorian 1998, Blommaert and Verschueren 1998). These ethnic groups were presumed to be homogeneous, monolingual, and geographically bounded, and when they could not be found, they were invented.

In southwestern Cameroon, the British adopted a style of indirect rule, focusing on the extraction of resources rather than investing in the colony. The French ruled much more directly, however, in the southern half of eastern Cameroon, implementing an assimilationist policy which led to the creation of a class of Cameroonian elites *(évolués)*. In northern French Cameroon, however, the French ruled through the existing political organizations, Fulbe caliphates which were established during Usman dan Fodio's 1804 *jihad* (Regis 2003, 4). These different styles of rule led, among other things, to a higher acquisition rate of French by people in the southern half of the French colony, whereas Cameroonian Pidgin English developed as the predominant *lingua franca* in the English colony in place of British English, and Fulfulde remained the dominant language for intergroup communication in northern Cameroon.

After World War II, movement toward independence increased across the African continent, and decolonization took place gradually in both Cameroonian colonies over the next fifteen years. During this process, British Cameroon was faced with the decision of whether or not to join newly-independent Nigeria, or to reunite instead with French Cameroon. Ultimately, they

chose the latter option, and Anglophone Cameroon and Francophone Cameroon joined to become the independent Republic of Cameroon on January 1st, 1960. The new republic was led by Amadou Ahidjo, a Fulbe man from northern Cameroon who appointed a majority Muslim administration (Regis 2003, 18). Ahidjo split the country into ten regions, two of which are Anglophone, and the other eight of which are Francophone. While all ten regions remain united under one government, administrative activities and education continue to take place in English in the Anglophone regions and French in the Francophone regions.

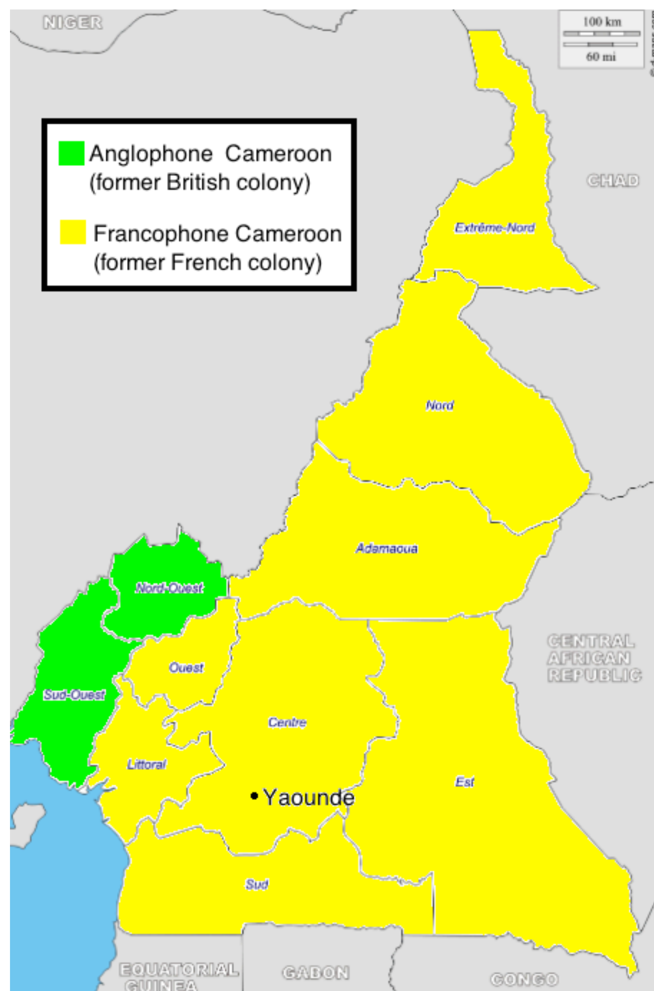

Figure 1.1: Map of Cameroon[2]

[2] Base map from D-maps at http://d-maps.com/m/africa/cameroun/cameroun21.gif, edited and annotated by the author to show location of capital city and highlight significant regional boundaries, May 30, 2015.

British Cameroon's decision to rejoin French Cameroon marked a rare instance of new African nations erasing colonial boundaries, although this erasure did restore the former German colonial boundaries (Birmingham 1995, 6). The decision to join French Cameroon remains controversial, as Anglophone residents feel underrepresented in government affairs. Additionally, because of this unique situation, the new government of Cameroon was forced to choose both English and French as the republic's official languages, rather than using a single, unifying national language or privileging any of its numerous indigenous languages. However, in a 1996 amendment to the constitution, indigenous Cameroonian languages were uniformly upgraded to the status of 'national languages,' although this promotion did not come with any additional institutional support (Nforgwei 2009, 98).

Official Bilingualism in a Multilingual State

The promotion of both English and French to the status of official languages has led to the imagination of an ideal bilingual Cameroonian, who speaks both French and English equally (Biloa & Echu 2008; Tadadjeu 1985). However, as education opportunities in both languages are limited, fluency in both official languages is relatively uncommon, particularly among Francophones. Today, Cameroon's indigenous languages continue to be used for the majority of informal communication, particularly in rural areas. The main *lingua franca* for each area of the country varies, largely due to the different styles of colonization described above. In the Francophone regions of the country, French is the language of instruction in schools and is used for administrative purposes as well. However, in the southern half of Francophone Cameroon, French serves as the largest *lingua franca*, while in the northern half of Francophone Cameroon, Fulfulde continues to be used as the main *lingua franca*, and rates of fluency in French remain

low. In Anglophone Cameroon, English is used in schools and administration, but the majority of daily intergroup communication occurs in Cameroonian Pidgin English.

It is important to note that the English and French that is written in Cameroon and taught in Cameroonian schools is based upon British English and the French of France, although in both cases what is spoken has significant enough phonological and lexical differences to be better referred to as Cameroonian English and Cameroonian French, respectively. Scholars have called for the documentation and standardization of Cameroonian English and Cameroonian French (see Echu & Grundstrom 1999, Echu 2004), but to this date they remain little studied in their own right.

More work has been done on Cameroonian Pidgin English or 'Pidgin' (see for example Mbangwana 1983, Gilman 1979, Schroder 2003), although like many hybrid varieties, it is often seen by its speakers as unprestigious or "bad English." Indeed, Anglophone Cameroonians in Limbe commonly refer to more standard varieties of English simply as "grammar" – i.e. "I don't speak grammar." Various forms of Pidgin have been used since the arrival of British traders and missionaries in the 18th century. This creole has a lexicon that is approximately 80 percent English, 14 percent indigenous Cameroonian languages, and 6 percent French and other languages. Cameroonian Pidgin English is very similar and generally mutually intelligible with Nigerian Pidgin ('Naija'), although there are a large number of lexical differences in particular. It is used for the majority of interethnic communication in the Anglophone regions of Cameroon (Mbangwana 1983, 82). Although its use is discouraged in schools, it is already spoken by the majority of children in the Northwest and Southwest regions before they begin their formal education (Kuchah 2013).

In Cameroon, as in much of Africa, heteroglossia is seen as the norm, with most people speaking at least three different languages, and using each for different purposes (for example, an

indigenous language with family, Pidgin at the market, and English at school). While official discourses emphasize bilingualism in English and French (Biloa and Echu 2008, Nforgwei 2009), indigenous linguistic diversity in Cameroon is highly valued, and often discussed both formally and colloquially as an irreplaceable form of cultural expression, and symbol of natural wealth (see, for example, DCAC 1985).

Anglophone Marginalization in Post-Independence Cameroon

The government's exploitation of ethnic difference to maintain its power, combined with limited educational opportunities to learn English and French, and limited job opportunities even if one is able to learn the official languages, means that the bulk of daily communication in Cameroon continues to take place in its indigenous languages (Nyamnjoh 1999, Moore 1999, Biloa and Echu 2008). Nevertheless, people in the north- and southwestern regions of Cameroon identify strongly as "Anglophones" in the face of the larger and politically dominant "Francophone" Cameroon. Despite government discourses of equality and "bilingualism," the imbalance in terms of size and representation in government has led to strong claims of marginalization on the part of the Anglophone population:

> [D]espite numerous governmental efforts aimed at building a feeling of inclusion and a sense of oneness among Cameroonians through the policy of official bilingualism, bilingual knowledge of English/French remains quite uneven, and Anglophone Cameroonians generally appear to know and have an ability to communicate in French more frequently than Francophone Cameroonians know and are able to communicate in English. (Biloa and Echu 2008, 205)

This linguistic imbalance is so severe — and bound up with issues of political representation — that Anglophones "openly complain about the unequal status of the official languages, to the point of entertaining succession or a return to federalism as a possible solution to language-generated problems for the Anglophone part of the country" (Ibid. 213). Here, language becomes a

politicized terrain through which Cameroon's minority regions negotiate larger political questions of representation, governance, and resource division.

In the decade since Biloa and Echu's description, tensions between Anglophone and Francophone Cameroon have escalated, to the degree that northwestern Cameroon in particular is now in a state of civil war. The origins of this particular series of conflicts can be traced back to November 2016, when Anglophone lawyers and teachers went on strike to protest the increasing number of Francophone judges and teachers posted to the Anglophone region. These government employees not only could not speak English, but were unfamiliar with the separate legal and educational systems used in Anglophone Cameroon. Protesters argued that these employees represented an explicit strategy of the government to "francophonize" Anglophone Cameroon. Courts and schools closed, and the strikes quickly expanded into "ghost town" days, when all businesses and markets in Anglophone towns refused to open.

The government reacted violently to the strikes, deploying military and cutting off internet access in the Anglophone regions for six months in an effort to prevent the separatists from organizing. Since 2016, violence between the government and the separatists has increased, as a group of guerilla fighters calling themselves "Ambazonians" (informally known as "the Amba boys") have emerged in rural areas, arguing that Anglophone Cameroon should be given its independence from the Republic of Cameroon and rename itself Ambazonia. Continued clashes between Ambazonian separatists and Cameroonian military have continued to escalate. Over 400 people – mainly civilians – have been killed, and over 40,000 have fled across the border to Nigeria (Chothia 2018, Searcey 2018).

<u>The Field Site: The Limbe Wildlife Centre</u>

This dissertation offers a case study of communication and collaboration at the Limbe Wildlife Centre, a wildlife sanctuary located in Limbe, Cameroon. Limbe is a town of approximately 90,000 people on the southwest coast of Anglophone Cameroon. Its black sand beaches and proximity to both Mount Cameroon (the tallest mountain in West-Central Africa, and 4th highest peak on the African continent) and Douala (Cameroon's largest city) make it one of the country's most popular tourist destinations. The town of Limbe is also home to several major industries, including the oil refinery SONARA, the cement works CIMENCAM, and the Cameroon Development Corporation (CDC), which exports tropical crops from the area including bananas and palm oil.

Although the term 'sanctuary' might call forth the image of a secluded forest refuge, the LWC is in fact located inside the city of Limbe on a major thoroughfare, about a ten-minute taxi ride from the busy center of town. Despite its urban location, inside the walls of the sanctuary it is quiet, green, and shady, with large, open enclosures for the sanctuary's 250 animals. These animals are mainly primates, including around fifty chimpanzees (*Pan troglodytes verus* and *Pan troglodytes ellioti*), twenty gorillas (*Gorilla gorilla gorilla*), several species of guenons (including *Cercopithecus cephus, pogonias, mona*, and the critically endangered *Cercopithecus preussi*) and nearly one hundred critically endangered drill monkeys (*Mandrillus leucophaeus*) — the second largest captive population in the world. However, in addition to primates, the LWC is also home to a crocodile (*Crocodylus suchus*), a ten-foot-long African rock python (*Python sebae sebae*), several small deer (including *Tragelaphus scriptus*, *Philantomba monticola*, and *Cephalophus dorsalis*), and dozens of African grey parrots (*Psittacus erithacus*). All of the animals at the sanctuary were confiscated by the government after being illegally kept as pets, or injured in poaching activities. After arriving in Limbe, these animals undergo physical and social

rehabilitation until they are healthy enough to be introduced into a larger group of conspecifics, or returned to the wild.

Figure 1.2: LWC gorillas in their outdoor enclosure.

Figure 1.3: A young chimpanzee in the LWC's quarantine nursery.
Once this chimpanzee has matured and completed physical and social rehabilitation,
she will be integrated into a large group of mature chimpanzees.

Figure 1.4: A school group observes drill monkeys at the LWC.

Figures 1.5-1.6: While the majority of animals at the LWC are primates,
the sanctuary is also home to several species of deer (left) and a crocodile (right).

For over twenty years, the LWC has not only been rescuing and rehabilitating wild animals, but also running environmental education programming and hosting around 50,000 tourists and several dozen foreign volunteers each year. Despite limited financial resources and a high volume of both human visitors and non-human residents, the LWC has maintained certification through the Pan-African Sanctuary Alliance (PASA), and is widely recognized within the environmental conservation community as one of the most well-run, successful conservation institutions in

Cameroon. Located in Anglophone Cameroon, but only an hour away from the Francophone border, the LWC conducts its work in the heart of the ongoing tensions between the Anglophone and Francophone communities described above, as well as in the midst of transnational flows of tourists, NGO workers, and volunteers from the Global North.

A History of Transnational Collaboration at the Limbe Wildlife Centre

The LWC formally began in 1993 as a partnership between Cameroon's Ministry of Forestry and Wildlife (MINFOF), and the Pandrillus Foundation, a Nigerian-based NGO run by American conservationists Peter Jenkins and Liza Gadsby. The LWC occupies government-protected land that originally housed the Victoria Zoo. According to the LWC's website, in the early 1990's, Jenkins and Gadsby were visiting Cameroon doing a survey of the critically endangered drill population in western Cameroon, when they noticed dozens of chimpanzees being kept as pets or tourist attractions in poor conditions. In conjunction with the Cameroonian government and under the heading of the Pandrillus Foundation, Jenkins and Gadbsy began the process of transforming the Victoria Zoo into the Limbe Wildlife Centre. According to the LWC's website, when Pandrillus arrived:

> Victoria Zoo housed 3 drills; the hairless but cheerful chimpanzee Suzanne; an adult male mandrill living in the steel crate he arrived in 3 years prior; 3 baboons; and mona, putty-nose, Preuss' and tantalus monkeys; and 2 red-capped mangabeys. All primates except the crated mandrill were nailed into wire battery cages about a meter square. Victoria Zoo was also home to some reptiles, duikers, birds and small carnivores. There were old lion cages and other enclosures, rusty and empty, but still serviceable.
>
> The keepers, together with Peter and Liza, worked diligently to change procedures for the benefit of the animals, and improvements were made to feeding, enclosures, and care. It took the them less than 10 minutes to transfer the adult male mandrill into the empty lion cage; his subsequent smile lit up the whole zoo and inspired all of us to improve the lives of every animal.
>
> The old zoo had beautiful grounds, full time water and electric supply, and loads of potential. Limbe was a popular town and weekend destination for Cameroonians. Here was the rescue center that was so desperately needed, and in a partnership between the Government of Cameroon and Pandrillus, Limbe Wildlife Centre was born in 1993.
>
> (LWC Website 2018)

The partnership between the Cameroonian government and Pandrillus continues today, with the government appointing a conservator and assistant conservator who officially run the sanctuary, in addition to about half of the LWC's main staff members. Government workers are graduates of forestry and wildlife training schools run by MINFOF who have been appointed to the sanctuary, but who may be transferred between several different government posts around the country during their career. About half of these government workers serve as animal keepers, while others hold miscellaneous bureaucratic or administrative positions, including managing the ticket window.

Although there are often debates between government and NGO management over which organization is responsible for which aspects of running the sanctuary, according to the agreement between MINFOF and Pandrillus, the government is responsible for providing the majority of the sanctuary's funding, in particular food for the animals, salary for government staff, and maintaining grounds and equipment. Pandrillus in turn provides a manager and assistant manager to the sanctuary, who describe their positions as consultants to the government. However, in practice the NGO managers generally take on the majority of the work involved in overseeing day-to-day operations, including making work schedules, planning and securing funding for new projects, and overseeing animal health and well-being. In addition to providing management and funding special projects, the NGO also employs around half of the center's animal keepers, runs the education program, trains and employs education staff, carries out the majority of veterinary care and animal population management, and runs the center's volunteer program, which at any time hosts 5-10 foreign volunteers for one to six month stays.

Research Participants

This dissertation focuses on communication between three main groups of people at the LWC: Cameroonian animal keepers, NGO management, and foreign volunteers. There are around fifteen animal keepers at the LWC, the majority of whom have worked at the sanctuary for ten to twenty years. All animal keepers are Cameroonian, and all but one are men. About half are employed through the government, and the other half through the NGO. All but two of the animal keepers are from Anglophone Cameroon, with about half originating from Limbe or the surrounding area. Each keeper is assigned to work with a particular species of animal (chimpanzee, gorilla, baboon, guenon, etc.) and is responsible for cleaning cages and maintaining outdoor enclosures, feeding, watering, and monitoring animal behavior and well-being.

NGO management consists of the manager and assistant manager, as well as the head veterinarian and assistant veterinarian, and a head animal keeper and assistant head animal keeper, both of whom have worked at the sanctuary for over twenty years. The two current managers, Guillaume le Flohic and Peggy Motsch, both come from France and began working at the sanctuary in 2013. Together they hold degrees in agronomy, primatology, conservation biology and population management, as well as veterinary training, and have over a decade of experience working with both wild and semi-wild animal populations across Africa. The NGO managers generally take on the majority of the work involved in managing day-to-day operations at the sanctuary, including making work schedules, planning and securing funding for new projects, overseeing animal health and well-being, and holding staff meetings.

Previous managers have generally stayed at the sanctuary for between two and five years, and have come from the United States and Spain, among other European and North American countries. The only time Pandrillus has appointed a manager from Cameroon was for a few months

before the current managers took over, when Dr. John Kiyang, the sanctuary's head veterinarian, served as an interim manager.

The LWC's long-running volunteer program normally hosts a rotating group of five to ten volunteers, mainly from Europe. Volunteers pay 300 Euros per week to volunteer at the center, cleaning cages and feeding animals alongside keepers, as well as conducting enrichment activities for the animals and working in the sanctuary's gift shop. While a minority of long-term volunteers are generally aspiring primatologists or veterinary students, the majority of volunteers have little to no prior experience working with wild animals, and normally stay for between two weeks up to two months on what many of them describe as a "working vacation." During 2017, the largest majority of volunteers came from the Netherlands (35%) for short-term stays via private foundations that support the LWC. However, 31% of volunteers came from France, including five long-term volunteers recruited by the NGO managers.

In addition to these human participants, as this dissertation explores the daily interactions involved in wildlife conservation, non-human animals are also important participants. The health, cleaning, feeding, and (mis)behavior of the LWC's 250 resident animals are the reason for the existence of the sanctuary and presence of its staff and volunteers. These animals are also of course the topics of the majority of workplace conversations, and the unpredictability, intelligence, and creativity of these animals require a great deal of communication in the form of advance planning and on-the-ground troubleshooting (see chapters 4 and 5). These animals, however, are not just the *subjects* of communication, but participants in interactions in their own rights, with their own motivations, agency, and semiotic resources (Mondémé 2011, Takada 2013, Kohn 2013), which can significantly interrupt staff's plans and ability to carry out their work. In this dissertation, chimpanzees in particular are important participants – both as subjects of human conversations,

and interactants themselves. Chapters 3, 4, and 5 focus on two groups of chimpanzees: the main "island" group of 30 or so mature chimpanzees living in a large indoor-outdoor enclosure, and the "new" group – three young chimpanzees fresh from the LWC's chimpanzee nursery, who are in the process of being integrated into the main group.

Methodology

The origins of this project lie in part in the curiosity I developed about multilingualism and transnational work during the two years I spent in Cameroon as an English teacher through the Peace Corps (2010-2012). While I taught in English and French at school, I lived in a community in the Far North region where Wandala and Fulfulde were the main languages of informal communication, and the average individual spoke upwards of four languages. This densely multilingual environment raised questions for me about the role played by both official and indigenous languages in Cameroon, as well as the role of international development organizations and their perceptions in local communities.

I was able to begin exploring these issues using anthropological methods during 2014 research at Mvog-Betsi Zoo-Botanical Gardens, a zoo located in Yaoundé, Cameroon's capital city. At Mvog-Betsi, I found that although staff spoke an average of four languages each, animal care was organized along linguistic boundaries, as English-speaking NGO staff cared for primates, Fulfulde speakers from northern Cameroon cared for lions, and French remained the dominant language in all intergroup communication. Norms for language usage (in particular, Anglophones having to cater to Francophones' linguistic repertoires) were bound up in larger politics of representation, leading to conflicts between staff. This research demonstrated the impact of linguistic tensions within a single, small conservation institution oriented toward Cameroonian

visitors. However, it also raised questions for me about both the effects of language ideologies in conservation in contexts involving transnational collaboration, and about how these ideologies play out in particular interactions.

With these questions in mind, I conducted fieldwork in Limbe between January and September 2017, during which time I lived at the LWC volunteer house and conducted approximately 60 hours per week of ethnographic and linguistic fieldwork at the sanctuary. An additional visit in March 2018 allowed me to do follow-up interviews, gauge progress on ongoing projects, and discuss preliminary findings with research participants. As the LWC conducts large-scale animal rehabilitation in addition to education programming, and hosts a rotating group of volunteers and visitors from around the world, it offers the opportunity to explore how the linguistic tensions between Cameroon's Francophone and Anglophone populations (Biloa and Echu 2008, Kuchah 2013) play out alongside tensions between local staff and international volunteers (Parreñas 2012, West 2006, Nyamnjoh and Page 2002). The LWC's reputation for productivity amidst great linguistic, cultural, and ideological diversity led me to ask what it means for environmental conservation programming to be successful, and what this success looks like on the ground in daily workplace interactions.

With these questions in mind, I designed my research plan with the idea of collecting ethnographic data in addition to recordings of particular interactions, allowing the project to move between larger-scale analysis of ideologies about language and conservation, and microanalyses of how individuals manage, reinforce, or resist those ideologies as they work together to accomplish everyday tasks. Combining ethnography with in-depth analysis of video-recorded workplace interactions, this dissertation examines language ideologies in action, as participants' beliefs about both communication and conservation intersect in, and are reflected by and contested

through the daily communicative practices involved in creating knowledge, making decisions, and caring for chimpanzees. I therefore employed three main methodologies: participant observation, video recordings of naturally occurring interactions, and semi-structured interviews.

Participant Observation

I had always planned on using participant observation as a core methodology for this project, in order to contextualize linguistic practices and gain a comprehensive view of the types of work and communication that take place at the LWC. However, I did not initially anticipate just how important this methodology would be, or the degree to which I would be expected to participate in the daily operations of the sanctuary. As an anthropologist, I found it convenient to work at an institution that is used to (and has structure for) new, foreign people coming in to learn how the sanctuary works and participate in its daily activities. Normally these people are European volunteers, who stay for one to six months. Often these volunteers are veterinary students or aspiring primatologists, but as these volunteers are always conducting research on non-human primates, it initially required some explaining to establish why and how I would be studying the humans that work at the sanctuary, rather than the animals. However, once I discussed my interest in the complexity of communication —across both languages and cultures — at the sanctuary, I generally found that both staff and volunteers were very receptive, and identified communication as difficult, important, and a common topic of conversation amongst themselves.

After explaining my motivations for the study, I quickly learned that whether or not my primary focus was working with animals, there was little room for observers in the daily operations of the sanctuary — the physical labor involved in animal care required as many able hands as possible, and keepers tended to look poorly on anyone who appeared to consider themselves too

important to assist with the feeding and cleaning work. I therefore worked as a volunteer at the LWC in addition to conducting research throughout my stay. My daily responsibilities included chopping fruit, cleaning cages, feeding animals, taking shifts in the gift shop, and often, on the request of French management, proofreading English-language materials for fundraising or social media. I also attended staff meetings, observed education programming, and accompanied visitors on guided tours.

Video Recording of Naturally Occurring Interactions

While I was expected to participate in these activities to a greater degree than I had originally anticipated, I was able throughout the fieldwork period to collect over 100 hours of video of naturally occurring workplace interactions. I filmed these using alternately a Canon Vixia HF R700, or while wearing a GoPro when I needed to keep my hands free to participate in animal care. I also used a Roland R-05 for interviews and other audio recordings. I transcribed recordings using conventions from Jefferson (2004), and take a conversation analytic approach (ten Have 2007, Sidnell and Stivers 2013) in much of my analysis. While my fluency in French and English enabled me to complete the majority of transcription myself, I benefited tremendously from the skills and insights of my research assistant Betke Armel, who transcribed video files in Pidgin and provided English translations.

Semi-Structured Interviews

As what people do and what they say about what they do are often two different things (and an important site for the disclosure of language ideologies), I used semi-structured interviews to explore participants' beliefs about communication and conservation at the LWC. During my

time in Limbe, I conducted 57 interviews with animal keepers, educators, volunteers, managers, staff, and community members involved with the LWC. These interviews included participants' background information (where they are from, their reported linguistic repertoires, etc.) as well as more open-ended discussions about their motivations for working with the LWC, and beliefs about animals, conservation, and communication.

Language Usage and Ideological Assemblages at the Limbe Wildlife Centre

Following Paul Kroskrity, I adopt the term "language ideological assemblages" (LIA) with the goal of examining the different language ideologies at the Limbe Wildlife Centre "as part of a larger complex of relevant beliefs and feelings, both Indigenous and externally imposed, that may complement, contest, or otherwise dynamically interact with each other to modify language ideologies and linguistic practices" (Kroskrity 2018, 134). Instead of simply identifying or listing particular ideologies, an LIA approach allows us to "redirect attention to the interaction of clusters of ideologies that occur within or across linguistic communities" (Ibid.), and specifically to how these interactions between ideologies relate to actual language practice.

Kroskrity 2018 describes how the different LIAs of the Mono v. the Arizona Tewa have led to different patterns of language shift and strategies for revitalization in each community. Instead of applying LIA to a particular indigenous community, I aim to apply it to an institution — a community of practice (Bucholtz 1999) consisting of animal keepers from Cameroon, as well as NGO workers and volunteers from Europe and North America. Together the fifty or so core members of this community constitute speakers of at least two dozen different languages, from five different regions of Cameroon, and ten different countries. Members range from Cameroonian men in their 50s with high school diplomas, to French women in their 20s with Master's degrees.

Some have worked at the sanctuary for decades, others only stay for a few weeks. Despite their linguistic, cultural, and ideological differences, these people work closely together every day as they conduct the time-sensitive and often dangerous work involved in caring for wild animals.

LWC staff and volunteers speak a broad range of languages, both Cameroonian and European. The three main *lingua francas* of the LWC are English, French, and Cameroonian Pidgin English ('Pidgin'), although these three languages are spoken unequally across the center's different activities and staff. The LWC is located in Anglophone Cameroon, where English is the main language used for education, administrative purposes, and formal or intergroup communication. Pidgin, however, is the most common *lingua franca* in Limbe, used for nearly all informal communication, unless speakers share a mother tongue or ethnic language. Additionally, as Limbe is located only an hour or so from Francophone Cameroon, and NGO managers and the majority of long-term volunteers at the sanctuary come from France, French is also one of the LWC's major *lingua francas*. While European volunteers and NGO workers generally are bilingual in their L1 and varying amounts of English, Cameroonian staff are normally at least trilingual — in English, Pidgin, and at least one indigenous language, as well as varying amounts of French.

English at the LWC

All staff and the majority of volunteers are able to hold a conversation in English, although some are more comfortable than others. Although managers, keepers, and volunteers all speak different varieties and quantities of English, English is the only language spoken in meetings or for intergroup communication (for example, between keepers and volunteers), and, as I discuss below, English is treated as the default and even neutral *lingua franca* of the sanctuary.

The majority of animal keepers come from the Anglophone region, and learned English in school. In addition to Pidgin and generally one or two indigenous Cameroonian languages, most keepers are fluent in a variety of Cameroonian English that is heavily influenced by Pidgin vocabulary and structure. This is the most normal variety of English to hear around Limbe, but European volunteers report it can be difficult for them to understand. Volunteers' difficulty with Cameroonian English has led them to develop a well-established ranking of keepers ranging from "speaks 'good' English" (i.e. more similar to British English) to "difficult or impossible to understand." When asked about their fluency in English, all keepers identified as completely fluent and comfortable in English. When I asked them to answer the same question about their colleagues, they also unanimously said that all staff at the LWC speak English, and any problems in communication between staff were due to personality clashes, not linguistic fluency. "Here it's obvious that everybody speaks English, so language is not a barrier," one keeper said.

The two NGO managers both come from France, and speak European English as a second language. This is their first English-language position, and when I asked Peggy, the assistant manager, how she felt about how well she spoke English, she told me that it was "maybe not the best for a conference or an interview, but for managing and speaking and explaining everything, it's okay….The first month [at the LWC] was a little bit difficult. [Staff] don't always understand me properly. But now [two years later] it's much better." When I asked her if she considered herself to still be in the process of learning English, she was quick to agree. However, she laughed as she clarified that the English she is learning in Cameroon is "not maybe the good one." She continued, "I try some time to ask people who speak good English to help me and correct me also."

Volunteers come from a variety of mainly European countries, and most also speak European English as a second language, with varying amounts of fluency.[3] While nearly all had English classes in school, some volunteers have lived or volunteered in other English-speaking locations and are more or less fluent, while others struggle to hold a simple conversation in English and actively work on their language skills during their time in Limbe. These volunteers sometimes complained that differences in "accent" and interference from Pidgin made their learning extra difficult. One long-term French volunteer admitted to me that when she first arrived in Limbe, she spoke so little English that she had a hard time knowing if someone was speaking to her in English or Pidgin. "I learned the word 'wheelbarrow'," she said, "and for the longest time I thought it was Pidgin."

While everyone at the LWC has at least some access to English, there is a great deal of variability in which varieties of English they speak and understand, and how comfortable they are using them. This makes it difficult for some people to participate in certain kinds of interactions, and for anyone to know how much someone else is understanding. This also means that people may be held accountable for information that they did not understand, or someone's knowledge may be ignored because it is not expressed in a way that is intelligible to others.

Pidgin at the LWC

Cameroonian Pidgin English, or 'Pidgin' as it is normally called, is perhaps the most ubiquitous language spoken both in the town of Limbe and at the LWC, in terms of number of speakers and frequency of usage. At the Limbe Wildlife Centre, conversations between animal

[3] During the fieldwork period, I was often the only native English speaker living at the LWC volunteer house. Of the thirty volunteers I encountered during my nine months in Limbe, only six of them came from predominantly English-speaking countries – one from Australia, one from the United Kingdom, and four from the United States.

keepers and other Cameroonian staff both during work and on breaks almost always take place in Pidgin, even when volunteers or other foreigners are present. During animal cleaning and care, the vast majority of keepers' inquiries, commands, clarifications, and discussions occur in Pidgin. As is the case with many creole languages, however, Pidgin carries a great deal of stigma, with many speakers not considering it to be a 'real' language, but rather an ungrammatical form of English.

Staff rarely use Pidgin with visitors to the sanctuary, even when it is clearly the easiest language for everyone involved in the interaction.[4] Anglophone staff do, however, see Pidgin as a useful tool for communicating with newly posted Francophone staff who do not speak English. Several staff members told me that first Francophone staff will start to speak Pidgin, because it is easier, and then by using Pidgin they will eventually be able to speak more and more English. "We're in a local area. Everybody here – like the keepers – they all speak and understand Pidgin. So it's an easier way of understanding ourselves," one keeper explained to me. "Pidgin is the easiest language for me," said another keeper. "So I use it when I don't want to stress up, or when I want someone to understand as fast as possible."

French at the LWC

While the majority of Cameroonian staff at the LWC identified as being fluent speakers of both English and Pidgin (as well as often one or two indigenous languages as well), around 10% of the staff come from Francophone Cameroon. Most of this group consists of government workers who grew up and went to school in Francophone Cameroon before being appointed to a position at the LWC. Additionally, as Limbe is only about an hour away from the Francophone border, and

[4] On the one occasion that I observed a tour of the sanctuary conducted in Pidgin, tour guides apologized to me and told me that they were forced to use Pidgin, because the tour group — former hunters turned farmers who sell crops to feed the sanctuary's animals — was "uneducated," "from the village," and would not be able to understand English.

only three hours away from Douala (Cameroon's largest city, also located in the Francophone region), the majority of tourists who come to the sanctuary are French-speaking, and have limited to no fluency in English or Pidgin. While Anglophone staff all have some familiarity with French from school (where French classes are obligatory), only a couple staff members acknowledged being even semi-fluent in French, although on several occasions I observed staff members who claimed not to speak French speaking it fluently on the phone or with visitors.

Nevertheless, the majority of French spoken at the LWC is not Cameroonian French, but rather European French. Both NGO managers come from France, and during the fieldwork period, there were six French volunteers who stayed for over six months, training as primatologists, and/or assisting with animal monitoring and construction projects. According to staff, there was a large increase in the number of French volunteers between 2016 and 2017, which they attributed to the tendency of NGO managers to attract more volunteers from their home country – for example, the previous managers were from Spain, and while they worked at the sanctuary, there was a greater number of Spanish volunteers.

While they speak French with each other and at home, French NGO managers and volunteers uniformly said they avoid using French with staff — even staff they knew to be fluent French speakers. When I asked why, they generally oriented to Cameroon's official language policies: as they were working in the Anglophone region, they should use English. Although most insisted that they would never initiate a conversation with staff in French, some admitted that they might use a little — but only if they did not know the name for a tool or something in English, and needed a translation.

Despite the avoidance of French as a language of intergroup communication, it is still one of the core languages spoken at the LWC. Although all official staff meetings always occurred in

English, unofficial meetings between NGO managers and long-term volunteers took place multiple times a day, and always in French. In these conversations, the managers would ask for reports on how the volunteers' projects had gone, volunteers would give updates or raise concerns over animal or keeper behavior, and the group would informally evaluate the progress of rehabilitation activities.

These conversations primarily concerned the work of aspiring primatologists, mainly French students apprenticing under the NGO managers (see chapters 2 and 3). As part of honors projects or in preparation for graduate studies, the managers trained these volunteers to conduct formal primatological observations, applying standardized codes for animal behavior to observations of the LWC's animals, and then using statistical analyses of this data to draw conclusions and make predictions about animal rehabilitation. This training and these observations were conducted entirely by French people, and so occurred in French. However, the results of these observations (and the subsequent discussions of them) informed management and volunteers' knowledge about and stance toward keepers, animal well-being, and the status of various rehabilitation projects, which in turn influenced decision-making processes at the sanctuary. The use of French in these conversations thereby excluded keepers from receiving, discussing, and/or potentially contesting these kinds of information.

Other Cameroonian Languages

Aside from English and French, Cameroon is home to over 250 indigenous languages from three separate language families (Afro-Asiatic, Nilo-Saharan, and Niger-Congo) (Lewis et. al. n.d.). Although there has been some shift away from smaller indigenous languages toward larger *lingua francas* among younger generations in urban areas (a pattern common across Africa; see

Vigouroux and Mufwene 2008), most Cameroonians continue to speak several languages. These include either French in the Francophone regions or English in the Anglophone regions, Pidgin or another regional *lingua franca* like Fulfulde, and one to three local languages or "mother tongues." Outside of formal situations, there remains a strong preference to use local languages as often as possible.

This pattern is consistent at the Limbe Wildlife Centre, where the twenty-two staff members I interviewed reported speaking around 15 different languages in addition to English, Pidgin, and French. The majority of these languages only had one or two speakers on staff, and so participants reported that they did not use them often at work — only if someone from their hometown happened to visit the sanctuary. However, there are a couple of micro language communities within the LWC staff, consisting of four or more speakers of the same indigenous language. The most prominent of these is Weh, a language from northwestern Cameroon spoken by around 15% of the staff, including all of the main gorilla keepers.[5] Gorilla care therefore predominantly takes place in Weh, with switches to Pidgin if non-Weh Cameroonian staff are present, or sometimes English if volunteers are assisting. Bakweri, a language local to the Limbe area, is also spoken by several staff members, although as these staff members work in separate departments (unlike the Weh speakers), they reported that they did not use it often at work.

Other European Languages

[5] These keepers constitute the majority of the most senior LWC staff, all of whom have worked at the sanctuary for 15-20 years. Although most of them knew each other growing up, they reported that they did not start working at the LWC at the same time, or move to Limbe together. Instead, it is likely that their presence at the LWC relates to broader historical patterns of Northwest-Southwest migration, as described by Konings and Nyamnjoh 2003.

In addition to indigenous linguistic diversity, volunteers and tourists regularly bring other foreign languages with them to the sanctuary, primarily German, Spanish, and Dutch. Dutch is a particularly important language, as there are two private foundations in the Netherlands that sponsor the work of the sanctuary. These foundations were both started by former volunteers, and while they conduct fundraising activities, sponsor projects, and provide supplies to the sanctuary, their main contribution is in attracting new volunteers and assisting with their travel logistics. For this reason, the majority of short-term volunteers at the sanctuary come from the Netherlands, and Dutch is commonly used at the volunteer house and for a significant amount of fundraising and online activities related to the LWC.

	Anglophone Staff	**Francophone Staff**	**NGO Managers**	**Volunteers**	**Tourists**
English	**X**	**(limited)**	**X**	**X**	**X**
French	**(limited)**	**X**	**X**	**X**	**X**
Pidgin	**X**	**(limited)**			**X**
Other Cameroonian Language	**X**	**X**			**X**
Other European Language				**X**	**X**

Table 1.1: Distribution of languages at the Limbe Wildlife Centre. X = Fluent.

	Anglophone Staff	Francophone Staff	NGO Managers	Volunteers	Tourists
Anglophone Staff	Pidgin (informal), English (formal), Indigenous language (if possible)	Pidgin, French (limited)	English	English	English, French (limited)
Francophone Staff	Pidgin (limited), French (limited)	French	English, French (rarely)	French, English (limited)	French
NGO Managers	English	English, French (rarely)	French	English or French	n/a
Volunteers	English	English or French	English or French	English, French, Dutch	English or French
Tourists	English, French (limited)	French	n/a	French or English	French or Pidgin

Table 1.2: Patterns of language usage across different groups at the Limbe Wildlife Centre. Most commonly spoken languages listed first.

Institutional Ideologies of Language Usage

Cameroonian staff often take an instrumentalizing stance toward multilingualism — they report using whatever language is best for the job, with a preference toward indigenous languages whenever possible. However, when asked how they decide what language to use, staff uniformly answered that they picked whatever language their interlocutor spoke best. Alternatively, French managers and volunteers generally oriented to Cameroon's national language policies when justifying their language choices. "We are in the Anglophone region, so we should speak English," one told me. However, as I discuss below, while French volunteers said they always spoke English at work and identified it as the language that they "should" use in intergroup situations, this was not always the case in practice.

Despite the variety of languages and ideologies surrounding them, the overarching institutional ideology at the Limbe Wildlife Centre – shared by Cameroonian staff, NGO

managers, and volunteers alike – identifies English as the sanctuary's primary and sufficient *lingua franca*, and indeed as a neutral choice for workplace communication. People's belief in the neutrality of English is perhaps loudest in the silence surrounding it — in just how infrequently people discussed the language, except in initial "getting to know you" conversations with new volunteers. These conversations largely center around where the volunteer had learned English and how much prior experience they had speaking it.

In contrast, comments, jokes, and complaints about the LWC's other main *lingua francas* — Pidgin and French — are a very common topic of casual conversation at the sanctuary. Staff may ridicule or gossip about someone speaking Pidgin at an inappropriate time as being "from the village" (i.e. uneducated). They will also often affectionately tease more experienced volunteers by beginning a conversation with them in Pidgin and continuing until the volunteers finally admit they cannot understand. This admission is followed by mock surprise and playful admonishment ("What do you mean you can't understand Pidgin? You've been here four months!").

Both staff and non-French volunteers frequently complain about the use of French at the sanctuary — either about Cameroonian tourists from the nearby Francophone region who refuse to even greet their guides in English, or about French volunteers using French exclusively in mixed settings. The use of French was a common point of tension between French volunteers and other Europeans — particularly Dutch — at the volunteer house. While most Dutch volunteers used exclusively English when in a mixed group (regardless of their own level of fluency), it was common for French volunteers to converse instead in French, something the Dutch volunteers complained about regularly. The perceived rudeness of French volunteers when it came to language choice spilled over into other arenas as well, as Dutch volunteers complained about French volunteers not doing their dishes or smoking in public places, and non-French volunteers

and Cameroonian staff alike described French volunteers overall as less friendly, and more standoffish.

Like many environmental conservation efforts (see Parreñas 2012, Walley 2004, West 2006), the LWC is a transnational space, bringing together people from across the world with the goal of local conservation. Discourse (or often lack of discourse) about English as the default language of the LWC therefore mirrors common ideologies about English as a global language. In the popular discourse of Anglophone writers, the success of English as a global language is attributed to its inherently superior qualities, such as a large vocabulary, simple grammar, and adaptability. These writers juxtapose English with French, ridiculing the latter language's supposed passion for prescriptivism and fear of language change. As French appears as old-fashioned and exclusionary, English in turn becomes "a language that borrows democratically, its diverse vocabulary a reflection of the democratic and open nature of British or American people" (Pennycook 1998, 328).

These beliefs about English are neither recent nor the products of globalization, however. Instead, they are the evolution of European ideologies going back to the 18th century regarding the languages of colonizers. Colonial powers portrayed European languages as a "rich, precise, rationally organized and rationally organizing instrument; dialects and ethnic-minority languages, by contrast, [were] considered impoverished and crude, most likely inadequate to organize the subordinate world itself and certainly inadequate to organize other worlds" (Dorian 1998, 8).

There were differences, however, in which colonial powers encouraged local v. European languages (Irvine 2008). While the French *mission civilatrice* aimed to transform the colonized into lesser French citizens, exploitative British rule worried that colonial subjects who spoke English might see themselves as on the same plane as the colonizers, and refuse to do manual labor

(Pennycook 1998, Chapter 4; Errington 2001, 28). English was strategically withheld from the majority of the British colonial population, as it was "deemed to serve colonial interest best by being made inaccessible" (Mazrui & Mazrui 1998, 56). In Cameroon, this led to the rise of Pidgin as the main *lingua franca* of the region, while fluency in English is restricted to a smaller number of well-educated citizens in the Anglophone regions.

The legacies of these colonial policies are evident today, as in much of Africa, English "is the medium of educational instruction, the instrument of civil administration, the language of parliamentary discussion, the link with the international community of nations and the perceived key to socio-economic advancement" (Ibid. 109). This reliance on English and other European languages excludes the majority of the African population (who are more likely to speak a combination of local languages) from the opportunity to participate actively in political, legal, and educational systems. Nevertheless, as English and other former colonial languages have no ethnic ties (unlike indigenous African languages), they are often seen as neutral choices (see Spitulnik 1998).

In addition to its status as a global *lingua franca*, English's position at the LWC comes from its status, alongside French, as one of Cameroon's two official languages. In interviews, both Cameroonian staff and French volunteers oriented to this official language policy when explaining the centrality of English at the LWC. Although French volunteers emphasized English as the appropriate language to speak in Anglophone Cameroon, as I described above, they predominantly used French together (to the frustration of non-French volunteers). Their belief in the appropriateness of English seemed only to apply to speaking with Cameroonians. French volunteers said they would never use French with Cameroonian staff at the LWC, and some even

complained that Cameroonian tourists were rude for initiating conversations with them in French. "We are in the Anglophone region," one of them said. "We can all speak English."

It is true that English is both the region's official language, as well as the language that is the most accessible to the largest number of people – everyone at the LWC has at least some English, where not everyone knows any Pidgin or French. However, the belief in English as 'neutral' erases both the substantial work that occurs in the LWC's other *lingua francas*, as well as differences in both individual's fluency (as English is almost no one's first language), and in the different varieties of English that people speak.

Theoretical Framework — Why Language and Conservation?

The Limbe Wildlife Centre's situation of multilingualism is not unique in the conservation world. The work of environmental conservation is frequently transnational, involving both local communities and governments as well as internationally-funded NGOs. As areas of high biological diversity are also often areas of high linguistic diversity (Nettle 1998, Nettle and Romaine 2000), these transnational contentions play out in densely multilingual landscapes. Language choices in these contexts are always political, reflecting local, national, and international tensions regarding power and representation. In these types of situations, different norms for communication — combined with pre-existing hierarchies between speakers, as well as unequal access or fluency in the language being used — can cause significant problems that influence not only the interaction at hand, but how participants feel about each other. While work in environmental anthropology has taken an ethnographic approach to understanding conflicts and miscommunication between the different actors involved in environmental conservation, these accounts often fail to examine in detail the actual interactions through which conservation work is designed and implemented.

This dissertation therefore combines approaches from linguistic and environmental anthropology to explore both the ideologies of conservation and language which underlie choices about work (including how to communicate with others), as well as their historical underpinnings. Finally, I use a conversation analytic framework to analyze the microdynamics of interaction in which this multilingual, institutional communication occurs.

The Politics of Environmental Conservation in Africa

Anthropological work on environmental conservation has focused on both documenting the knowledge and practices of people living in areas undergoing conservation, and advocating for their rights (Orlove and Brush 1996, Agrawal 2005, Di Chiro 2003). Current work in anthropology continues this tradition, paying special attention to the transnational nature of conservation work, and the different ideologies and expectations of its actors (West 2006, Walley 2004, Tsing 2005). While the need for conservation is often couched in terms of global environmental problems, “the political economy of ‘truth’ concerning environmental change is intimately linked with a very material political economy concerning who manages whose environment and in whose ‘interests’” (Fairhead and Leach 1996, 293).

Conservation work in Africa is shaped by its colonial history, where the separation of traditional and civil society led to very different forms of organization and rule at the local and state levels (Mamdani 1996, Mbembe 2001). Contemporary forms of development in Africa continue to rely on problematic Western philosophical beliefs about the relationship between nature and culture, and assumptions of bounded, homogeneous communities (Fairhead and Leach 1996, Geschiere 2011, Moore 2005). These relationships are often structured through NGOs, whose work frequently relies both on strategies of neoliberal governmentality and development

discourse (Fisher 1997, Bornstein 2005). Perhaps most famously, Ferguson and Gupta (2002) have demonstrated how "the outsourcing of the functions of the state to NGOs" is part of "an emerging system of transnational governmentality" (990), serving mainly to help "Western development agencies to get around uncooperative national governments" (993).

Tracing the history of NGOs in Africa, Manji & O'Coill (2002) argue that they developed out of colonial missionary and voluntary organizations which "provided the administration not only with a cheap form of private welfare, but also with a subtle means of controlling" the colonized population (570). Post-independence, they drew increasingly on an emergent discourse of development which:

> offered a confused [Western] audience a more palatable perspective on Africans and Asians. It was more palatable because it was similar in many respects to the racist discourses of the past, this time with a vocabulary consistent with the new age of modernity. It was no longer that Africans were 'uncivilised'. Instead, they were 'underdeveloped'. Either way, the 'civilised' or 'developed' European has a role to play in 'civilizing' or 'developing' Africa….[This discourse] was framed not in the language of emancipation or justice, but with the vocabulary of charity, technical expertise, neutrality, and a deep paternalism….[it] continued to define non-Western people in terms of their perceived divergence from the cultural standards of the West, and it reproduced the social hierarchies that had prevailed between both groups under colonialism. (574)

While development discourse has been widely critiqued, more recent work in anthropology has argued that it is not monolithic, and attention must be paid to how it is taken up and transformed in particular contexts (Mosse 2013, Tsing 2005). Within the world of environmental conservation, NGOs often draw on this discourse to conduct Integrated Conservation and Development Programs (ICDPs), which aim to encourage local people to conserve biodiversity by making the process of conservation profitable for them. West (2006) describes these programs as "at their base about changing the actions and practices of local people in order to meet the end goal of conservation [and] the integration of local peoples into commodity-based systems of production as a strategy for the conservation of biological diversity" (35). She argues that these projects

portray the market "as both the savior of biological diversity and the most rational and efficient way to organize social and economic life" (39). However, as the idea of community is not as straightforward or neutral as policymakers imagine (Geschiere 2011), it "often works to disguise differential abilities to access power" (West 2006, 36), leading to different expectations between conservationists and local people.

Conservation work in Cameroon involves interactions between a variety of humans, nonhumans, and landscapes. It takes place amidst nearly three hundred distinct languages, in addition to every type of biome found on the entire African continent (Alpert 1993). Daily activities at the Limbe Wildlife Centre highlight conflicts between local farmers, hunters, and international NGOs, each with their own ideas about how Cameroon's natural resources should be used. For employees of the LWC (coming from across Cameroon, in addition to Europe and North America), doing conservation work means searching for common ground among rural hunters and farmers, wealthy French-speaking tourists, and young international volunteers who pay for the opportunity to care for endangered animals. Each of these groups carry with them their own ideologies about conservation, shaped by individual, localized experiences in addition to larger processes like colonization and globalization. Understanding how work gets done at the LWC, and in Cameroon more broadly, requires an appreciation of the complex histories which have shaped its actors and its landscapes — spaces in which collaboration and productivity occur (or not) through a multiplicity of local, regional, national, and transnational ideologies and processes.

Anthropological work on conservation has centered on questions of power, including the continuation of colonial power relations, and the power of transnational organizations to shape local landscapes. However, although language is one of the central ways that power is expressed, reproduced, and destabilized (Woolard 1985, Jacquemet 2005), its role has gone largely

unexplored in conservation work. Environmental studies research across Africa has found that the maintenance of biological diversity is most successful when conducted in collaboration with local people (Abbot and Thomas 2001, Mbile et. al. 2005, Homewood and Brockington 1999). In Cameroon, this collaboration requires the mediation of a complex linguistic landscape (Blommaert 2013, Shohamy and Gorter 2008).

This dissertation therefore follows a call from Anna Tsing to explore how power is "changed and enacted in the sticky materiality of practical encounters" (2005, 1) – practical encounters which are built out of speakers' choices about and interpretations of language. The conservation of Cameroon's biodiversity takes place amongst a plurality of people from different ethnic groups, regions, and countries, in a context where the state exploits these differences to maintain its power, and Western and colonial ideologies about the nature of both people and the environment continue to carry great influence. In this diverse context, attention to the specificities of the people, animals, and activities at particular institutions like the Limbe Wildlife Center is essential in order to understand how collaboration takes place, or where and why it does not.

Misunderstandings and Institutional Talk

Misunderstandings and conflicts surrounding communication have been a common topic in environmental anthropology surrounding ICDPs and other NGO conservation work. Walley (2004), writing about the establishment of a national marine park in Tanzania, describes how residents of the island near the park used a patron-client format with colonial roots when communicating with a World Wildlife Fund official, while the same official used an "alternate political ideology centering around participatory activism" (35) to argue that it was residents' responsibility to make their voices heard.

West (2006) describes how the Crater Mountain Wildlife Management Area (CMWMA) in Papua New Guinea was created because of a misunderstanding between David Gillison, a nature photographer, and residents of the village of Maimafu. Visiting the area, Gillison became fascinated with birds of paradise, and asked the residents to protect a particular bird which nested nearby. When he returned to the area and found that the bird had been killed, residents agreed to give Gillison the land that now makes up the CMWMA in exchange for income. This marked the beginning of long-running misunderstandings between transnational development workers, who believed they were giving Maimafu residents development in exchange for conservation, and the Maimafu residents, who assumed their participation in conservation "would be reciprocated in socially appropriate ways" (xiii), specifically by access to medicine, education, wealth, and technology.

In ethnographic work on environmental conservation, language regularly surfaces as a strategy for exercising or contesting power. Anna Tsing describes how local environmental activists in Indonesia strategically use English in their documents:

> Indonesian is fully adequate to discuss public interest and intergenerational accountability. Translation, however, serves a political purpose, building an expansive public in the space between English and Indonesian. 'Public interest' emerges in that space; the future to which generations look forward is simultaneously local, national, and global. (2005, 212)

Walley (2004), giving the example of a marine park warden who does not want the Marine Parks and Reserves Act translated from English to KiSwahili (the language spoken by local residents), demonstrates the "strategic use of language to draw in, exclude, or harass particular park actors as well as to control information" (201). She also describes a meeting between government officials from mainland Tanzania and local residents in which the officials repeatedly and publicly correct the residents' grammar, despite the fact that KiSwahili is the residents' first language, and is a second language for the officials.

While these ethnographic examples demonstrate the significance of language in environmental work, the conflicts they describe originate and develop in the day-to-day interactions that occur within and around the institutions they study. Work on misunderstandings in linguistic anthropology and conversation analysis has explored the interactional dynamics of these types of intercultural misunderstandings, perhaps most famously with John Gumperz' analysis of contextualization cues (Gumperz 1982, 1992a, 1992b). More recent work has transitioned away from the belief that greater awareness is the solution to interethnic communication problems, arguing that this approach "neglect[s] the power technologies through which elites guard access to upward mobility and institutions resist change" (Jacquemet 2011, 477; see also Pennycook 2007, Eades 2004). An alternative, proposed by Marco Jacquemet, is to see:

> communication as a contested field and as a practice to be inserted in wider and long-standing power struggles. Intercultural communication in this view is less like a cooperative enterprise and more like a battlefield interactants enter more or less well equipped with cultural and sociolinguistic resources. As such they are acutely aware of language use and of the possibility to use their resources for achieving a position of interactional dominance. (2011, 478)

Different norms for communication — combined with pre-existing hierarchies between speakers, as well as unequal access or fluency in the language being used — can cause significant problems that influence not only the interaction at hand, but how participants feel about each other (Bailey 1997, Blommaert 2009, Scollon et. al. 2012, Kurhila 2006).

The tensions, complications, and inequalities involved in intercultural communication often become exacerbated when these interactions occur in institutional settings. As Heritage and Clayman (2010) have demonstrated, although institutional interactions follow the same norms as less formal interactions, they often differ from them in being increasingly task-focused, and revolving around specific, recurrent practices. Moreover, Heritage and Clayman argue that "small behavior sequences are deeply aligned to the workings and ideology of large institutions, and

changes in these sequences can have great significance for the nature of the institution and how its workings are managed" (2010, 32).

Work in conversation analysis has demonstrated how hierarchies of knowledge and power can be created and transformed in the way speakers gain and keep the floor (Local and Walker 2004), make requests (Drew and Couper-Kuhlen 2014), and respond to and evaluate each other's speech (MacBeth 2004). More recent work has examined how people display and challenge epistemic authority (see Heritage and Raymond 2006, Heritage 2012) and deontic authority (see Stevanovic and Peräkylä 2012, Stevanovic and Svennevig 2015), managing their own and others' rights to knowledge and authority. As Stevanovic and Peräkylä describe, "you may command someone to do something, or propose that it be done, or suggest it, or hint at it; all these things claim a certain degree of authority in how the world 'ought to be.' But it has to be done in talk, and it might be resisted at any turn" (315). As both the shape of work and the roles of the people completing it are established in interaction, speakers have the possibility of deploying certain strategies within interaction to reinforce or challenge existing practices and identities.

While the work described is essential in demonstrating ways authority can be constructed and contested, in analyzing how these dynamics play out in individual interactions, it may miss the way rights to knowledge and authority change across time, and across different settings. This dissertation therefore takes into account the trajectories of action (Goodwin 2006) involved in carrying out environmental conservation work, analyzing interactions both during the decision-making process (for example, a meeting between administrators to set animal feeding schedules) and its subsequent implementation (as keepers and volunteers care for animals). In these different settings, who speaks, who listens, how, and in what language varies (Blommaert et. al. 2005, Jørgenson et. al. 2011). Perhaps even more importantly, across these settings, there are dramatic

differences in who has the right to make a decision, who faces the risks in carrying it out, and who is held responsible if things do not go according to plan.

Language Ideologies and Multilingual Institutions

In addition to its focus on individual interactions, work in conversation analysis has historically focused on monolingual interactions, treating mutual intelligibility between speakers as the presumed state of affairs in communication (Kurhila 2006). However, in multilingual institutions like the Limbe Wildlife Centre, shared understanding is rarely a given, but rather something which must be actively produced, maintained, and repaired in collaboration with others, and which is embedded in pre-existing hierarchies of knowledge and power (Ceikaite and Evaldsson 2008, Kyratzis 2017, Raymond forthcoming). Moreover, as described above, mutual intelligibility is shaped by larger individual and institutional ideologies about particular languages and language usage. This dissertation therefore combines conversation analytic and language ideological approaches, in order to analyze the way speakers assert knowledge, power, and authority in particular interactions, and the way these interactions are shaped by larger structures and beliefs.

Multilingualism is frequently a significant (if often unacknowledged) component in the workings and ideologies of institution, although, as Raymond (forthcoming) describes, "a social institution's *ability* to be bilingual does not necessarily correlate with its ground-level interactional preferences and practices regarding bilingualism" (31). Furthermore, institutional ideologies about language usage frequently intersect with ideologies about people. Examining how a Flemish health center deals with multilingualism, Collins and Slembrouck (2006) argue that perceived translation problems cross linguistic and social ideologies, as "concern with communication, with language

that may or may not be understood or faithfully translated, shades over into judgments about kinds of persons" (262). While in their case, the multiplicity of languages that entered the health center were seen as an obstacle to be overcome, recent work in linguistic anthropology has examined how, in many workplaces, languages are often seen as beneficial skills (Urciuoli and LaDousa 2013, Heller 2010, Reyes 2014). This is particularly common in situations where people's labor depends on their linguistic abilities — as the worker is reimagined "as an assemblage of commodifiable elements, i.e., a bundle of skills" (Urciuoli and LaDousa 2013, 176), language too becomes commodified.

As described above, issues surrounding multilingual communication are of particular significance in Cameroon, where the official languages of English and French operate alongside 250 indigenous languages. National ideologies about French and English within Cameroon intersect with ideologies of French and English as international languages, as many Cameroonians (both Anglophone and Francophone) view French as dominant and obligatory within the country, but English as providing access to desirable international opportunities (Kuchah 2013, Ngomo 2011). At the Limbe Wildlife Centre, ideologies of English as an international *lingua franca* (see, Pennycook 1998) are often only partially shared by native Cameroonian English speakers and European volunteers and NGO workers, who may hold different beliefs about what counts as English and how it should be used. As discussed above, the status of English as *lingua franca* at the LWC is complicated further by its status as an official but marginalized language (Biloa and Echu 2008).

With these issues in mind, this dissertation is in conversation with previous work that has examined the consequences of monoglot ideologies for speakers from multilingual communities, both during colonization (Irvine 2008, Dorian 1998), and, more recently, in the case of asylum

seekers (Jacquemet 2011, Blommaert 2009, Eades 2004). While there has been increasing interest in the effects of Western language ideologies on multilingual speakers, language ideological work has in general been more concerned with exposing the simplifying ideologies of nation-states (Silverstein 1996, Heller 1999, Cameron 2007), than exploring how new language ideologies are generated, or how indigenous or alternative ideologies interact with dominant ones.

These issues are particularly salient in Cameroon, as in many other parts of Africa, where multilingualism is often viewed as normal, rather than deviant (Moore 1999, Bokamba 2008), despite the continuing prestige of European languages and norms for communication (Mazrui and Mazrui 1998, Fabian 1986, Fardon and Furniss 1994). This dissertation therefore takes inspiration from prior detailed studies of language ideologies and communication in post-colonial Africa, including Spitulnik 1998, Vigouroux and Mufwene 2008, and McIntosh 2014, in order to explore the interaction of the differing ideologies of Cameroonian staff and international volunteers, in addition to the potential emergence of new and alternative ideologies.

Chapter Overview

This dissertation provides a case study of the way ideologies about both language and conservation intersect in, are reflected by, and contested through the daily communicative practices involved in carrying out environmental conservation work. At the Limbe Wildlife Centre, a highly transnational, collaborative, and generally successful institution, this work occurs in the midst of great inequalities and ideological contestation. Through the analysis of how animal keepers, NGO managers, and foreign volunteers work together, I argue that the conservation of Cameroon’s biological diversity requires a negotiation of its linguistic diversity, as different linguistic abilities and ideologies serve to magnify racial, neocolonial, and epistemic divides. By

clarifying the pragmatic and ideological processes at play at the LWC, this dissertation offers a new perspective on how global environmental problems are negotiated in transnational, multilingual, multipolitical settings.

In chapter two, I examine the different types of work and knowledge produced at the Limbe Wildlife Centre through the lens of 'observation.' Animal keepers, foreign volunteers, and tourists all conduct observations, bringing different types of knowledge, motivations, and goals to the act of seeing primates. Although each type of observation requires time, energy, and knowledge, the tools and resources surrounding primatology volunteers' observations give them more institutional legitimacy than those of animal keepers, erasing the centrality of keepers' knowledge and labor to the sanctuary's day-to-day ability to function. This chapter analyzes the use of the term 'observation' as a shifter (Silverstein 1976), and how its unequal applications illustrate institutional issues surrounding expertise, inequality, and the value of different types of work.

In chapter three, I focus on the acquisition of professional vision (Goodwin 1994) in primatological observations, as a French volunteer is trained to code chimpanzee behavior. This is a time-consuming, labor-intensive process, requiring the memorization of dozens of different codes, the ability to map them onto moving chimpanzees, and the ability to do all of this in both French and English. I argue that the acts of memorizing, discussing, applying, and analyzing these codes produce a particular type of professional vision, the use of which produces the field of primatology, and the Limbe Wildlife Centre as a particular type of institution.

Chapter four describes the collision of primatological and keeper knowledge about chimpanzees in meetings between NGO managers, animal keepers, and volunteers. While managers see meetings as egalitarian spaces, keepers instead see them as hierarchical settings where management gives them commands or criticisms. Drawing from work on epistemics,

deontics, and assessments, this chapter analyzes the interactional strategies the assistant manager uses to minimize the physical labor and risk involved in chimpanzee rehabilitation, as well as the strategies keepers use to contest her vision. This chapter examines two contradictory components of the meeting: how consensus is possible between groups with very different linguistic, cultural, and epistemic backgrounds; and how the act of reaching this consensus erases the discussion and contestation that occurs along the way.

Chapter five follows the trajectories of action (Goodwin 2006) involved in chimpanzee rehabilitation, as keepers work with chimpanzees to carry out decisions made in meetings. The communication involved in this work is generally much less structured than that of meetings, involving additional complications related to time and space, and the presence of non-human actors with their own understandings and motivations. This chapter analyzes multimodal communication (Goodwin 2000) between keepers, volunteers, and chimpanzees, arguing that although keepers' labor is primarily understood to be menial, the unpredictable nature of chimpanzees requires a type of professional vision which is both complex and often overlooked.

The concluding chapter examines the intersection of the different linguistic resources, ideologies, and types of knowledge outlined in the previous chapters in relation to the concept of success. As the LWC is widely regarded both within and outside Cameroon as a successful and productive conservation institution, this chapter explores how success is defined by the different actors involved in wildlife conservation, and what the implications of these definitions might be both for the LWC and for wildlife conservation more broadly.

CHAPTER TWO
Leisure or Labor? Expertise and Expectations in Wildlife Observations

"Victor, I forget to tell you," called Sara, a 21-year-old undergraduate from France, as she walked up to a large cage. Inside, Victor, the head chimpanzee keeper with over twenty years of experience and a reputation for strictness, was bent over with a broom in one hand and a hose in the other, efficiently sweeping mango peels, chimpanzee droppings, and picked over leaves into a pile. He didn't look up.

"Today I will stop to clean at 10? For observation?" Sara continued haltingly, struggling to find the right words in English. As quickly as she found them, they were drowned out by the sounds of rushing water from the hose, the scritch-scritch of the straw broom on the floor, hoots from the excited chimpanzees next door, and the persistent loud hum of the generator that was powering the electric fences after a storm the night before which had knocked out the main power supply.

"And for after, I do observation at three? So, I w-, I will not help, for do the feeding?" She continued. Another thirty seconds passed. Victor stood up and turned around, looking at Sara for the first time.

"Are you talking to me?" He asked.

"Yes," she said, laughing uncomfortably. He gave her a long look.

"I'm not getting you," he said. He turned off the hose and Sara began again, with Victor's full attention. She explained slowly and painfully that Peggy, the assistant manager, had assigned her to do observations of the chimpanzees twice today — first at ten this morning, and again at three in the afternoon. Although the official work schedule had her listed as working in the chimpanzee section that day, instead of assisting keepers with the difficult physical labor of

cleaning cages and feeding animals, she would be sitting in a plastic chair outside an enclosure in two hour blocks, taking periodic scans and jotting down the behavior of each individual chimpanzee in a large notepad.

"So you will not work?" Victor said finally, after Sara finished her explanation. She repeated her observation schedule once more, and Victor confirmed with her — she would not clean after ten, or help with the feeding in the afternoon.

"Yes," Sara nodded in relief.

"Okay." Victor said with a brief nod, turning on the hose and returning to sweeping. Sara picked up a rake and climbed inside to join him, albeit briefly, until her observations were scheduled to begin.

Observing animals is one of the primary activities that occurs at the Limbe Wildlife Centre. Cameroonian animal keepers like Victor, foreign volunteers like Sara, and the 50,000 tourists that pass through the LWC annually all conduct observations, although there is great variation in whether and how these observations are treated as work, formalized and valued, required or done for pleasure, and if and how the results of these observations are put to use by the sanctuary afterwards. This variation depends both on who is doing the observing (keeper, volunteer, tourist) and on which type of animal they are observing. Animal keepers, primatologists, and tourists all bring different types of knowledge to the act of observing primates, and do so with different motivations and goals. Their observations each require different resources and types of expertise, and produce different results: a rewarding vacation and photographs in the case of the holiday volunteers, increased well-being of animals in the case of the keepers, statistical data and predictions of animal behavior in the case of the primatology volunteers. However, each of these

types of observations also involve different ways of seeing and interpreting animals and their behavior.

With the exception, perhaps, of tourists, the Limbe Wildlife Centre's NGO managers orient to all of these different activities as 'observations,' although they are often inconsistent when defining what counts as an observation, or how it should be done. In this way, I argue that the word 'observation' functions as a shifter at the LWC. As Michael Silverstein describes, "the referential value of a shifter is constituted by the speech event itself" (1976, 29) – i.e. the meaning of a shifter is dependent on both its referential meaning, and its pragmatic meaning within the context in which it is uttered. Or, as Robert Moore (drawing from Urciuoli 2009, 2010) describes, shifters are:

> terms whose conceptual content – and whose reference to real-world objects – shifts in subtle but important ways, depending on who is using them, when, where, to whom, and to what ends…. Like all indexical expressions, they not only *reflect* aspects of the contexts in which they are used, they help to *create* those contexts, in and by their very use. (2015, 20)

In this chapter, I analyze the four main ways the term 'observation' is applied at the LWC: to the activities of tourists and holiday volunteers, whose observations require no training and are generally done for pleasure; and to the activities of primatology volunteers and animal keepers, whose observations are labor intensive, requiring experience and training. Each of these groups receives different amounts of resources to aid in their observations, and faces different consequences if they fail to do them in accordance with management's expectations.

For those for whom observing primates is both a daily experience and a part of their job, certain features of primates' appearance, movement, and behavior become salient, meaningful, and categorizable in ways that are generally invisible (or at least unintelligible) to an outsider. Charles Goodwin discusses the processes involved in this discipline-specific way of seeing as 'professional vision' — the "socially organized ways of seeing and understanding events that are answerable to the distinctive interests of a particular social group" (1994, 606). At the LWC, there

are two main types of professional vision involved in observing primates: the practical but unstandardized vision of keepers, and the scientific and generalizable (but decontextualized) observations of volunteers.

Tourists, primatology students, and animal keepers may see and interpret different things when they observe the same group of chimpanzees. Despite holiday volunteers' desires to assist as much as possible in the work of conservation, their lack of training and experience relegates their observations to nearly the same status as those of tourists, who come to the sanctuary primarily for entertainment. In contrast, both primatologist and keeper observations require a great deal of time, energy, and knowledge. However, the tools and resources surrounding primatological observations create chains of authentication (Irvine 1989), giving them more legitimacy than the work of the LWC's keepers and erasing the centrality of the keepers' knowledge and labor to the sanctuary's day-to-day ability to function. The inconsistencies in the way management deploys the term 'observation' with tourists, holiday volunteers, primatology volunteers, and animal keepers enables management to exercise their authority in order to accomplish numerous and sometimes contradictory goals – ranging from bringing in volunteer and tourism income, to quantifying and legitimizing rehabilitation protocols, to criticizing the work habits of animal keepers. In this way, the shifting nature of the term 'observation' provides a window into the work, hierarchies, and inequalities through which the sanctuary operates.

Observations as Leisure

There are two main groups of people who come to the LWC to observe animals with little knowledge or experience, both of whom also come with the goals of entertainment and/or education. Tourists come to the LWC from across Cameroon and the world to encounter wild

animals, spend time in green spaces, and enjoy each other's company for a couple of hours. Holiday volunteers come mainly from Europe, visiting the sanctuary as part of a "working vacation" for a few weeks, but with similar goals to tourists: to experience a new place, and have the opportunity to be close to wild animals. For both groups, observing animals is a central part of their experience. However, while observations generally satisfy the main goals of tourists, for holiday volunteers, observations often do not live up to their expectations for interacting with animals.

Observing as a Tourist

The Limbe Wildlife Centre, with its exotic animals, international reputation, and location in a beachside town, is a major tourist destination in Cameroon. The sanctuary is open to the public seven days a week, from nine in the morning until five o' clock at night. It hosts 50,000 tourists each year, mostly on weekends and holidays. The sanctuary categories approximately 70% of its visitors as "national" tourists – Cameroonian visitors, the majority of whom come from Douala, Cameroon's largest city, located only a couple of hours away in the Francophone region. Aside from Douala, most national tourists come from Limbe and the surrounding area. Like in many American zoos, the majority of visitors are families, with Sunday after church being the most popular time to visit. The sanctuary also generally sees several large groups of between ten and fifty people each day, mainly school groups or professional team-building excursions. The LWC is also a popular date spot, with young couples discreetly holding hands, teasing each other and taking photos together.

International visitors mainly come from Europe, with the majority coming from citizens of Cameroon's former colonial powers, especially France and Germany. There are many American

visitors as well – mainly Peace Corps volunteers, military, or university students on study abroad trips. Staff also report an increase in the last few years of tourists from China, who often arrive in groups of twenty or more on large, air-conditioned tour buses. As the LWC is the most accessible and public of Cameroon's conservation institutions, it offers the best opportunity for international visitors to see a chimpanzee or gorilla during their time in Cameroon. The LWC additionally caters to this international crowd through an upscale European restaurant located inside of the sanctuary, which serves pizza, hamburgers, and milkshakes.

Tourists generally spend between one and two hours walking the wide dirt path around the sanctuary. Five of the sanctuary's animal keepers double as tour guides, having received training through the LWC's education program to teach visitors about conservation and answer their questions about the animals. As there are not many tour guides and they often have other more pressing responsibilities to attend to, tour guides generally accompany only larger groups, and the majority of visitors move around the sanctuary unaccompanied, at their own pace.

There are numerous benches throughout the sanctuary for visitors to sit and observe from, but most lean against the metal bars of the safety rails set back from the enclosures, taking pictures, pointing, or calling to the animals. The observations of tourists are scaffolded occasionally by tour guides, as mentioned above, but also by signs posted outside each enclosure, listing basic facts about each species, their behavior and distribution, or, in the case of chimpanzees and gorillas, biographies of particular animals and how they came to live at the LWC.

Figure 2.1: Signs displaying species and biographical information about the Limbe Wildlife Centre's gorilla population

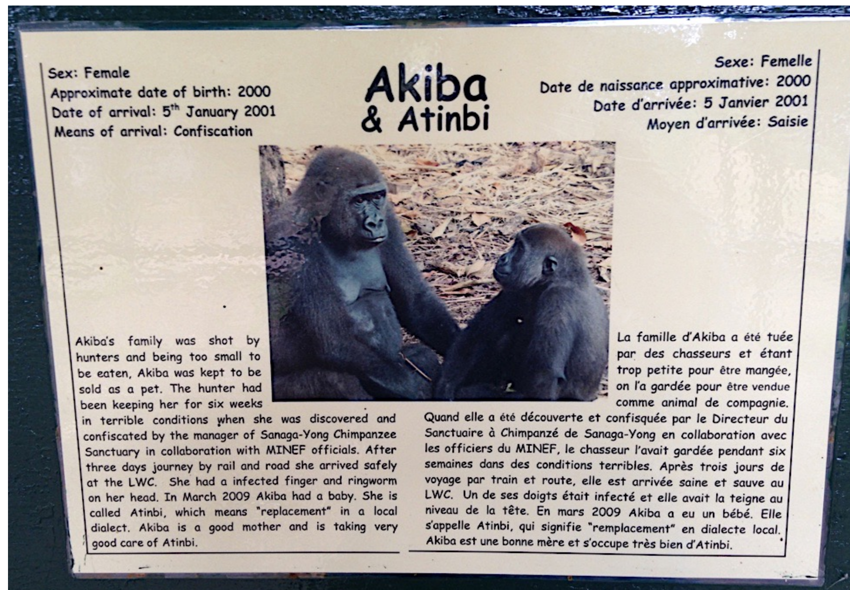

Figure 2.2: Sign describing the history of LWC gorillas Akiba and Atinbi. English text (left) reads: "Akiba's family was shot by hunters and being too small to be eaten, Akiba was kept to be sold as a pet. The hunter had been keeping her for six weeks in terrible conditions when she was discovered and confiscated by the manager of Sanaga-Yong Chimpanzee Sanctuary in collaboration with MINEF officials. After three days journey by rail and road she arrived safely at the LWC. She had a [*sic*] infected finger and ringworm on her head. In March 2009 Akiba had a baby. She is called Atinbi, which means 'replacement' in a local dialect. Akiba is a good mother and is taking very good care of Atinbi."

Figure 2.3: Tourists observe and photograph one of the LWC's gorillas.

The LWC invests considerable time and resources in its education program, with the aim, similar to many American and European zoos, of using their captive animals as ambassadors to inspire awareness and care for their wild counterparts (see Braverman 2012, Bishop 2004, Clayton et. al. 2009). However, the majority of tourists come to the sanctuary with the main goal of entertainment. Tour guides lament that Cameroonian visitors in particular see the sanctuary as a zoo, frequently complaining that the sanctuary has no lions or elephants, or requesting that the tour guides make resting animals "do something." Tour guides say international visitors are more likely to express concern for animal welfare – are the cages big enough? Are the animals healthy?

For both types of tourists, animal observations are unskilled, requiring no training, conducted out of curiosity or a desire to see with their eyes things they have only encountered in books or on television. These unskilled observations nevertheless produce a variety of outcomes,

both material and immaterial. Perhaps most obviously, these observations produce photographs, and more intangibly, memories, but they also perhaps produce bragging rights, and they certainly produce a non-negligible amount of income for the sanctuary – international visitors pay 2000 CFA, or approximately $4 USD, while Cameroonian visitors pay 500 CFA, or approximately $1 USD, per visit. In addition to photographs, managers and tour guides also hope that tourists' observations produce some sort of care for animals, and/or perhaps changes in people's behavior: that observing chimpanzees at play will help tourists see them as more human-like, and therefore more deserving of care and protection. Tour guides express the hope that learning about animal behavior and conservation problems may make Cameroonian tourists more likely to stop eating bushmeat or keeping animals as pets, and may encourage international tourists to donate money to the sanctuary.

Observing as a Holiday Volunteer

The other main group of people at the LWC that conduct frequent but unskilled observations are a group I call "holiday volunteers," adopting a nickname given to them by a senior primatology volunteer. More commonly at the sanctuary, these volunteers are referred to as "short-terms," as they normally only stay at the LWC between two weeks and two months (in contrast to "long-term" volunteers – mainly primatology volunteers – who may stay for six months or longer). Similar to tourists, holiday volunteers generally have little to no prior knowledge or experience working with wild animals. Unlike tourists, however, nearly all holiday volunteers come from Europe, with 60% coming from France and the Netherlands, and 30% coming from other European countries during 2017.[6] The majority of holiday volunteers are either in their 20s and still at

[6] During the fieldwork period, the remaining 10% of these volunteers came from the United States, with the exception of one volunteer from Australia.

university or recently graduated, or in their 50s and 60s with grown children or near retirement. 95% of holiday volunteers are female.

At any given time, there are generally between three and ten holiday volunteers at the LWC, all of whom pay 300 Euros a week to work at the sanctuary, and generally stay for two to six weeks. During this time, they spend six days a week at the sanctuary, assisting keepers with animal care and other odd jobs. In interviews, they frequently described visiting Africa and/or working with primates as a life-long dream. Very similar to the European volunteers described by Parreñas (2012) who pay to work with orangutans in Indonesia, volunteers at the LWC describe a desire to help animals through physical labor and care. Simply making a monetary donation "would deny them the experience of engaging affect while in the proximity of rare wildlife and while engaging in toil" (Parreñas 2012, 682). As many of these volunteers work desk jobs at home, they "are deeply alienated from the products of their labor in the service economy. [They turn] to commodifying manual labor and paying to participate in meaningful production" (Ibid.).

Holiday volunteers spend their mornings working alongside keepers, assisting them with animal care. This close contact with animals is the main reason most of them describe for wanting to volunteer. As management strictly forbids volunteers from touching animals (in order to prevent injuries, disease transmission, and animals becoming too used to human interaction), feeding animals and cleaning cages is generally the closest direct contact with animals that volunteers are able to achieve. However, animal care generally finishes around 11am, and does not resume until the next feeding at 4pm. In between, volunteers might take shifts working in the gift shop or assist with special projects, but the majority of the time they are left more or less to their own devices.

Figure 2.4: Volunteers assist animal keepers with cleaning.

When these volunteers ask managers how else they can help during the day, "do some observations" is a common response. In fact, at one point, in response to holiday volunteers' increasing complaints about being bored or not knowing what to do, management posted a flyer on the central bulletin board entitled "LWC VOLUNTEERS: There is ALWAYS something to do!" Alongside working in the gift shop or creating enrichment activities for the animals, "Observe animals and ask questions" was one of the main options. As the flyer described: "This is the best way to get to know individual and species behavior. The more you understand, the more you can contribute to providing every animal with the best life that we can!"

For holiday volunteers, observations involve sitting alone outside an enclosure, not taking notes, but just watching the animals for however long they like. In some cases, management may direct interested volunteers to watch a particular group of animals ("Campo the mandrill is new to

the group. See if he is getting into any fights."), or ask keepers to teach them the names of particular animals and how to identify them.

But generally, holiday volunteer observations involve little to no training or expertise, and management does not ask volunteers to report on their observations. Similar to tourist observations, these observations are supposed to be conducted mainly for fun, and it is common for management or animal keepers to ask holiday volunteers as they pass by if they are enjoying themselves. In fact, these observations differ from tourist observations mainly in that volunteers have spent more time at the sanctuary, and have permission to sit closer to the animals, in parts of the sanctuary that are closed to the public. Volunteers report that these observations can be interesting at first, but eventually they become boring, especially when there is nothing else to do, and they have spent all this time and money coming to the sanctuary in order to help.

Figure 2.5: Keepers supervise as a volunteer photographs gorillas.

Also similar to tourist observations, holiday volunteers' observations produce photographs – in their case, more exclusive, wild-like photographs of animals without visible bars or other barriers, which they are able to take by holding the lens of the camera between the bars of a cage or fence (see figure 2.5). These observations also produce selfies and social media posts, all of which serve as evidence of a volunteer having been to Africa, had close contact with wild animals, and contributed their time and labor to wildlife conservation.

The volunteer program itself also produces significant income for the sanctuary – 15-20% of its annual budget. However, in an interview with Guillaume le Flohic, the NGO manager, he emphasized that it was not only the volunteer fees that helped – the LWC is perpetually short-staffed, and does not have the budget to pay more keeper salaries. The labor of volunteers means that the sanctuary can operate with a smaller staff while still managing to carry out all the necessary daily tasks involved in keeping animals clean, fed, and cared for.

Through holiday volunteers' sharing of photographs and experiences, management also hopes that these observations will encourage new volunteers to come to the sanctuary, and that the personal significance of volunteers' experiences at the sanctuary will inspire them to become long-term supporters of the sanctuary's work. This has happened with several volunteers, who make return visits to the sanctuary each year and conduct fundraising activities for the sanctuary in between. Two of these volunteers have even gone as far as to create private foundations which fundraise for special projects at the LWC and help attract new volunteers to the sanctuary.

Observations as Labor

For tourists and holiday volunteers, observing is an informal, unskilled activity, primarily conducted for the observer's enjoyment. In contrast, the observations of both primatology

volunteers and animal keepers require training, skill, and different types of professional vision that allow these experts and aspiring experts to see and make sense of animal behavior in particular ways. Also unlike tourists and holiday volunteers, primatology volunteers and animal keepers are both expected to produce evidence of their observations, and to be able to use this evidence to actively improve animal well-being, or to prevent problems from occurring.

Despite these commonalities, management applies the term 'observation' selectively and unevenly to these different groups. In the case of primatologists and their apprentices, 'observation' is a term that refers to a very specific type of activity which requires a particular skillset only gained through intensive training. The acquisition and application of this skillset is the subject of much commendation from the managers, and affords volunteers promotions both within the sanctuary, and outside of it through opportunities for advanced study or employment. In the case of animal keepers, however, the meaning of 'observation' is ambiguous, and the products of these observations can only be seen through negative evidence – a lack of animal escapes, injuries, or other problems. Animal keeper observations are ambiguous in nature, have a significant lack of time and resources allocated to enabling keepers to do them, and still involve a vast amount of knowledge and experience. Nevertheless, keepers' observations (or, more often, a lack of evidence for them) are more likely to produce reprimands from management rather than commendations or promotions, when animals escape, fight, or otherwise behave in ways management expects keepers to be able to prevent.

Observing as a Primatology Volunteer

Unlike holiday volunteers, primatology volunteers generally have at least some formal training in fields like primatology, biology, environmental science, or agronomy, and aspire to

careers in conservation. They come to the LWC to apprentice under the NGO managers, gain research experience and letters of recommendation for jobs or graduate school. During the fieldwork period, there were eight primatology volunteers, all of whom were in their early to mid-20s, and all of whom came from France. Many primatology volunteers are actually recruited directly by the NGO managers to assist with particular rehabilitation projects. While holiday volunteers may only stay for two to six weeks, primatology volunteers stay much longer – normally between two to six months, although sometimes a year or longer – in order to complete their training and assist with major projects at the sanctuary. Also unlike holiday volunteers – almost all of whom are women – primatology volunteers are about 50% male, 50% female.

The largest difference, however, between these two groups of volunteers is in how they see their role at the sanctuary. "Holiday volunteers come here to play," complained one senior primatology volunteer. "They don't understand that we are here to work." While holiday volunteers generally spend their days shadowing keepers, doing odd jobs around the sanctuary, and looking (often unsuccessfully) for other ways to be helpful, primatology volunteers work with management before their arrival to develop particular projects – most commonly the monitoring of a specific rehabilitation process. For example, Sara, the 21-year-old French undergraduate described at the beginning of this chapter, spent two months at the LWC in 2017 assisting with the integration of three young chimpanzees into a large, potentially dangerous group of mature chimpanzees (see chapters 3-5).

Management invests large amounts of time and energy into helping Sara and other primatology volunteers acquire the necessary skills to assist with these processes by conducting formal observations of animal behavior. First, Sara must work with animal keepers to learn to identify each of the LWC's nearly fifty chimpanzees via unique physical characteristics such as

size, color, or facial features. Next, with the help of managers and senior primatology volunteers, she must learn to use an ethogram, a catalog of dozens of different codes for behaviors chimpanzees might produce. These behaviors range from simple ones like "grooming" or "biting," to more complex ones such as "brachiating," "charging display," or "pant scream". She must then learn to apply these codes to the moving chimpanzees in front of her (see chapter 3).

Once she has acquired these skills, Sara can begin conducting observations, taking samples of group social behavior by sitting outside enclosures with a notepad in two hour blocks at different times of day. During these times, she periodically scans the group of chimpanzees in front of her and jots down a code that describes what each one is doing at that moment. These lists of times, names, and codes are then entered into the quantitative analysis software R, and the results of the subsequent analysis provide information like which chimpanzees have had the most friendly or aggressive interactions.

Primatology volunteers' observations normally begin at six in the morning, while animals are just waking up. They may continue until six in the evening, once nearly everyone else has already gone home. During this time, primatology volunteers perch precariously in plastic lawn chairs or on empty water jugs, hunched over their notebooks in the tropical heat. Observation periods are carefully scheduled and announced at the morning staff meetings, along with explicit instruction for the rest of staff and volunteers not to disturb volunteers while they are doing observations. These volunteers are also exempt from cleaning and feeding work (a volunteer's normal responsibilities), and management make special efforts to ensure that they have access to food, notebooks, and other materials throughout the day. At the end of their stay, primatology volunteers make presentations to the staff of their findings, which routinely end by the managers making a speech about what a good job they have done and how important their work is.

Figure 2.6: A primatology volunteer observes a group of drill monkeys.

The results of primatological observations inform decisions about animal care and rehabilitation, with the goal, in Sara's case, of ensuring that young, vulnerable chimpanzees are able to safely integrate into a larger group and will not be injured by their older, more aggressive new groupmates. In addition to producing recommended courses of action for introduction processes, these observations also create new primatologists, allowing volunteers like Sara to add practical research experience to their CVs, and gain letters of recommendation for graduate school and future employment.

Perhaps most importantly, primatological observations create the LWC as a particular type of institution — one that follows scientific protocols and merits substantial international funding. The statistical analyses generated from primatological observations are used in reports to the NGO that co-runs the LWC, and to funding organizations, demonstrating the efficacy of the LWC's rehabilitation programming. These observations are therefore part of what contributes to the Limbe Wildlife Centre's international reputation for doing conservation well. In the case of the Pan-

African Sanctuary Alliance (PASA) and other transnational conservation and funding organizations, successful conservation involves, in part, the ability to measure conservation outcomes using quantitative data.

Observing as an Animal Keeper

The Limbe Wildlife Centre employs approximately fifteen people as animal keepers – around half the total staff of the sanctuary.[7] As described in chapter one, about half of the keepers are employed by the government, while the other half receive their salaries through the NGO. All animal keepers are Cameroonian, and the majority are from Limbe or the surrounding area. During the fieldwork period, all but one animal keeper was male. The majority of animal keepers are in their 40s or 50s, and have worked at the sanctuary for ten to twenty years. They generally specialize in the care of one particular species, such as chimpanzees, gorillas, or guenons. Working for the sanctuary provides a relatively rare opportunity in Cameroon for consistent, salaried employment. However, most keepers describe their motivations for working at the sanctuary in terms of a passion for animals. Several of the younger keepers grew up in Limbe, and began visiting the sanctuary first as part of the LWC's Nature Club, which meets each Saturday and offers children environmental education and fun animal-related projects around the sanctuary. When they became older, these Nature Club graduates began volunteering at the sanctuary before finally gaining employment.

For animal keepers like Victor, work days start at eight in the morning with a general staff meeting. Keepers are then assigned to a section (chimpanzees, guenons, baboons, etc.) and spend the next 3-4 hours doing the bulk of the day's work: cleaning cages and feeding animals. This

[7] Staff other than animal keepers include construction workers like builders and welders, as well as reception workers, gardeners, and janitors.

work is hot, dirty, physically exhausting, and often dangerous – pushing 200 pound wheelbarrows full of bananas or primate waste, sweeping floors, scrubbing platforms, carrying buckets of water, and fixing electric fences, all the while dodging grabbing primate hands and biting teeth, in the tropical heat and humidity. Once the morning work is finished, keepers will intermittently take a rest, socialize, or occasionally leave to run a quick errand in town unless they have a particular task scheduled or an animal that needs extra care.

These breaks are a cause of concern for management, who expect keepers to stay near their assigned animals' enclosures, and informally observe what they are doing throughout the day. "The first thing for being a good keeper, is that you know all of your individuals, and you take the time to just watch them," says assistant NGO manager Peggy Motsch. "Because we know, even if the work of the cleaning is not always perfect, but they take care of the individual [animals], they will be able to say 'okay today this one is not doing fine, we need to do something,' and that's the most important thing for me."

According to Peggy, observations are one of the key components of animal keepers' jobs, although what these observations should consist of is generally left undefined. The primary goal of keeper observations is to prevent or respond to disasters: animals escaping, becoming injured, or fighting with each other. The secondary goal of these observations is to loosely monitor group dynamics — to see if animals are healthy, behaving normally, isolated or interacting with others, starting fights or being friendly, etc. According to Peggy, keepers' observations are a fundamental part of animal care, a keepers' primary duty. However, in the excerpt above, Peggy also describes keepers' observations as "just watch[ing]" – a seemingly passive, unskilled task, although it may also involve a sense of monitoring as a protective act.

Figure 2.7: Animal keepers Victor and Thomas monitor chimpanzees during evening feeding.

Although keepers do not receive formal primatological training in the same way that primatology volunteers do, and also do not generally receive specific instructions on what, how, or when to observe, they are often held accountable for *not* observing, or not observing in particular ways. As the goal of keeper observations is mainly preventative — breaking up a fight, spotting a small injury before it becomes a large one — there can be little positive evidence of having conducted them. While the primatology volunteers I describe below have logbooks and statistical analyses, keepers' only evidence of having done observations can be a healthy group of animals — a lack of injuries, fights, escapes. This emphasis on negative evidence puts keepers at a serious disadvantage.

In addition to failing to specify what exactly keeper observations should consist of, or providing training or resources for them, management also fails to structure keeper responsibilities in such a way that they will have the time or energy to do them consistently. The sanctuary is perpetually short-staffed, and, as mentioned above, does not have the budget to pay additional keeper salaries, relying instead on inexperienced volunteers. This shortage of staff, combined with the unpredictable nature of working with wild animals (see chapter 5), means that keepers' daily responsibilities take different amounts of time each day. Once they have physically recovered from the demanding work of cleaning and feeding, keepers' afternoons involve a combination of rotating tasks, ranging from going out into the fields to cut tall grasses for the animals, picking up a truckload of bananas from a plantation thirty kilometers away, assisting with construction projects, or leading tours for visitors. While it is true that some keepers tend to be busier than others, there are often not only few training or standards for keeper observations, but also simply very little time.

Expert Observations and Contradictory Expectations

Expectations for keeper observations become even more unclear when managers, keepers, and primatology volunteers undertake the time-consuming, labor-intensive process of integrating new animals into an existing group. In April 2017, young chimpanzees Mayos, Lolo, and Madame began the process of moving from the LWC's small chimpanzee nursery to the chimpanzee "island," a large group of thirty mature and potentially dangerous chimpanzees located across the sanctuary. Over the next year, management, keepers, and primatology volunteers worked together to carefully plan when and how the new and old chimpanzees should come into contact, so that they could build positive, friendly relationships with each other, and avoid fights and injuries.

French primatology volunteers Sara, a young novice working on an undergraduate honors project, and Alice, a senior volunteer with a Master's degree in conservation and population management, were assigned to conduct formal observations of chimpanzee group dynamics throughout this process (see chapter 3).

The chimpanzee introduction additionally involved significant increases and changes in animal keepers' work schedules. Not only did they have three additional chimpanzees to care for and monitor, but as these chimpanzees had to remain separate from the main group for several months, the introduction also doubled the number of cages that needed to be cleaned each day. Keepers complained that the addition of these new work responsibilities often led to unrealistic expectations from the managers, who held keepers responsible for all aspects of the introduction process, regardless of the amount of volunteer assistance they received to cope with the increased workload (see chapter 5).

By the end of July 2017, the introduction of the three young chimpanzees was heavily underway, and would continue for nine more months. However, by mid-July, both Sara and Alice had reached the end of their time volunteering and returned to France. Shortly before their departures, assistant manager Peggy also returned to France for a few weeks to visit family. Before she left, she gave Alice instructions to leave keepers a list of which chimpanzees to introduce to each other on which days. She then held a meeting with keepers to plan for how the introduction process should continue while she was away. However, Peggy failed to account for how observations should continue in Alice and Sara's absence. Indeed, without volunteers (who have both the training and the time to conduct formal observations), there was no realistic way for observations to continue in the same fashion. Nevertheless, when Peggy returned, she called a

meeting with chimpanzee keepers Victor and Guy, where her first order of business was to ask keepers about the findings of their observations.

<u>Example 1</u>

```
01    Peg:  so now, (.) with observation, (.)
02          because now you are in charge since a month
03          because Alice has left since a month,
04          you make the observations, you have the data.
05          [you working
06    Vic:  [Alice did observation.=
07    Peg:  =yes but she left since a month.
08          (0.8)
09    Vic:  but she was supposed to make the list, after observation,
10          these are the people who can go in with them.
11          so we don't know. (.) so as [long as
12    Peg:                              [so you never observe them?
13    Vic:  no^ she has been there making the report,
14          so before she left I don't know if she gave another list
15          that we should follow.
16          (0.5)
17    Peg:  so you ne^ver observe.
18          (1.1)
19    Peg:  so you don't know.
20    Vic:  ((quietly)) yes
21          (2.4)  ((Peg raises chin, smiles tensely, taps pen))
22    Guy:  yeah because I think what he is saying
23          uhm I think Alice was here, she did observations,
24          and she made a report to you. yeah.
25    Peg:  ((nod))mmhmm.
26    Guy:  I [think
27    Peg:    [I am supposed to discuss with you too.
28    Guy:  I think for that report (.) that Alice made, (.)
29          we said okay this this is what is happening.
30          but if if we also give you our own report,
31          or our own observation, (.) it might be contrary
32          to what she has uh she has programmed.
```

Peggy frames what she expected keepers to have done in her absence as observations (lines 1, 4), which they interpret as the primatological observations that Alice and Sara have done. The keepers did not receive training or instructions on how to do these observations — they simply had the list that Alice left behind of which chimpanzees to introduce to the new ones on which days. They are therefore taken aback to find that Peggy seems to have expected them to have

continued Alice's observations. Victor immediately and firmly abdicates responsibility for conducting this type of observation, asking for a report he assumes Alice sent to Peggy upon her departure (lines 9-11). Guy attempts to explain Victor's stance, saying that their observations may have contradicted Alice's, and Alice's were the ones that Peggy had approved (lines 22-32).

Here, the shifting, ambiguous nature of the category of 'observations' causes problems. Keepers interpret 'observations' as referring to a specific type of activity — one conducted by primatology volunteers like Alice, who has the authority to generate reports, which then become plans for the keepers to carry out. The keepers have been excluded from receiving the training, the time, and the authority to do these observations and make these plans. They therefore see their role instead as following the directions of Peggy or, in her absence, Alice — implementing the plan, rather than creating it. Peggy interprets keepers' reluctance to describe what has been happening with the introduction while she was away as evidence that the keepers have been neglecting their duties– that they have not been taking the time to observe what is going on with the new group (lines 17-19).

```
33    Peg:  where is the problem?
34          if it's not the same observation, it's an observation.
35          I ne^ver ask since the beginning-
36          since the beginning of the project,
37          I never asked only on the shoulder of Alice, (.)
38          we are a team. (.) working all together, no?
39          (0.7)
40    Guy:  yeah.
41    Peg:  that's right. (.) and that's the plan since the beginning.
42          you are involved. she take her observation
43          because she can stay longer than you,
44          because you have other job to do. but you work wi^th her.
45          and now she left since a month. (.)
46          so, (.) you just follow the schedule but you didn't take any:,
47          you didn't take time to observe what's happening?
48          with Lolo Madame and Mayos and the others?
49    Vic:  ((nods))
```

In line 38, Peggy uses the language of teamwork to implicate the keepers in the observation part of the introduction process, directly contradicting her framing in lines 1-2, where she states that "now" the keepers are "in charge," since Alice has left. She further admits in lines 42-44 that she does not expect keepers to have the time to do observations like Alice. Nevertheless, she accuses the keepers of failing to fulfill their responsibilities by not doing observations.

It is true that, in Peggy's absence, the keepers did not sit outside cages at systematic intervals with a notebook, jotting down codes, as Alice and Sara had done – nor is this something Peggy would have expected them to do. However, it is not true that the keepers did not spend time with the chimpanzees during this period. Keepers worked closely with the chimpanzees every day as they transferred them to the appropriate locations, brought food and enrichments several times a day, cleaned their cages, and spent time before and after these activities informally monitoring them. Through this work, they developed a clear sense of each chimpanzee's well-being and daily activities. However, this is not the information they interpret as appropriate to answering Peggy's question, or as sufficient to enable them to make and carry out their own plans without Peggy's permission.

Although it may not be clear in the excerpt above, based on discussions with Peggy and observations of her interactions (both formal and informal) with keepers throughout the fieldwork period, it was obvious to me that Peggy has great respect for keepers and their experience with and knowledge of the LWC's animals. However, this respect can be lost in the structure of decision-making processes at the sanctuary, and particularly in how Peggy frames the kind of information and procedures she considers appropriate for making decisions about the introduction process. In this example, Peggy frames her question about what happened in her absence in terms of data and reports — tangible representations of a very particular type of observation, which are then

deployed to create a new formal plan for the introduction. Confusingly, Peggy uses this framing despite the fact that she knows keepers do not have the type of training to produce these reports, nor does she does actually expect keepers to have produced these types of representations. Instead of asking keepers for their 'observations,' Peggy could have asked more general questions, such as: "How is the introduction going? Which individuals do you believe should go in with the new group next? Do you think the new chimpanzees are ready to have increased contact with the main group?" These are questions they were able to answer at length and in detail other meetings (see chapter 4), and for which they certainly have the answers. However, because keepers are uncomfortable providing their response using the observation framework, Peggy instead concludes that "you never observe, so you don't know."

Conclusion

In the introduction to the section of Philip Lehner's *Handbook of Ethological Methods* entitled "How to observe," he writes:

> Babysitters *watch* children; developmental psychologists *observe* them. *Watching* is a casual endeavor; *observing* is a rigorous process. Ethologists enjoy both watching and observing animals. They receive pure enjoyment from *watching* animals....but obtaining answers to [their research] questions requires careful *observations.* (1996, 55)

For Lehner, there is a clear and obvious distinction between 'watching' and 'observing.' However, at the Limbe Wildlife Centre, not only is this distinction not always clear, but 'observing' itself can mean a variety of different things. For tourists, observing is done mainly for entertainment. For holiday volunteers, observing is a somewhat unsatisfying way to occupy time and attempt to fulfill a desire to assist with the sanctuary's work. For animal keepers, observing is an ill-defined job requirement for which they are generally not given the appropriate time or resources. And for

primatology volunteers, observing is a scientific endeavor, whose practice leads to improved animal welfare and potential career advancement.

These outcomes for primatology volunteers in particular become possible through the deployment of professional vision, which allows others (i.e. managers, primatologists, potential funders) to see volunteers' observations "not as idiosyncratic phenomena lodged within the minds of individual[s]….but as socially organized perceptual frameworks shared within [a] profession" (Goodwin 1994, 616). As Goodwin notes, however, "the power to authoritatively see and produce the range of phenomena that are consequential for the organization of a society is not homogeneously distributed" (Ibid. 626). In this case, the power to authoritatively see is given to young, white, foreign volunteers, while animal keepers – older Cameroonian men, without whose physical labor the sanctuary could not function – are simultaneously denied access to this vision, and held accountable for it.

Although they are often criticized for not doing observations, and do not receive the same resources in the form of time, manpower, and tools as the volunteers, keepers do have their own professional vision. Instead of emphasizing large-scale patterns in dynamics, like the professional vision of primatologists, keepers' professional vision is rooted in the ability to see patterns in individual chimpanzees' health and behavior over time, as well as to predict and manage the day-to-day contingencies of animal care and its frequent emergencies (see chapter 5). While primatological observations can be used to make statistical analyses of the quantity of antagonistic or affiliative behavior occurring between particular chimpanzees, keepers' professional vision allows them to see and predict chimpanzee behaviors based on their personalities – for example, that elderly chimpanzee Suzanne has been a good foster mother in the past, but has become very lazy and is more likely to just sit inside and eat all day, instead of caring for young chimpanzees.

Chimpanzee Damien is friendly and likes to stay inside, but only if the door to the outside remains open – otherwise he will become agitated. This information often contradicts the findings of primatological observations (as Guy points out in example 1), but, as I will demonstrate in subsequent chapters, is central to the success of the introduction of young chimpanzees into the established group.

While 'observation' has many meanings at the LWC, French NGO managers orient to this category inconsistently — to praise students like Sara who have come to train with them, to reprimand animal keepers for failing to report a sick or injured animal, and to occupy inexperienced international volunteers, who come to the LWC with a passion for animals and a desire to help, but without the requisite skills. Managers have the authority to create and assign work tasks, as well as define what these tasks consist of, and whether or not they have been done adequately. Their selective applications of the term 'observation' to different people and activities at the LWC have various consequences, including the legitimization of the work of un- or newly-skilled volunteers, and indeed of the LWC itself as an institution that uses scientific methodologies to measure conservation outcomes.

However, the shifting meanings of the term 'observation' also serve to delegitimize the skills and labor of animal keepers, reinforcing a caste-like system wherein the work of black Africans (who have the most knowledge and experience) is reduced to manual labor, while white, French management criticizes these same people for their lack of professionalism. Unlike primatology volunteers, keepers' observations will never enable them to be promoted away from responsibilities involving the physical labor of feeding and cleaning. Although some keepers do receive management responsibilities under titles like "head keeper" or "head chimpanzee keeper," these titles come only with increased responsibilities (in the form of setting work schedules,

resolving disputes, making formal requests for equipment, etc.), and never exempt keepers from the daily labor of cleaning cages and taking care of animals. For both animal keepers and primatology volunteers, the acquisition and application of their respective forms of professional vision are essential to their ability to carry out their responsibilities. However, only that of primatology volunteers may be considered as "professionalized" vision – a particular way of seeing which also gives these volunteers increased value and status, as I will explore in the next chapter.

CHAPTER THREE
Learning to See Chimpanzees:
Professional Vision and the Role of Primatology in Conservation Work

French volunteers Alice and Sara perch on cracked plastic lawn chairs outside a large enclosure. On the other side of the electric fence, a couple dozen chimpanzees climb, rest, forage, groom, and occasionally pick fights with each other. Alice points to a pair of them, who are rolling on the ground, making faces and playfully poking at each other. Sara stares at them and frowns.

"Ils jouent, uh, à deux, en contact. Uh, rouler, mais…" Sara begins hesitantly, glancing down frequently at the spreadsheet open on her tablet. "They are playing, uh, two of them, in contact. Uh, rolling, but…" Sara begins to trail off, and Alice provides a hint.

"Rouler c'est pas juste, uh, je me mets sur le dos quoi je me mets sur le côté tu vois," Alice rocks her body side to side to illustrate. Rolling, it's not just moving back and forth from my back to my side.

"Uh," Sara pauses, scanning the spreadsheet again. *"Bah enfin, corps a corps?"* Body to body? She guesses, providing a different technical term from the ethogram in front of her. Alice confirms, and they proceed to discuss in French what distinguishes the category "rolling" from "body to body," as well as what other details Sara needs to add to correctly code the chimpanzees' behavior.

"C'est dur," Sara concludes a few minutes later. It's hard.

As discussed in the previous chapter, many kinds of animal observations occur at the LWC, and the category of 'observation' is selectively applied to legitimize the work of certain observers, while reprimanding others. The observations conducted by both primatology volunteers and animal keepers require 'professional vision(s)' (Goodwin 1994). However, only the observations

conducted by primatology students receive a significant investment from management in terms of time, labor, and material resources.

This chapter analyzes the acquisition of this type of professional vision as Alice, a senior primatology volunteer, trains Sara, a 21-year-old undergraduate, to recognize and code chimpanzee behaviors according to an ethogram, a standardized chart of primate behavior. This is a time-consuming, labor-intensive process, as Sara must not only memorize dozens of different behaviors, but also map them onto the moving chimpanzees in front of her. And she must do all of this in both French, her native language, and English, a language in which she is also a novice.

Sara was recruited by the NGO managers to assist with the monitoring of a group of young chimpanzees, who were slowly being integrated into a large, well-established, and potentially dangerous group of older chimpanzees. Over the course of her two month stay, Sara was officially expected to participate in normal volunteer duties, assisting keepers with feeding and cleaning, working in the gift shop, and taking on other odd jobs around the sanctuary as needed. However, the majority of her time was spent training for and then conducting primatological observations.

Although they often have minimal experience working with animals, primatology volunteers like Sara generally have or are working toward degrees in fields like biology, zoology, or population management. Management assigns them to a particular group of animals undergoing rehabilitation, and, after learning to identify each of those animals, the managers or senior volunteers train them to use an ethogram – a list of codes for over a hundred distinct animal behaviors. Once they can identify all the individual animals and reliably code their behaviors, primatology volunteers can begin conducting observations. These observations are generally scheduled in advance to catch a consistent sample of different times (i.e. as animals wake up,

during morning feeding, in the afternoon, during evening feeding, and as animals go to sleep), and this schedule is posted to a central bulletin board and announced at morning staff meetings.

During their observations, volunteers take samples of group social behavior while sitting outside enclosures with a notepad in two hour blocks. During these observations, volunteers do a scan of the group of animals every five minutes, and jot down a code that describes what each animal is doing at that moment. For example, the note "Carlos - Jack SPGR" means that at the moment of the scan, chimpanzees Carlos and Jack were engaged in grooming behavior, with SPGR standing for Social Play — Grooming. With the help of the NGO managers (who are more experienced in this type of data analysis), volunteers enter these lists of times, names, and codes into the quantitative analysis software R, and the results of the subsequent analysis provide information on group dynamics, such as which animal is dominant within the group, or which animals have had the most friendly or aggressive interactions.

As discussed in the previous chapter, observing animals in this way is time- and labor-intensive, and requires a highly specialized, uniform professional vision. The professional vision socialized through the ethogram is generally used to study large, wild populations, using quantitative data sets gathered over long periods of time to produce analyses and draw conclusions about the behavior of an entire species of animal (see, for example, Perry et. al. 2008). The Limbe Wildlife Centre's application of this methodology – to small, semi-wild populations like the thirty chimpanzees in its island group – is somewhat less common and more idiosyncratic. In the case of the chimpanzee rehabilitation I discuss throughout this dissertation, the analysis of these observations is used to inform decisions about which chimpanzees to introduce to a new group first, whether increases in food or enrichment activities are required, if veterinary care is needed, etc. This application of this methodology differs from its academic usage in that a) it applies to a

small group of captive animals; b) it involves a smaller data-set (weeks rather than months or years of data); and c) it is used not only to analyze trends in past animal behavior, but also to make predictions about likely future behavior – for example, chimpanzees Suzanne and Ewake have had the largest number of affiliative interactions with the new chimpanzees, so they would be unlikely to attack them if they came into closer contact with each other.

Given the difficulty and specificity of this style of observation – nevermind the fact that this methodology is designed for a different set of purposes – why does the LWC invest so much time and resources in primatological observations? Chimpanzee keepers have been interacting with and informally observing this group of chimpanzees every day for years, and in some cases, decades. Why not just ask them to use their professional vision to inform the introduction process? There are a couple of answers. First, management does utilize keepers' knowledge to inform the rehabilitation process. During meetings (see chapter 4), managers ask both keepers and primatology volunteers to evaluate chimpanzees and provide suggestions for how the introduction should occur.

However, perhaps the more complete answer has to do with how the LWC imagines itself as an institution, as well as how it imagines expertise and successful conservation. The acts of memorizing, discussing, applying, and analyzing ethogram codes for chimpanzee behavior not only produce professional vision for volunteers like Sara, but they also produce the field of primatology, and produce the Limbe Wildlife Centre as a particular type of institution – one which can quantify conservation outcomes (particularly important for securing international funding), and one which is able to participate in the international scientific community. Unfortunately, as I discuss in chapters 4 and 5, despite the fact that experience with a particular species of animals has been demonstrated to be the best indicator of interpreting and predicting their behavior (Maréchal

et. al. 2017), these institutional priorities also often serve to delegitimize and undermine the work and expertise of animal keepers (see chapter 5).

Primatological Vision

A particular way of seeing and understanding something like the facial expression of a chimpanzee "is not a transparent, psychological process but instead a socially situated activity accomplished through the deployment of a range of historically constituted discursive practices" (Goodwin 1994, 606). Where a holiday volunteer might look at a chimpanzee, say "he's smiling" and take a picture, a primatologist might instead recognize a "fear-grin" and jot down a code, and a keeper might look for the cause of the facial expression, and shout a reprimand to an aggressive chimpanzee nearby. Charles Goodwin describes these discipline-specific ways of seeing and categorizing the world as "professional vision."

While ethology and primatology handbooks do not refer to professional vision specifically, many do describe at length the difficulty of acquiring the ability to render seemingly random animal behavior visible as a series of interpretable actions, rather than incomprehensible movements. For example, the primatologist Frans de Waal, commiserating with his students, describes a shift in "perception" as the key to making sense of chimpanzee interactions that may at first appear chaotic:

> I too went through a long period when I found myself wondering at the apparent lack of structure in these episodes, whereas the real problem was not the lack of structure, but my own lack of perception. It is necessary to be completely familiar with the many individuals, their respective friendships and rivalries, all their gestures, characteristic sounds, facial expressions, and other kinds of behavior. Only then do the wild scenes we see actually begin to make sense. (de Waal 2007, 18)

Outlining how these sorts of shifts in perception become possible for different kinds of specialists, Goodwin identifies three processes which bring professional vision into being —

coding, highlighting, and the production of material representations. For animal keepers and primatologists at the Limbe Wildlife Centre, these processes enable the recognition of fear rather than friendliness in the face of the chimpanzee above, and allow the primatologist to further identify the expression of this emotion as belonging to the particular ethological category "fear grin," rather than a different category such as "silent scream face." This process begins with the generation of a coding scheme, which "transform[s] the world into the categories and events that are relevant to the work of the profession" (1994, 608). Second, primatologists must be able to apply this coding scheme to external events in a way which "structures the perception of others by reshaping a domain of scrutiny so that some phenomena are made salient, while others fade into the background" (Ibid. 628). In this highlighting process, skilled members of the primatological community make visible a constellation of physical features (such as a face with lips drawn back, lower teeth showing) in order to apply the relevant category.

Not incidentally, the process Goodwin describes for professional vision looks somewhat similar to the process ethologist Philip Lehner describes in his *Handbook of Ethological Methods:*

> [S]uccessful data collection through observations necessitates your: 1. having developed the skills necessary for effective and efficient observation....2. having the proper equipment (e.g. binoculars and spotting scopes); 3. understanding the various ways to describe behavior; 4. having a well-designed system for recording your field notes; and 5. knowing when your data are sufficient. (1996, 58)

Step four of Lehner's scheme corresponds neatly with the third step Goodwin outlines for professional vision, wherein coding and highlighting processes become formalized in material representations — pictures, journal articles, and textbooks, and perhaps most significantly in the case of primatology fieldwork, in a chart called an ethogram, which Lehner defines as "a set of comprehensive descriptions of the characteristic behavior patterns of a species" (1996, 90). There are many different types of ethograms, each adapted to the particular setting and goals of the people using it. An ethogram consists of a list of between 50 and 300 different types of primate behaviors,

divided into categories such as “locomotion,” “vocalization,” or “social interaction.” Each of these categories contains a list of all of the different possible relevant behaviors, with a description of what that behavior looks like, and its code. For example, the Limbe Wildlife Centre’s ethogram lists “fear grin” under the category “Submissive Behavior,” and describes it as “the corners of the lips drawn back, exposing the lower or both upper and lower teeth.” Finally, it lists its code as “SSGR” (Social, Submissive, Grin).

The preferred length and complexity of ethograms have been a subject of debate in ethology, as researchers attempt to balance uniformity (across ethograms and researchers), accuracy (in terms of describing behaviors), and practicality (in representing only behaviors relevant to the species or group under study) (see Goodall 1989, Schleidt et. al. 1984). Alice, an experienced volunteer with a Master’s degree in conservation and population management, designed the LWC’s ethogram herself in 2015. Although Alice is a native French speaker, and identified as only semi-fluent in English, she used English for the LWC’s ethogram, explaining that this will make it more accessible to a larger number of people, after most of the French people have moved on. Alice explained to me that she began with a large ethogram she had found on the internet, then pared it down to include just the behaviors that she expected to see in captive chimpanzees. Once she had a draft, she spent five hours sitting outside the chimp enclosure testing it to see how well it covered the specific behaviors of these chimpanzees — did it include all of the particular stress or play behaviors she saw? Were there terms that were redundant or went unused? The final ethogram, she told me, was a mix of what they identify in the literature, and what she saw in “her animals.”

In this way, Alice (under management’s supervision) formalized professional vision at the LWC by creating a material representation (in the form of the ethogram) for seeing and interpreting

chimpanzee behavior. This is not the only, or necessarily the best, way of understanding chimpanzees — keepers use an entirely different system to monitor behavior and keep themselves and their animals safe, and a chimpanzee certainly does not rifle through a list of codes for social behavior before deciding whether or not another chimpanzee is planning to groom him or bite him. Rather, the ethogram is one "socially organized way….of seeing and understanding events that [is] answerable to the distinctive interests of a particular social group" (Goodwin 1994, 606) — in this case, primatologists. The act of seeing chimpanzees in this way allows primatology volunteers to take on a central and authoritative role in the work of rehabilitating chimpanzees. This way of seeing also allows these volunteers to eventually become primatologists and gain access to the social and economic capital associated with the field. And the fact that this type of seeing occurs at the LWC allows the institution as a whole to define itself as a particular type of institution — a sanctuary that practices good conservation.

The Role of Primatological Observations in Chimpanzee Social Rehabilitation

Formal primatological observations are a core component of the process of animal rehabilitation at the Limbe Wildlife Centre. Beginning in April 2017, this process began for a group of three young chimpanzees (*Pan troglodytes troglodytes*), Mayos, Lolo, and Madame, who had been living in the LWC's quarantine nursery area for the past few years. Like most of the LWC's chimpanzees, Mayos, Lolo, and Madame arrived at the LWC when they were only one or two years old. Although chimpanzees are classified as 'endangered' and it is officially illegal to hunt them, adult chimpanzees are often still killed for bushmeat, and their offspring sold as pets. These young chimpanzees are frequently confiscated by government authorities during the sale process, or are turned in by their owners after they begin to mature and become too difficult to

handle. They spend their first years at the LWC in the quarantine nursery with other young chimps, where they often must be hand-fed and taught basic behaviors such as grooming, foraging, and play.

Now that Mayos, Lolo, and Madame had become larger, healthier, and more mature, management determined that they were ready to be integrated into the "island" chimpanzee group — thirty adult chimpanzees that occupy a large outdoor enclosure during the day, and return to an indoor shelter consisting of six large cages at night. This section of the sanctuary is referred to as "the island", because it is separated from the main sanctuary by a small river.

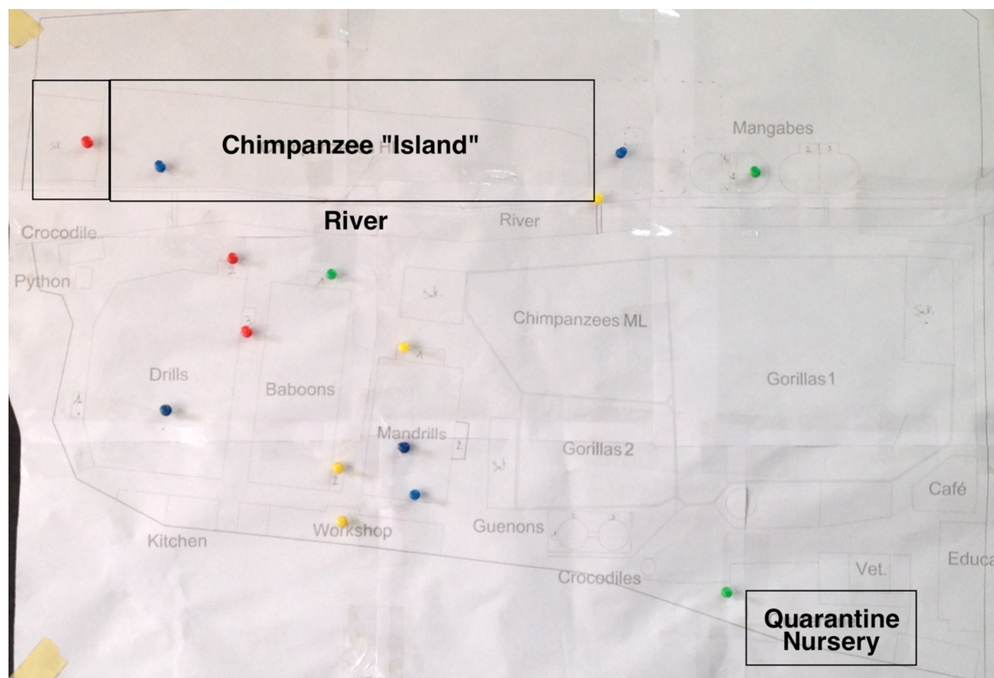

Figure 3.1: Map of the LWC with Relevant Spaces for Chimpanzee Introduction

Chimpanzees typically live in multi-male, multi-female groups, in 'fission-fusion' societies, "in which group members split up into smaller parties and reunite in response to daily fluctuations in the availability and distribution of their preferred foods" (Strier 2007, 21). They are

extremely intelligent, “lead[ing] a highly subtle and complex social life" (de Waal 2007, 3). Chimpanzees can recognize themselves in mirrors, solve problems using cause and effect, and use self-made tools. Chimpanzees (and bonobos, a closely-related species) raised by humans can even learn and communicate with symbols in the form of hand gestures (Taylor 2001, Kako 1999, Shanker et. al. 1999; but see also Hu 2014 for a description of the repercussions of these experiments).

However, chimpanzees are also very aggressive and strictly hierarchical, with members constantly fighting for status, and the better food and access to mates that it entails. These qualities only increase for chimpanzees living in captivity, whose “social life becomes intensified" (de Waal 2007, 11). For instance, wild chimpanzees spend about half their day foraging for food. While captive settings like the LWC attempt to encourage this behavior through, for example, distributing food widely throughout an enclosure, captive chimpanzees do not need to spend nearly as much time foraging, and so are prone to boredom. They spend this extra time socializing, and as they are surrounded by walls and fences, have less space to isolate themselves if they do not want to interact with other group members.

The complexity and aggressiveness of chimpanzee social structure, combined with the additional constraints of captive life, mean that the introduction of new chimpanzees (especially young and vulnerable ones) into an existing group is a slow and difficult process. It requires the primatological expertise of managers and their students, who use quantitative measures to monitor group dynamics, as well as the practical expertise of keepers, who use knowledge of chimpanzee personalities and behaviors resulting from working with them daily for over twenty years (see chapters 4 and 5).

In order to help the younger chimpanzees build positive relationships with more established group members and avoid fights and injuries, the LWC's introduction of Mayos, Lolo, and Madame involved several steps. First, the young chimpanzees were transferred from the quarantine nursery out to their own large cage on the island (see figure 3.1). Over the next several months, keepers gradually increased the amount of acoustic, visual, and eventually direct physical contact that the old and new chimpanzees could have — first only being able to see each other from different cages, then moving select friendly individuals into the cage directly next to the new members so that they can interact through the bars of the cage, then finally placing them in the same cage with each other, increasing the number of main group chimpanzees slowly until the two groups have completely blended.

For each of these steps, management recruited volunteers to conduct formal primatological observations in order to track the type and quantity of interactions between the new and old chimpanzees. After keepers finished the daily cleaning and moved particular chimpanzees to the agreed upon location (see chapter 5), volunteers would sit on plastic chairs or empty water jugs with a note pad in two hour blocks. Every five minutes, they would take a "scan" of the group, and jot down the name of each individual chimp and, using the ethogram, a code for their current behavior. Later, they would enter these codes into the quantitative analysis software 'R', and use the results of this analysis to draw conclusions about how the introduction process was going — which of the main group chimpanzees were exhibiting the most friendly behavior toward the new ones, which were aggressive, which were exhibiting signs of stress or isolation. These conclusions were then used to make decisions about how the process should continue — which chimpanzees should be introduced to the new ones next, which needed more food or enrichment, when could they move to a new step in the process, etc.

The people responsible for conducting these observations during the beginning of the introduction were Alice and Sara, two French volunteers in their 20s. Alice, a senior volunteer with a Master's degree in conservation and population management, had been working at the LWC for a year and a half at this time and had conducted many similar observations of the LWC's chimpanzee and gorilla populations. She came to the LWC after working with the LWC's managers on a similar conservation project in Gabon a few years earlier, and hoped to gain enough volunteer experience to eventually become a manager of a similar institution.

Volunteer Sara was visiting the LWC for two months to work on an honors project relating to chimpanzee behavior. After being trained to recognize chimpanzees, use an ethogram, and analyze quantitative data, she would write a paper and make a presentation to biology professors at her university in order to fulfill the requirements of her honors program. After graduation, she planned to attend the same Master's program as Peggy, the LWC's assistant manager, and work toward a career in primatology. However, upon her arrival at the LWC, Sara had no prior experience working with wild animals or conducting primatological observations, as well as very little comfort speaking English, the LWC's main *lingua franca* (see chapter 1).

Learning to Observe Chimpanzees

Before volunteers like Sara are able to conduct observations, they must first learn to recognize each of the individual chimpanzees at the LWC through distinguishing physical characteristics. When I asked Alice how she learned to do this, she said it was mainly the keepers that taught her, although Peggy helped too. A couple of months into my fieldwork at the LWC, I could reliably identify the most recognizable of the chimps: Mac, who was tall, dark, and lanky, with a significantly protruding brow ridge that made him look like he was always deep in thought;

Carlos, the only chimp with visible sclera, which meant his eyes showed white around the edges and looked eerily human; Papaya, the chubby dominant female with the thick, lustrous brown coat. I could identify the most dominant and the least dominant individuals in the group, as they always seemed to be getting into trouble. But there were a dozen or so chimpanzees somewhere in the middle who blended together for me. When I explained this to Alice, remarking that the process of learning each individual chimp must be difficult, she said that in fact chimpanzees were easy. You can use the same kind of strategies you use to recognize human faces — nose shape, eyes, etc. Their faces are all very distinctive. It's the smaller monkeys, like guenons, that are really difficult, because they look so much more alike.

Figure 3.2: LWC chimpanzees share a coconut
In order to conduct primatological observations, volunteers must be able to distinguish each individual chimpanzee via unique physical characteristics.

In volunteer Sara's first two weeks at the LWC, she had been assisting keepers with feeding and cleaning, nervously asking them to stay behind afterwards to show her which chimpanzee was which. She had created a spreadsheet with the names, genders, and groupings of all the chimps, which she carried with her during her work. Alice quizzed her each afternoon, giving her clues when she didn't know or guessed incorrectly ("look at the marks on his face," or "see how she walks, her shoulders are rounded").

After two weeks, Sara passed Alice's identification quizzes, and began training on the ethogram. Over the course of two days, Alice and Sara sat together outside the chimpanzee enclosure with Sara's tablet, going over in French the 115 behaviors that the LWC's ethogram identifies. Alice gave a quick direct translation for simple English terms like 'sleep' and 'feed,' then explained in more detail how to identify terms like 'self-play,' 'foraging,' or 'regurgitation,' along with the implications of these behaviors.

Finally, Alice asked Sara to apply these codes to the behaviors of the chimpanzees in front of them — an activity she would need to be able to perform quickly, reliably, and without supervision, in order to assist with primatological observations and complete the research for her honors project. If, during data collection, Sara was unable to identify a chimpanzee, or confused the codes for two different behaviors, the subsequent analysis of her data would be inaccurate and, in the worst case, might lead to the recommendation for the introduction of a dangerous chimpanzee to the new group instead of a friendly one. Importantly for Sara, who was hoping to apply to the same Master's program as assistant manager Peggy, the managers' evaluation of the quality of her work had very real consequences for her ability to become a professional in her desired field.

Learning to see chimpanzees through this primatological lens required a large amount of time and physical effort: Sara often woke up an hour or two earlier than the other volunteers to read and study her notes, and then spent multiple hours each day training with keepers or Alice, or simply standing outside an enclosure and quizzing herself when no one else was available. All this work occurred in hot, tropical conditions with temperatures of nearly 100 degrees and 100% humidity. It also required a lot of mental and linguistic work: the ability to identify dozens of chimpanzees, to memorize technical terminology in a foreign language, to associate that terminology instantaneously with a four-letter code, and to distinguish that behavior from other behaviors when enacted in time and space by particular chimpanzees.

Defining Categories

At the beginning of the ethogram training, Sara had the LWC's ethogram open on her tablet in the form of a spreadsheet. This spreadsheet is divided into nine main "activities": Stereotypical Behavior, Locomotion, Feeding, Foraging, Rest, Social Interaction — Affiliative, Social Interaction — Agonistic, Social Interaction — Submissive, and Vocalization. These activities are subsequently broken down into 115 distinct "behaviors," each of which contain a brief description, followed by the four-letter code Sara must jot down when she recognizes this behavior during her scans.

Agonistic	Pushing/shoving		SNPS
	Chasing (suplantación)	Run after a fleeing individual, in order to grab it in aggression	SNCH
	Rushing	A pursuit at full speed	SNRU
	Hitting		SNHI
	Biting		SNBI
	Grabing		SNGR
	Slapping		SNSL
	Dragging		SNDR
	Stamping		SNST
	Pinching		SNPI
	Scratching		SNSC
	Arm threat	Raise arm quickly	SNAT
	kick		SNKI
	Steal	Animal steals or tries to steal	SNSE
	Mounting aggressively	Mounting another animal to dominate him aggressively	SNMO
	Charging display	Animal runes quadrupedally on the diagonal past another but does not make contact	SNDC
	Dragging display	Drag an object during a charging display	SNDD
	Slapping display	Slap an object during a charging display	SNDS
	Hitting display	Hit the fence or wall with strong. It could be accompany with display vocalization.	SNDH
	Throwing object	Throw object. It could be accompany with display vocalization.	SNDT
	Swagger display	In an upright or semi-uprightposture the chimp sways, often rhythmically, from one foot to the other (usually before charging display)	SNDW
	Spar display	At the beginning of fight, both parties stand bipedally and flail one or both of their arms in hitting movement, with or without screaming.	SNSP
	Stiff stance stand up		SNSS
	Stiff stance walking		SNSW

Figure 3.3: An excerpt from the LWC's ethogram describing "Agonistic" behaviors

Teaching Sara to develop the professional vision necessary to first recognize these behaviors as they occur with live, moving chimpanzees, then code them consistently required a great deal of communicative work. Although many French language ethograms exist, Alice developed the LWC's ethogram in English. Alice and Sara are both native French speakers, but while Alice self-identifies as a semi-fluent speaker (she had some English in high school, but says she learned the majority of it during her time in Limbe), Sara's English upon arrival was very minimal, and an area of much frustration for her (and her less patient Anglophone interlocutors). After I observed and recorded Alice and Sara's ethogram training sessions — which took place entirely in French, except for references directly to the ethogram — I asked Sara why the ethogram was in English. She looked at me as if the answer was obvious, and then replied *"pour que n'importe qui peut comprendre"* — "so that anyone can understand it." She elaborated that English is the main language in biology — her field of study — and so it wouldn't make sense to have an ethogram in French that "other people" would not be able to understand.

Although the current NGO managers and the students they recruit are French, English is the official language in Limbe (although both English and French are official languages in

Cameroon; see chapter 1). In developing the ethogram, Alice chose to create a document in both the wider *lingua franca* of biology, and the region's official language, in the hopes that it might be useful to a variety of people long-term, even when the primatological majority at the sanctuary was no longer French. Alice's long-term thinking, however, did mean that Sara now had to memorize not just the codes and their four-letter abbreviations, but also the meanings of the codes in both English and French. For this reason, Alice's first description of each behavior during the training involved translating terms into French. In some cases, there was a simple direct French translation, which Sara typed into the "description" section of her copy of the ethogram:

Example 1

```
01    Ali:  uh throwing object tu l'as vu eh ((laugh))
            uh 'throwing object' [Eng] you've seen eh

02    Sar:  c'est quoi?
            what is it?

03    Ali:  ah jeter. ((throwing gesture))
            ah throwing [Fr]

04    Sar:  ah::.
```

Understanding the ethogram's vocabulary in both English and French is one of the first steps to being able to conduct primatological observations. Toward the end of their training session, Sara expresses frustration with this process, and Alice gives her some advice:

Example 2

```
01    Ali:  la seule problème pour toi c'est que
            the only problem for you is that

02          il y a forcément des mots qui sont en anglais
            there are necessarily words that are in English

03          donc si tu connais pas vraiment le mot en anglais
            so if you don't really know the word in English
```

04 ça peut te:: te peiner mais ((points to ethogram))
that can really hurt you but

05 juste pour voir comment-
just to see how-

06 avec quelles lettres je construis mes cordons
which letters I use to build my codes

07 retiens les mots que tu ne connais pas
keep track of the words that you don't know

08 comme ça même si uh uh tu sais que 'clutch' uh
like this even if uh uh you know that 'clutch' *[Eng] uh*

09 ba non tu connais bien sûr (…) particulier mais
ah no of course you know (…) this one but

10 Sar: c'est quoi?
what is it?

11 Ali: attraper
to catch

12 Sar: ((nods))

13 Ali: mais parce que du coup j'ai ((points to ethogram))
but because in fact I have

14 'hold clutch' j'ai H-C
'hold clutch' *[Eng] I have H-C*

15 ouai ouai. 'Hold clutch' c'est H-C parce que j'ai appris
yeah yeah. 'Hold clutch' *is H-C because I learned*

16 la première lettre de chaque mot tu sais
the first letter of every word you know

Although Alice minimizes the difficulty of Sara's task (line 1), she admits the problem is not only knowing the meaning of the words in English and French, but also being able to recognize them from the codes. As Sara learns the ethogram, she must be able to see the code HC, remember it stands for 'hold clutch,' and remember that it translates to '*attraper.*' Additionally, she must be able to look at the chimpanzees in front of her, recognize a particular movement as 'hold clutch' or *attraper*, identify the name of the chimpanzee performing that behavior, and write down their

name and the code 'HC.' Although Alice describes this memorization process as "the only problem" for Sara, these translations are something she herself struggles with on occasion as well. As Alice is also a non-native English speaker, she sometimes had to resort to asking Sara to borrow the English-French dictionary that Sara carries with her religiously:

Example 3

```
01    Ali:  Uh dragging c'est uhm ((looks away, smiles))
            Uh 'dragging' [Eng] it's uhm

02          A^:h. uh ((looks to Sar))

03    Sar:  ((shakes head))

04    Ali:  Tu eh tu uh tu vas trans-
            you eh you uh you're going to trans-

05    Sar:  transporter? non (…) ?
            carry? No (…)?

06    Ali:  non c'est le faire trainer en faite
            no it's to make something drag actually
```

Alice spends the next thirty seconds haltingly attempting to describe the meaning of the word, but finally gives in and asks Sara for her dictionary.

```
07    Ali:  désolé. C'est uh. C'est se trainer mais uh mais enfin
            sorry. It's uh. It's dragging itself but uh but really

08          ((looks through dictionary))

09          un mot plus poincé pour dire ça
            there's a more precise word to say that

10          ((continues looking through dictionary))

11          ah non trainer
            ah no dragging

12    Sar:  en fait?
            really?

13    Ali:  ((nods))
```

Although Alice and Sara both orient to English as the neutral or default language (both in the context of their field of study, and in the regional context of Cameroon; see chapter 1), organizing their work around orienting to these larger scientific and regional communities creates a great deal of extra communicative and linguistic work for them. Although they are both French and will report the results of their data in French to the sanctuary's managers, the fact that they instead use an English-language ethogram provides evidence that they are thinking of both their training and their participation in this particular rehabilitation process as socialization and participation in the broader world of conservation and primatology. In this way, their language choice reflects a socialization to scientific standards that require English entextualization in the performance of professional competence. The socialization and application of professional vision in this case entails the use of English, the professional language of primatology.

We see this further in Alice's struggle to find exactly the right translation for 'dragging': her frustration with herself for failing to translate the term is evident in lines 1-10. She looks to Sara for help, but Sara does not know the translation either, although she does offer a guess. In lines 7-9, Alice attempts to give a definition, and then a specification of how the English term differs from the translation Sara has offered – "it's dragging itself….but really there's a more precise word to say that." After several more attempts and lots of frustrated thinking, Alice finally resorts to the dictionary to find the 'precise' (line 9) term, only to discover that her original translation (*se trainer*) matches that of the dictionary. The communicative work involved in this instance is indicative of the primary goal of the training process itself: not only helping rehabilitate this particular group of chimpanzees, but producing primatology (in the form of this very specific coding scheme for interpreting chimpanzee behavior), and producing primatologists (who will be able to know and accurately apply this coding scheme, and do so in the *lingua franca* of the

discipline). The importance of these larger-scale goals is further underscored by the use of English as a language of professional authentication.

Embodying Behaviors

Alice's emphasis on precision — on finding a French translation for an English word that will perfectly capture the scientific definition of the category — means that even when Alice knows a term in both English and French, it is not always easy for her to find a direct translation for a behavior. Sometimes this is because the word does not exist in the same way in French, but more often it is because the word describes a particular combination of physical qualities that are only recognizable by an expert as all belonging to a particular behavior. In the example below, Alice and Sara are working their way through the list of behaviors categorized as "Social Interaction — Agonistic." While some of these behaviors, such as "hitting" or "throwing object" are easy to translate and recognize, at the bottom of the list are two entries: "Stiff Stance Stand Up" and "Stiff Walking."

Spar display	At the beginning of fight, both parties stand bipedally and flail one or both of their arms in hitting movement, with or without screaming.	SNSP
Stiff stance stand up		SNSS
Stiff stance walking		SNSW

Figure 3.4: Original ethogram entry for the behaviors under 'Stiff'
Unlike most ethogram entries (see figure 3.3), these behaviors do not have descriptions

Perhaps due to the difficulty of defining the word 'stiff,' Alice has left the description section of this part of the ethogram blank, and before her explanation, the only information Sara has about these terms are the codes to indicate them, but not what the behavior might consist of.

Example 4

```
01    Ali:  alors ehm la les deux c'est les mêmes,
            so ehm here these two are the same
```

```
02          c'est donc soit tu es en eh repos
            it's just whether you are standing

03          soit en marchant. mais tendu.
            or walking. but tense

04          ehm

05     (5.2)

06          après ça c'est pareil
            after that it's the same

07          °on voit ça plus chez les gorilles°
            you see this more with the gorillas
```

Alice begins by translating the term as best as she can — the last two entries are the same, just the body position is different. There is a significant pause in line 5 as she considers how to elaborate on this insufficient description, and she complains quietly that it's much easier to see this behavior in gorillas than in chimpanzees.

```
08          uh tu as vu Chella comment il était ce matin.
            uh did you see Chella how he was this morning

09          quand on le trouvait dehors?
            when we found him outside

10     Sar: ((shakes head))

11     Ali: t'as pas vu?
            you didn't see?

12     Sar: ((shakes head))

13     Ali: il était avec les épaules en avant
            ((sitting up, rolling shoulders forward; see Figure 3.5))
            he had his shoulders forward

14          la tête en avant mais comme ça,
            ((raising chin, pursing lips; see Figure 3.6))
            his head forward  but like this

15          et il marchait trè:s,
            ((rolling shoulders back and forth))
            and he was walking very

16     Sar: ((nods))
```

```
17    Ali:  tu l'as vu faire ça=
            did you see him do that=

18    Sar:  ((shakes head)) =non
                            =no

19          mais tu le faisais bien. ((laugh))
            but you did it well
```

Figures 3.5-3.6: Sara watches Alice embody Chella's behavior.
Left: "shoulders forward" (line 13). Right: "Head forward but like this" (line 14).

Here, Alice supplements her verbal translation in lines 1-6. This new translation is embodied, and therefore visible to Sara in the moment, but inadequate because Alice's human body cannot accurately portray the ineffable qualities of this behavior. Finally, Alice comes up with the example of Chella, a silverback gorilla who was exhibiting this behavior very publicly that morning as everyone arrived to work. This reference ties Alice's inadequate impersonation of the behavior to an actual instance of it. Sara was not there to see it, though, and so Alice embodies Chella, narrating the behavior's characteristics as she transforms her body piece by piece into the stance Chella took that morning (lines 13-15). The reference to Chella, as well as Alice's embodiment of the behavior, allow Alice and Sara to calibrate (Goodwin 2018) the abstract category 'stiff' with actual instances of the behavior – both human and gorilla. Sara nods in understanding, and so Alice asks if she did in fact see it that morning. Sara still says no, but acknowledges the adequacy of Alice's performance.

```
20   Ali: no là c’est vraiment uh donc par exemple,
          no there it’s really uh okay for example

21        Jack viens de se fighter avec un autre. Et après ba,
          Jack comes to fight with someone. And after uh

22        du coup après tu vas voir.
          anyway you’ll see

23        il a ((waving at arm)) piloerection.
          his hair is standing up

24        les épaules en avant,
          ((rolling shoulders forward))
          his shoulders are forward

25        et vraiment tendu.
          and really tense

26        donc il est comme ça
          so he’s like that

27        soit il est en repos comme ça soit il marche.
          whether he’s standing or walking

28        c’est une position de tension.
          it’s a position of tension

29   Sar: ((nods))

30   Ali: donc il généralement arrive après un fight.
          so it generally happens after a fight
```

As Sara did not see Chella exhibit the behavior that morning, and Alice is still unsure if Sara can recognize it, Alice uses a hypothetical example from an animal she knows Sara is familiar with: Jack, the dominant male chimpanzee, who does this behavior often. Here she provides not only the physical description of Jack doing the behavior (lines 23-25), but also information on the situation in which he would do it — if he “comes to fight with someone” (line 21). She finishes by providing a vague definition of the term, and the situation in which it might occur.

```
29   Ali: on voit ça beaucoup plus chez les gorilles=
          you see it much more with the gorillas=

30   Sar: =et quand
          =and when
```

```
31          c'est hier quand on a vu Bergkampf et (...)
            like yesterday when we saw Bergkampf and (…)

32          quand quand il marchait tu vois (...) qu’il continuer
            ((fist shake))
            when when he was walking you see (…) that he continued

33          qu’il voulait intervenir avec [(…)
            he wanted to intervene with   [(…)

34    Ali:                                [voilà exactement
                                          [voilà that’s it (…)

35          si (...) tu pouvais mettre ‘stiff’ quoi
            if (…) you could put ‘stiff’ for that

36    Sar:  okay.

37    Ali:  okay.

38    Sar:  stiff?

39    Ali:  stiff c’est ((shake fist)) tendu.
            stiff is                 tense

40          stance position et voilà.
            stance position and voilà
```

Still unsatisfied with her description of Jack, Alice mutters quietly about how much easier this behavior is to see in gorillas than chimpanzees, but Sara interrupts to provide her own example of something she witnessed yesterday. A chimpanzee named Bergkampf was walking in a particular way, going after one of the other chimps (lines 30-33). Sara’s description aligns with Alice’s, and so they reach an agreement on how to define the term ‘stiff’. Alice closes the sequence by finally providing a direct translation for the term as written in the ethogram: ‘stiff’ is *tendu* in French, and ‘stance’ translates to *position*. Sara types this into her personal copy of the ethogram, producing a French description of the body position, along with the example of ‘Berckamp’ (*sic*), to remind her what it looks like.

Stiff stance stand up	repos tendu : pilo-érection, épaule en avant, , stiff : tendu, stance : position	SNSS
Stiff stance walking	Marche tendu : ex Berckamp	SNSW

Figure 3.7: Sara's entry into the ethogram

The sequence above was typical for many of the terms Alice defined for Sara:

1) Reading out loud the term and any English notes from the ethogram;

2) A direct English-French translation if possible;

3) A description (generally hypothetical) of a particular animal doing this behavior, accompanied by Alice's best embodiment of the behavior;

4) A basic claim to understanding from Sara (generally via nod and/or verbal 'yes' or 'okay');

5) Sara's own description of the behavior typed in French into her copy of the ethogram (which Alice closely monitored and sometimes corrected while sitting next to her).

This sequence also loosely follows the three processes Goodwin (1994) identifies for professional vision: first, they orient to a coding scheme, breaking the actions of chimpanzees into discrete categories relevant to the work of primatology. Next, Alice applies this coding scheme to external events — at first, her own descriptions or anecdotes of things particular chimpanzees did, but also (as we will see in the next section), by pointing to relevant actions of the chimpanzees in the enclosure in front of them. Finally, Sara formalizes this scheme in the material representation of her own ethogram: a spreadsheet that follows Alice's official ethogram, but with idiosyncratic notes that allow Sara (with her particular set of experiences and linguistic skills) to accurately apply those categories on her own when she sees them. This process not only trains Sara to acquire the necessary professional vision to assist in the introduction process, but reifies the categories themselves, as Sara and Alice bring these categories to life in conversation, through their own bodies, and by projecting them onto the chimpanzees in front of them.

Verifying Understanding

Throughout the definition process, Alice checks in regularly with Sara to ensure that she is understanding what they are discussing. As seen in the previous example, a nod of acknowledgment from Sara is not usually sufficient — Alice normally only moves on to the next term once Sara is able to provide her own gloss or example. As they are sitting side by side, Alice also looks over Sara's shoulder to see what she is typing, offering corrections and clarifications on the notes Sara is taking (see Figure 3.9).

Once they finish defining all 115 terms, Alice quizzes Sara by pointing to particular chimpanzees in the enclosure in front of them, and asking her to identify their behavior from the ethogram. This requires Sara to not only remember the name and description of the behavior (in English and French), but to map that description onto one of the moving bodies in front of her.

Figure 3.8: Alice and Sara observe chimpanzees at play.

Example 5

```
01    Ali:  ((points to chimps))

02    Sar:  ils jouent uh     (2.3) à deux en contact uh (5.5)
            they're playing uh      two in contact uh

03          rouler (...) mais uh=
```

rolling (…) but uh

```
04   Ali: =non c'est pas uh donc rouler (...)
          =no it's not uh so rolling (...)

05        uh c'est vraiment ((rolling gesture))
          uh it's really

06        rouler rouler ((rolling gesture))
          rolling rolling

07        c'est pas juste uh ((moves back and forth)) je me mets
          it's not just                               I go

08        sur le dos quoi je me mets sur le côté tu vois
          on my back or I go on my side you see
```

Alice's point in line 1 serves as a directive, asking Sara to describe the behavior of the two chimps Alice indicated. Sara is quickly able to identify that they are playing — an observation a layperson would also be able to make. She begins to slowly narrow her description using categories from the ethogram: they are playing together (rather than alone), and the play involves touch. After a long pause (line 2), she categorizes their behavior hesitantly as "rolling," but Alice is quick to correct her. While to an outsider, the chimps do indeed look as if they are rolling, Alice emphasizes that with the ethogram, the category of "rolling" is more like a somersault, rather than the rocking back and forth motion the chimps are doing together.

```
08   Sar: uh (3.8) bah enfin corps à corps?
          uh       bah so body to body?

09   Ali: ouai ((nods)) ça fait corps à corps.
          yeah          that makes body to body

10        c'était pour te montrer que c'était le corps à corps bon.
          it was to show you that it was body to body okay

11        c'est vrai que souvent c'est
          it's true that often it's

12        c'est bien ils sont collés, ((smacking hands together))
          it's really they're really stuck together

13        mais pas forcément tout le temps collés.
          but not all the way together
```

```
14    Sar:  ((nods))

15    Ali:  des fois c’est quand même c’est un peu plus un peu plus
            sometimes it’s even it’s a little more a little more

16    Sar:  et la bou- la vocalisation ça se mis ou?
            and the mou- the vocalization where does that go

17    Ali:  ouai.
            yes

18    Sar:  là c’est avec la bouche ouverte?
            that’s with the mouth open?

19    Ali:  ouai.
            yeah
```

Now that Alice has negated her first guess, Sara scrolls through the ethogram again. Under the heading of “social play” she spots the behavior *‘corps à corps’* (‘body to body’), defined in the ethogram as “a clinch with arms locked and heads bowed, and sometimes roll over and over.” Sara makes this her second guess (line 8). Alice validates this response, and goes on to elaborate that she picked this example because she wanted Sara to be able to distinguish ‘body to body’ and its variations. She uses her hands to demonstrate some of the variations possible in the behavior (lines 11-13) — it may sound like ‘body to body’ means the chimps are very close together, but that is not always the case, as in the case of the chimps they are observing in front of them, who are more loosely entangled as they rock back and forth.

Sara nods, demonstrating her understanding, but as she attempts to code the behavior, she identifies a second problem. The chimps in front of them are not simply exhibiting ‘body to body’ behavior; they are also making particular facial expressions and vocalizations which need to be coded as well. In line 16, she begins asking about the chimp’s mouth, but switches halfway through to ask about the more scientific category of “vocalization” instead. She asks an open-ended question (“where does that go?”), which seems to be asking both about how to make the notation,

but also about which code to use. She receives a simple “yes” from Alice in line 17, and so makes her question more specific, switching to a yes/no format to verify that the facial expression she is observing involves an open mouth — once again a feature a layperson could distinguish. Alice again gives her a simple ‘yes’ in line 19, but does not elaborate, waiting for Sara to come up with the answer on her own.

```
20    (2.4)

21    Sar:  affiliatif?
            affiliative?

22    (7.8)

23    ((Ali looks to computer with Sar; see Figure 3.9))

24    Ali:   c’est quand même dans les trucs de play.
             it’s actually with the types of play

25          mais pas tout à force.
            but not all the way

26    (5.1)

27    Ali:  pense simple. (.) Ils faisaient quoi ils jouaient (.)
            keep it simple.   What are they doing they’re playing

28          la tu as? t’es jouer.
            there what do you have? you have play

29    Sar:  invite to play?=

30    Ali:  =invite to play. (.) play face.

31    Sar:  ah okay.
```

Figure 3.9: Alice reads the ethogram with Sara to help her locate the correct category (line 23).

Sara looks anxiously down at the ethogram in front of her, scrolling through potential categories. While her guess in line 18 (facial expression with open mouth) is fairly specific, narrowing the answer down to a handful of potential codes, her next guess in line 21 moves in the opposite direction. Categorizing the behavior as simply "affiliative" refers instead to several dozen different codes, including numerous facial expressions.

Perhaps confused as to why Sara is moving further away from giving a specific answer, there is a long pause while Alice leans over to view what Sara has been looking at on her tablet (lines 22-23; see Figure 3.9). She gives Sara a hint: the behavior she is looking for falls under the category of "social play," a type of affiliative behavior. There is a long pause while Alice waits for Sara's guess, and Sara reads through the list of approximately ten categories of social play.

As Sara fails to make a guess, Alice gives her further encouragement, telling her to "keep it simple." Sara was able to identify in her first guess in line 2 that the chimps were playing, and this is where she should focus her categorization of the facial expression as well. Alice's

scaffolding (Mehan 1979) encourages Sara to make another guess (lines 28-29): "invite to play?" Alice repeats it, indicating that it is correct, but elaborates with the term for the particular facial expression itself: "play face."

```
32    Sar:  mais du coup on peut avoir plusieurs trucs en même temps?
            but in the end can there be more than one thing at a time?

33    Ali:  ouai. Bien sûr.
            yeah. Of course

34          là il est en train de jouer avec sa mimique de- de play.
            there he's playing with his face of-  play face

35    Sar:  c'est dur.
            it's hard

36    Ali:  généralement ce qu'il se fait en même temps,
            generally what they do at the same time

37          le plus souvent c'est et mimique et les vocalisations.
            most often it's a facial expression and vocalizations

38    Sar:  ((nods))

39    Ali:  de manière générale c'est ça.
            most of the time that's it

40    Sar:  vocalisation s'ajoute soit fight soit jeu soit groom.
            vocalization adds to fighting or play or groom

41    Ali:  les mimiques aussi.
            facial expressions too

42    Sar:  ((nods))
```

With Alice's help, Sara has now identified the correct category. However, in making her notation, she faces a new source of confusion. In lines 1-19, Alice and Sara categorized the chimps' behaviors as "body to body" (SPPE). They have now also identified them as "play face" (SPPA). Sara asks if it is okay to indicate more than one category of behavior occurring at the same time. Alice responds "of course" — it is very possible to be engaged in play while making a play face.

Sara has been struggling all week with the identification of single behaviors, and this is a complication she has not foreseen. “It’s hard,” she complains in line 35.

Alice reassures her that there is not an infinite possible combination of codes. Mostly what is required in addition to a code for a main behavior is a code for a facial expression or vocalization — attributes that are relatively easy to categorize. Sara nods and repeats her understanding back to Alice, which, after a clarification, Alice accepts. In agreement, they close the sequence and Alice begins a new one by pointing to another chimpanzee.

Across this sequence, we see Alice complicate Sara’s understanding of chimpanzee behavior by asking her to move beyond definitions, toward applications of particular categories. This activity is designed to scaffold Sara toward their ultimate goal: for Sara to independently conduct accurate observations of the chimpanzees involved in the introduction process. However, it is an activity that requires a significant amount of knowledge and skill: the memorization of all 100+ terms and definitions in both English and French, along with their associated codes; the ability to map these definitions onto moving bodies; the understanding of how to process and annotate multiple co-occurring behaviors.

As a novice, Sara struggles with this new task. Her speech is marked by frequent extended pauses, restarts, and hesitations. Her attempts to identify behaviors oscillate from extremely obvious (as in line 2, when she identifies the behavior simply as ‘play’, and line 18, when she asks if the chimpanzee’s mouth is open) to extremely vague (as in line 21, when she guesses that the behavior is affiliative — a general category referring to several dozen more specific types of behavior).

As an expert, Alice assists her (with varying amounts of patience) in the winnowing process, helping her to see how to quickly identify a large category like ‘play’, then move within

it to a more specific behavior like "body to body." Both the ability to accurately use this set of codes and the winnowing process itself are skills that separate the observations of primatologists from those of laypeople (such as tourists), or even animal keepers, who are skilled in a different (and generally less valued) way of seeing and interpreting chimpanzees (see chapter 5). This primatological vision eventually comes quickly and intuitively to experts like Alice, who repeatedly minimizes the complexity of the categorization process (Example 2, line 1; example 4, lines 1-6; example 5, line 27). However, for novices like Sara, however, "it's hard" (Example 5, line 35).

Conclusion

Despite the complexity of the professional vision required to accurately recognize and code chimpanzee behaviors according to the LWC's ethogram, by the end of Sara's two months in Limbe, both of the LWC's managers and Alice seemed very pleased with her progress and contribution to the rehabilitation program. After about three weeks of training, Sara was able to conduct observations independently, and eventually undertook the majority of observations of the introduction process. Toward the end of her stay, she spent her mornings in the office of NGO manager Guillaume, who assisted her in using the software 'R' to generate quantitative analyses of the data she had collected during her observations. Before she left, Sara gave PowerPoint presentations to both the LWC's staff and to her undergraduate advisors on the findings of her study, and received a high grade on her honors project.

Throughout her time in Limbe, Sara contributed her findings and opinions on how well the rehabilitation process was going, and on what should happen next. Although she was not comfortable enough in English to participate verbally in meetings, the informal reports and

discussions she had with Alice and assistant manager Peggy were often introduced during meetings as evidence to support a particular evaluation of a chimpanzee's well-being, or future course of action for the introduction process (see chapter 4). Sara's ability to acquire and apply this professional vision required a great deal of time, energy, and work – both on her part, and on the part of those who trained her (Alice, Peggy, Guillaume, and chimpanzee keepers), and especially on the part of those who had to do extra physical labor when she was on observation (chimpanzee keepers and other volunteers).

This again raises the question of the value of Sara's observations, and how they are valued in relation to the other types of labor required to keep the Limbe Wildlife Centre running and the animals healthy (see chapter 5). As described at the beginning of this chapter, there is often a divide between the world of on-the-ground environmental conservation (as it is conducted in sanctuaries like the LWC), and the world of primatology, which is generally very concerned with problems such as animal endangerment and its causes, but not always actively involved in helping to produce solutions. Although the professional vision the LWC uses is ostensibly the same as that of primatologists, the institution walks a somewhat unconventional ground by combining these two worlds, using the methodologies of primatology to inform the work of conservation. While in many ways this is a logical and innovative strategy, these methodologies are not necessarily designed for the uses to which the LWC applies them, and their use also involves a significant investment on the part of the LWC (and its staff and volunteers) in terms of time, training, and other resources.

While the LWC invests a large amount of resources in developing and applying this particular type of professional vision, as discussed in chapters 2 and 5, primatology volunteers are not the only group of people at the LWC using a form of professional vision. The professional

vision of keepers – although it looks very different from the application of the ethogram – is perhaps most essential in maintaining animal well-being and the daily operations of the sanctuary. However, unlike the primatology volunteers, the professional vision of keepers neither entails nor produces international prestige, scientific backing, or written materials like the ethogram or statistical analyses. It also occurs alongside the low status, physical labor of cleaning up animal feces, and so is easily reduced by association to menial labor, rather than expertise. Furthermore, this professional vision is generated by black men, whose work historically has been and continues to be devalued and invisibilized (Lamont 2000, Crain et. al. 2016, Ahmed 2012). In the next chapter, I explore the collision of these two types of professional vision – and the different ways they are valued by LWC management – as they come to a head in meetings to make decisions about chimpanzee care.

CHAPTER FOUR
"They Will Beat Them":
Claims to Knowledge and Decision-Making in Chimpanzee Rehabilitation

On an afternoon in May 2017, management, chimpanzee keepers, and volunteers at the Limbe Wildlife Centre sit down together to discuss the progress of Mayos, Lolo, and Madame, three young chimpanzees who have outgrown the sanctuary's small chimpanzee nursery, and are now in the process of being integrated into a larger group of mature chimpanzees. The meeting takes place in the LWC's education hall, a large, high-ceilinged room officially dedicated to holding classes for visiting school groups, but which also doubles as meeting space, lunch room, storage, and occasionally a place for keepers to catch a quick nap.

French volunteers Alice and Sara are the first to arrive, joined shortly after by French assistant manager Peggy, who sits across the rectangular table from them. Peggy asks Alice in French how her observations went that morning, and they chat about chimpanzees as head keeper Jonathan and chimpanzee keeper Thomas join them at the table. Peggy switches to English to ask Thomas if chimpanzee Nemo received her medication that morning. He confirms, and Peggy turns back to Alice to continue their discussion in French. Head chimpanzee keeper Victor is the last to arrive, fresh from doing a lap around the sanctuary to ensure all animals are behaving and in their proper places. He takes a seat at the table perpendicular to the meeting table, until Peggy insists that he move to sit next to her.

"We are meeting today to discuss the progress of the introduction, nearly a month after the last meeting on the 21 of April, ten days after we transfer [*sic*] Lolo, Madame, and Mayos," Peggy begins, glancing down at the notebook in front of her. She proceeds to describe her goals for the meeting, before turning to the keepers to address an ongoing issue: Madame, the least dominant

of the young chimpanzees, has been causing trouble for keepers by refusing to move from one cage to another so they can clean each morning. At the last meeting, Peggy gave keepers instructions on how to train Madame so that they could move her more easily.

"So if we speak first for the training, uh now, for the cleaning everything is okay? Or we still have some issue to send Madame in one side and back to the cage?" There is silence, and Peggy looks to Victor. "She has been passing," he finally confirms. "So now there is no problem at all?" Peggy persists. Victor nods, and Peggy moves to the next item on the agenda. Over the next half an hour, the group discusses the behavior of the young chimpanzees, which of the older chimpanzees are likely to be friendly with them, and how and when the two groups should come together.

This chapter examines these discussions between management, animal keepers, and volunteers as they make a plan for how the young group of chimpanzees should have contact with the larger, established group for the first time. In this space, each group brings different types of knowledge about chimpanzees and concerns about their care, in addition to different varieties of English and norms for communication. They also each have varying amounts and kinds of power within this institution. And when they leave the meeting space to put this plan into action, each of these groups will have different responsibilities — and face different kinds of risks — to ensure that the plan is successful (see chapter 5).

French NGO managers Peggy and Guillaume see these meetings as an intentionally egalitarian space for open discussion, a way for management to give keepers more ownership over decision-making processes at the sanctuary. For managers, meetings are simultaneously a pedagogical space, where they hope to teach keepers what they believe to be proper rehabilitation and animal care protocol. For French volunteers Alice and Sara, these meetings are both an

opportunity to put their skills as budding primatologists into practice, and a test to see if their scientific observations align with those of managers and keepers. For animal keepers Victor and Thomas, meetings are an obligation, a formal and explicitly hierarchical setting where managers — their bosses — evaluate their work and assign them tasks, often despite managers' lack of familiarity with the realities of keeper work.

This chapter begins by describing the chimpanzee introduction process, and the role of meetings within it. I explore the different beliefs each group has about what meetings are for, asking how management can see meetings as democratic, when keepers view them as hierarchical, and how these views affect how decisions are made. Next, I turn to the meeting talk itself, drawing from work in conversation analysis on epistemics, deontics, and assessments to analyze the strategies Peggy uses to minimize and collectivize the physical labor involved in the introduction process, as well as the strategies keepers use to complicate and contest her vision.

Although Peggy may not see meetings as hierarchical and is often deferential to keepers' opinions and expertise, her conversational practices regularly serve to minimize keepers' labor and privilege the expertise of the much younger, less experienced primatology volunteers. These pitfalls are perhaps inescapable in an institution whose hierarchy is deeply informed by the transnational dynamics of contemporary environmental conservation and/or development work (West 2006, Mosse 2013, Ferguson 2006). These dynamics often trace their lineages directly back to colonial power relations and ideologies surrounding nature, in which European authorities determined how local resources should be managed, what work was necessary to manage them, and what the consequences should be when they were not managed according to European standards (Moore 2005, Walley 2004, Saberwal and Rangarajan 2003, Moore et. al. 2003).

This chapter explores the interactive nature of how decisions are made and the practices through which hierarchy is co-constructed by meeting participants. Despite all of the inequalities and difference present in the meeting room, by the end of the meeting, the group is able to reach a series of decisions, and leaves with a plan for how to proceed the next day. Through the analysis of decision-making processes as they occur in interaction, this chapter will examine two contradictory components of the meeting: how consensus is possible between groups with very different linguistic, cultural, and epistemic backgrounds; and how the act of reaching this consensus often erases the discussion and contestation that occurs along the way.

The Chimpanzee Introduction Process

The introduction of young chimpanzees Mayos, Lolo, and Madame began in April 2017 when they were transferred across the sanctuary from the isolated chimpanzee nursery to the LWC's main group of approximately thirty chimpanzees. This group is referred to as "the island group" because their large outdoor enclosure is located across a thirty-foot-wide river from the main sanctuary, and can only be reached via a bridge.

Integrating these young chimpanzees into the established group was a dangerous, labor intensive process that ultimately lasted until about June of 2018, when Mayos, Lolo, and Madame were released outside with the entirety of the main group. Under the management of LWC assistant manager Peggy, keepers and volunteers carried out step-by-step rehabilitation protocol during this process. In the first stage, the main group of chimpanzees only had access to cages 1-3, and the new group (Mayos, Lolo, and Madame) stayed in cage 4 (see Figure 4.1). The two groups could smell and hear each other, but only see each other at a distance.

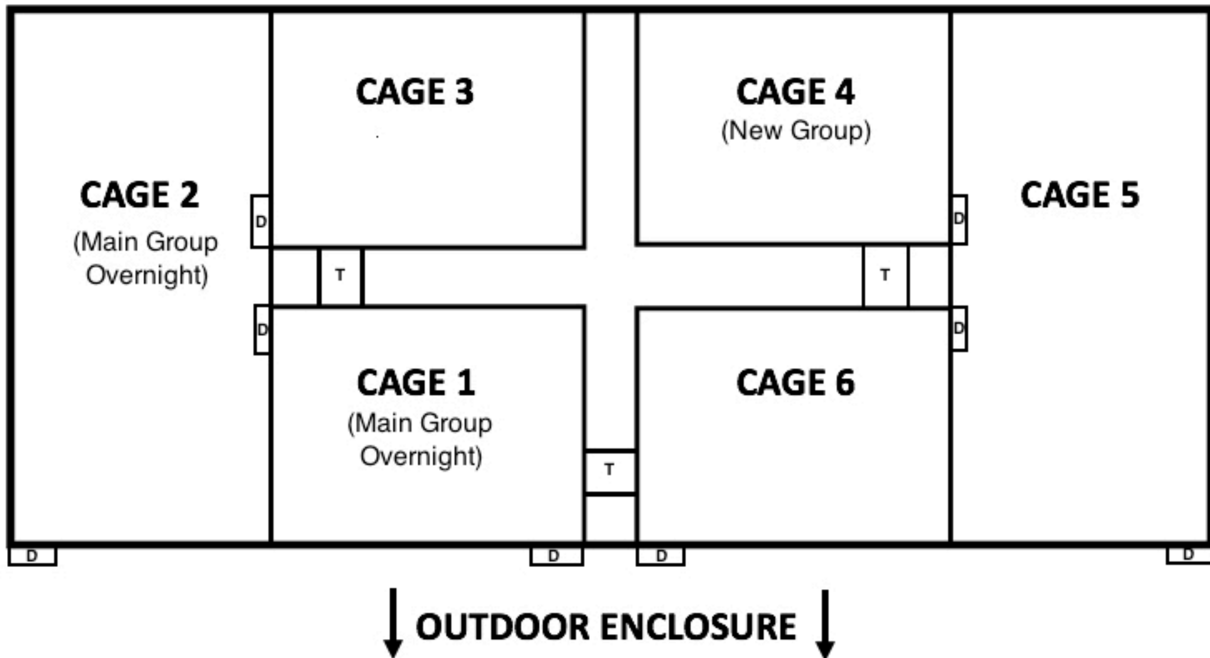

Figure 4.1: Map of indoor enclosure for Island Group.
'T' indicates overhead tunnels for moving chimps between cages.
'D' indicates sliding doors to moving chimps between cages or outside.

During the second stage, keepers began leaving cage 6 open during the day while the main group was outside, so that any main group chimpanzee could investigate the new group — but only visually. During this stage, volunteers conducted observations, seeing which chimpanzees from the main group were interested, and how they behaved toward the new group. Did they exhibit friendly behavior, or look as though they wanted to start a fight?

With the data from these observations, volunteers and managers could try to select particular chimpanzees that could be used in the third stage of the process, when the two groups would be placed in cages side-by-side and be able to touch each other for the first time. Moving to this third stage was the main topic of the meeting that I discuss in this chapter. In the fourth stage, the doors would be opened and friendly chimpanzees from the main group would have direct contact with the new chimpanzees for the first time. Eventually they would integrate more and

more chimpanzees from the main group into the new group, until all the chimpanzees could interact peacefully together.

If the rehabilitation team proceeded to a new stage too quickly, or selected inappropriate chimpanzees for the introduction, there could be dire consequences. Chimpanzees might become stressed and stop eating, or, in the worst case, chimpanzees might attack one another, leading to serious injury or death. The previous year, there was an attempt to introduce Mayos, the oldest of the new chimpanzees, to the island group. When they had almost reached the final step in the process, Mayos was attacked viciously by several of the males from the main group. She lost an eye and nearly died, and had to spend several months receiving extensive veterinary care. Now that she had recovered, staff were hopeful that this time Mayos would be able to build enough positive social relationships to gain support from the group, and be large and aggressive enough to hold her own in a fight.

Expertise, Collaboration, and Hierarchy

The successful integration of Mayos, Lolo, and Madame into the main group requires coordination between managers, primatology volunteers, and animal keepers. Each of these groups bring different types of expertise and expectations to the meeting space (see chapter 2), and each will have different responsibilities and face different risks outside the meeting room, when it comes time to enact the decisions made during the meeting (see chapter 5). Managers use their expertise in primatology and wildlife management to provide a plan for the different steps of the process. During the chimpanzee introduction process, the majority of this responsibility belongs to Peggy, who has held the position of manager at the LWC for more than two years. Prior to coming to the Limbe Wildlife Centre, Peggy spent several years working with wild and semi-wild primates in

different parts of Africa, in addition to earning degrees in wildlife behavior and veterinary medicine.

Through these credentials and experiences, Peggy holds great scientific authority – a type of authority that is highly valued in this institution (see chapter 3). This authority allows her to determine what healthy chimpanzee behavior looks like, what training and rehabilitation techniques keepers should apply when chimpanzees are not behaving in this way, and how they should be monitored in order to make these determinations. Peggy's direct contact with the chimpanzees, however, is mainly restricted to morning rounds, where she walks through each section of the sanctuary, observes the animals for a few minutes, asks if keepers are having any problems, and checks to be sure they are following her directions regarding animal care and cleaning. Directly interacting with chimpanzees is not a part of Peggy's responsibilities, except occasionally when she is assisting the veterinary team with an exam or procedure. Instead of extended direct experience observing and interacting with chimpanzees, Peggy's evaluations stem largely from numerous daily reports from both keepers and volunteers on how the chimpanzees are doing.

In contrast to Peggy, animal keepers' expertise comes from their extended daily contact with the chimpanzees in question – feeding, cleaning, observing, coaxing, and reprimanding chimpanzees five to six days a week, for over twenty years. Senior chimpanzee keepers Victor and Thomas both began working at what is now the Limbe Wildlife Centre in the early 1990s, when it was still known as the Victoria Zoo. They began as animal keepers hired through the government, and were later rehired by the NGO the Pandrillus Foundation when it transformed the Victoria Zoo into the LWC (see chapter 1). Victor and Thomas have therefore known all of the LWC's chimpanzees from the first day each chimpanzee arrived at the sanctuary. Although neither keeper

went to school for animal care, they were both trained directly by the Pandrillus Foundation's founders, and together have nearly fifty years of hands-on experience working with primates.

During meetings, Peggy asks animal keepers to apply their knowledge of individual chimpanzees and group structure to make the group's plans more realistic. For example, animal keepers know each chimpanzee's standing in the group hierarchy and how it has changed over time, the chimpanzees' individual preferences for staying inside or going outside, and under what circumstances they may become stressed or start fights. They are also the most familiar with the physical conditions and constraints of the enclosures they will use during the introduction – which doors will be easiest to move chimpanzees through, which ones need repairs, what equipment or special incentives keepers will need to convince chimpanzees to move where they would like them to go (see chapter 5). All of this information is essential to forming a safe, feasible, and efficient plan for the introduction. However, most importantly, keepers will not only have to assist with the development of the plan – they will be required to physically *implement* the plan by moving certain chimpanzees through a series of sliding doors and overhead tunnels into the correct locations at the appropriate times. Keepers, rather than managers or volunteers, will also be held responsible if the plan is not successful (i.e. if a chimpanzee escapes or is injured, goes to the wrong place at the wrong time, etc.).

Volunteers Alice and Sara (the aspiring primatologists described in chapter 3) conduct observations throughout this process, noting the frequency and types of interactions between chimpanzees from the new and main groups. Alice has a Master's degree in conservation and population management and has worked at the LWC for over a year and a half, in addition to carrying out similar work elsewhere in Africa and Asia. Although her official title at the sanctuary is "volunteer," this now mainly reflects the fact that she does not receive pay. Early in her stay,

her main responsibilities looked similar to those of most other volunteers – assisting keepers with feeding and cleaning, working closely to care for the chimpanzees under discussion in the meeting. However, over the last few months, she has done less direct work with keepers and animals, and more work with management and conducting observations, to the point that she is often considered more of an unofficial assistant manager than a volunteer. As mentioned in chapter 2, this promotion out of the manual labor of cleaning and feeding is a common trajectory for long-term primatology volunteers, but one that is unavailable to animal keepers.

In contrast to Alice, all of Sara's experience working with and studying chimpanzees has occurred over the last few weeks, during her two-month volunteer stay in Limbe. Although she has much less experience than Alice, she has followed a similar, albeit expedited, trajectory. She spent her first two weeks working directly under keepers assisting with chimpanzee feeding and cleaning, while also receiving training from Alice, Peggy, and keepers in identifying individual chimpanzees and coding their behavior (see chapter 3). Since then, she gradually began spending less and less time assisting keepers, and more time studying, conducting observations, and eventually analyzing data.

While both Alice nor Sara no longer interact directly with the chimpanzees as often, they do spend several hours each week sitting outside their enclosures conducting formal primatological observations of dynamics in the group. In addition to generating quantitative analyses of these observations (for use in official institutional reports), Alice and Sara provide more informal reports of their observations to assistant manager Peggy. Their observations are a frequent topic of discussion – and source of evidence – during meetings as well. Both volunteers, but in particular Alice, have worked closely with keepers, and are generally both deferential to them, and respected by them.

	Title	Credentials / Experience	Domain of Expertise	Responsibilities in Introduction
Peggy	Assistant Manager	Degrees in conservation and veterinary science; 3+ years population management	Primatology and formal observations; Animal health and rehabilitation	Oversee process; Make final decisions; Evaluate progress
Jonathan	Head Keeper	European animal keeper training; 20+ years working with LWC's gorillas and chimpanzees	LWC animal care; LWC daily operations and management	Set work schedules; Oversee sanctuary operations; Assist with decision-making process; Occasionally help chimpanzee keepers with animal care
Victor	Assistant Head Keeper; Head Chimpanzee Keeper	20+ years working with LWC's chimpanzees	LWC chimpanzee personalities and behavior; chimp enclosures, equipment, and routines	Set work schedules; Oversee sanctuary operations; Manage chimpanzee section; Feed chimps and clean cages; Assess chimpanzee well-being; Move chimps to appropriate locations; Solve problems and stop fights
Thomas	Chimpanzee Keeper	20+ years working with LWC's chimpanzees	LWC chimpanzee personalities and behavior; chimp enclosures, equipment, and routines	Feed chimps and clean cages; Assess chimpanzee well-being; Move chimps to appropriate locations; Solve problems and stop fights
Alice	Senior Volunteer	Master's degree in primatology; 3+ years volunteer work with primates	Primatological observations; LWC chimp behaviors; Statistical analysis	Conduct formal primatological observations of LWC chimp group dynamics; Analyze and report on these observations; Train Sara
Sara	Junior Volunteer	Biology undergraduate student; 1 month volunteer work with chimps	Primatological observations; Chimp behaviors; Statistical analysis	Conduct formal primatological observations of LWC chimp group dynamics; Analyze and report on these observations

Table 4.1: Individuals present at chimpanzee introduction meetings,
their credentials, domains of expertise, and roles in the introduction process.

The Role of Meetings in the Introduction Process

The expertise of managers, animal keepers, and volunteers come together in meetings to discuss the progress of the introduction. While the data I analyze in this chapter all come from one

meeting held in May 2017, the conclusions I draw surrounding normal meeting dynamics (and participants' interpretations of them) are informed by 22 staff meetings I attended and recorded between February and September 2019, seven of which pertained specifically to the chimpanzee introduction process. My analysis further draws from interviews with each of the meeting participants I discuss in this chapter, as well as informal conversations and participant observation as I worked alongside chimpanzee keepers, managers, and volunteers throughout the fieldwork period.

Chimpanzee introduction meetings occur approximately twice a month, and normally last around half an hour. During this time, assistant manager Peggy normally begins by asking for updates from keepers and volunteers on how the chimpanzees have been behaving, and if any unforeseen problems have occurred. Are the new chimpanzees losing weight? Which of the main group chimpanzees are most interested in them? How has the cleaning and other labor involved in animal care been impacted? Once any pressing day-to-day problems have been resolved, Peggy moves on to the main point of most meetings: to determine if the group is ready to move to a new stage in the introduction process described above.

In these meetings, Peggy behaves as if everyone present has equal rights to participate. However, this belief neglects the structure of meetings, in which "one participant is recognized as having special rights to decide who may speak when, what may be talked about, when a present speaker should stop speaking, etc." (Atkinson 1982, 103). In chimpanzee introduction meetings, this person is Peggy herself. Outside of the restrictions created by the structure of the meeting talk, meetings are also informed by participants' prior histories with each other, and norms for communication, as "each participant enters a social situation carrying an already established biography of prior dealings with the other participants – or at least with participants of their kind;

and enters also with a vast array of cultural assumptions *presumed to be shared*" (Goffman 1983, 4; emphasis mine). In this setting, which involves Cameroonian men and French women between the ages of 21 and 60, who together speak upwards of seven languages but speak only English together, it is dangerous to *assume* common ground or understanding. Finally, interactional and social constraints may make certain meeting participants *unwilling*, if not unable, to participate, often strategically (see example 15). As Goffman describes, "individuals go along with current interaction arrangements for a wide variety of reasons, and one cannot read from their apparent tacit support of an arrangement that they would, for example, resent or resist its change. Very often behind community and consensus are mixed motive games" (Ibid. 5).

In the meeting that is the focus of this chapter, which occurred approximately one month into the introduction process, Peggy sits down with head keeper Jonathan, chimpanzee keepers Victor and Thomas, and primatology volunteers Alice and Sara to discuss moving to the next stage of the introduction process — indirect contact through the bars of adjacent cages. They spend half of the meeting discussing which of the chimpanzees from the main group would be good candidates for this stage – the chimpanzees Alice and Sara have noticed exhibiting the most friendly behaviors toward the new chimps. They spend the second half discussing the logistics of which chimps should be placed in which cage, and how.

This meeting constitutes an example of 'collaborative imagining,' "a social, jointly produced activity in which the objects of thought are actually manipulated in interaction rather than just reported" (Murphy 2005, 114). In order to imagine how the introduction will take place, participants rely on a variety of semiotic resources, including gestures, gaze, and material objects in the form of notes and diagrams. They also of course rely on talk – notably in this case, talk that occurs almost entirely in English, although it is no one's first or preferred language (see chapter

1). Combining these resources allows participants to “take their own ideas and make them publicly available for the rest of the team to see and potentially supplement or change” (Murphy 2005, 114), enabling them to not only present their ideas, but build off each other’s.

The study of workplace meetings within conversation analysis has described how meetings impose a different set of interactional regulations than ordinary conversations. As meetings often involve a larger number of participants than ordinary conversations, they require interactional procedures that not only keep the attention of everyone present, but also ensure basic requirements for interaction, such as that only one person speaks at a time, that speaker change recurs with minimal overlap, silences are brief, etc. (Atkinson 1982, Schegloff 2007, Clayman 2013, Drew 2010). Meetings are pre-planned, goal-oriented, and involve participants with clear institutional roles. These roles, however, “are not static entities throughout the entire meeting event, but are recurrently oriented to, renegotiated, and sometimes also challenged” (Asmuß and Oshima 2012, 68). For example, as I demonstrate below, while Peggy regularly exercises her authority to decide which chimpanzees should be involved in the introduction, her lack of direct experience with the chimpanzees in question means that she must also frequently pass decision-making authority to keepers.

As the goal of chimpanzee introduction meetings is to both share information about current chimpanzee health and behavior, as well as to decide what new actions to take in the future, participants are constantly negotiating each other’s epistemic and deontic rights. While epistemic rights pertain to individuals’ authority to have and express knowledge over certain topics (see Heritage 2012, Heritage and Raymond 2006), deontic rights concern “who has the capacity to define what is necessary and desirable, what should, and what should not, be done….and who has the obligation to do what others tell him or her to do” (Stevanovic and Svennevig 2015, 2).

Drawing on Searle (1976), Stevanovic and Peräkylä (2012) describe the difference between epistemic and deontic authority as follows: "epistemic authority is about getting the *words to match the world*, and deontic authority is about getting the *world to match the words*" (298; emphasis in original).

An individual's deontic and epistemic rights vary from domain to domain – something that is essential in the introduction process, as assistant manager Peggy may have rights to dictate how events *should* unfold, but only keepers have the rights to *make* events unfold by moving chimpanzees. Across these domains, it is not only the type of rights that may change, but also the degree of rights, as well as the potential stakes and consequences for asserting them. As meeting participants have different rights within the meeting (where the plan will be made), and outside of it (where it will be enacted), meetings are full of tensions over who knows what, who should know what, whose knowledge counts, who has the authority to tell someone what to do, and who will actually have to do the thing that is decided. These tensions emerge (and have the potential to be ameliorated or worsened) in the way participants shape their talk, and react to the talk of others.

Meetings as Egalitarian Spaces?

In this meeting, managers, keepers, and volunteers seek to reach an agreement on how the new chimpanzees are doing, which of the main group chimpanzees should meet them, and when and how this introduction should take place. Despite the complexity and inequalities inherent in both the structure of this institution and the setting of the meeting itself, assistant manager Peggy views meetings as intentionally egalitarian spaces, where different groups can come together to share knowledge and help each other solve problems. In conjunction with her husband, NGO

manager Guillaume, Peggy says she began holding meetings to create opportunities for Cameroonian staff to be more involved in decision-making processes at the sanctuary.

In fact, she says alongside issues with animal health and the physical maintenance of the center, staff involvement and professionalization were one of the main problems she and Guillaume identified when they arrived at the LWC around two years prior. "In the past, it was always the management who decide. That's it. And now we do a lot of meetings so people are more implicated," she says.[8] "They need to be involved in all the things we do, otherwise it will not work. So we changed a lot of things." Meetings are therefore an intentional strategy that the new managers developed which they believe sets them apart from previous managers, who, current managers believe, were not as concerned with involving Cameroonian staff in decision-making processes. Current managers see this strategy as an essential part of making the LWC as a whole function, and making the managers' work sustainable, even after they leave.[9]

A large part of the reason Peggy feels staff need to be more involved in making decisions at the sanctuary has to do with the relationship between Pandrillus, the NGO, and the Ministry of Forestry and Wildlife (MINFOF), part of the Cameroonian government, who co-run the LWC. "It was MINFOF who created this protected area," explains Peggy. "It's MINFOF who manages the sanctuary. Pandrillus is just here to help them to know how to do it." For the managers, helping them "to know how to do it" often involves managing and restructuring budgets and the allocation of NGO and government resources – the main responsibility of Guillaume, the NGO manager and

[8] Peggy's use of 'implicated' here is a calque of the French verb *impliquer*, which translates to 'involve' in English, Peggy's intended meaning. I have left her choice of words unedited in appreciation of the (incidental) double entendre – while Peggy wants keepers to feel included in institutional decision-making, more often these meetings leave them feeling implicated for not having carried out decisions according to managers' desires.

Peggy's husband. But for these managers it also involves changing many work protocols, such as how staff interact with animals, and increasing their participation in settings like meetings.

Officially, the NGO managers occupy the position of 'consultants' to the Cameroonian government. Most NGO managers stay at the LWC between two and five years, and have always been European or American. Managers and their apprentices have described the position as requiring long hours (generally six to seven days a week, nine to ten hours a day), low pay, and often difficult physical and social living conditions. These factors, combined with the uncertainty of project funding, and distance from family, lead most managers to enter into the position with the belief that they have a limited amount of time to enact the changes they see as necessary for the sanctuary. To make their work sustainable, Peggy and Guillaume firmly believe that Cameroonian staff – most of whom have worked there for 10-20 years or more — must be trained in particular ways and take ownership of how the sanctuary runs. Organizing regular meetings with staff is one of the primary strategies they have devised to accomplish this.

Managers view meetings in two somewhat contradictory ways: as neutral ground for sharing information and making decisions, as well as a pedagogical space for training staff in rehabilitation and animal care techniques. Meetings allow managers to teach keepers rehabilitation protocol, and give keepers the opportunity to ask management for support with any problems they might be having. For example, if keepers are struggling with a chimpanzee who always refuses to move out of a cage they need to clean, management can use their expertise in primate behavior to help them come up with new training strategies. Alternatively, they may be able to provide keepers with material resources like tools, repairs, or treats that will make this move easier. Managers may also decide a behavioral problem may be health-related, and call in the veterinary team. In situations like these, managers view meetings as a space for all involved in the chimpanzee

rehabilitation process to air concerns, share knowledge, and come up with decisions that follow international 'best practices' for rehabilitation, while also working for keepers at a practical level.

This ideology corresponds with many of the ideals Darrin Hicks (2002) describes as the promises of deliberative democracy: first, inclusion – that every citizen should be able to participate and come to an agreement in the decision-making process. Next, equality, in that it will weigh all views equally in order to transform citizen preferences and conduct into justice. And finally, what Hicks calls "the promise of reason," in which citizens agree upon what it means to be reasonable, and accept and abide by the results of public deliberation, even if they disagree. However, Hicks argues that each of these promises falls short when faced with the reality of cultural differences, shortages of resources (temporal, material, and cognitive), and dramatically unequal relationships of power. While those in power (such as NGO managers) may see dialogue as the solution to disagreements, they generally underestimate the obstacles faced by those lower in the hierarchy:

> Once engaged in dialogue, the norms of decorum and the demands of social cooperation make it difficult to make radical critiques of current arrangements, to ascribe blame, and to point out complicity; each of these moves threatens the faces of other participants, whose identities are constituted by their commitment to these procedural norms and their positions of social power. As a result, it becomes almost impossible to forge the kinds of trust and mutual respect necessary for collaboration. (Hicks 2002, 251)

Instead of opportunities for collective decision-making, keepers generally view meetings as interruptions to their work schedule, places where they receive even more responsibilities, and where managers are likely to criticize or reprimand them for not doing their jobs according to the managers' standards. As keepers frequently complain, these standards are often unclear, or do not align with the practical realities of the facilities, manpower, material resources, and/or animal behaviors actually present at the LWC. Keepers describe feeling like management take a condescending stance toward them, viewing many keepers as lazy or stubborn instead of as

invested experts who should be appropriately compensated for their knowledge and experience. As one keeper described to me in an interview:

> You can be here for decades, but then a new manager comes, and you start at square one. All they say is 'you are not working hard,' but they don't see that you've already been working for twenty years….When you've been here that long, when you're old, you should be controlling the workers, training them and telling them to go clean, not doing the cleaning yourself.

Complaints like this were common from senior keepers, and nearly always related to compensation as well – cost of living in Limbe has risen dramatically over the last decade, but keepers' salaries have not. For many keepers, then, meetings are spaces where management gives them unrealistic instructions, or reprimands them for not having carried out the unrealistic instructions they gave at the previous meeting. Many keepers are eager for the opportunity to take on more authority, but do not view meetings as a place where this happens. And, as described in chapter two, while there are some opportunities for keepers to take on more management responsibilities, unlike primatology volunteers, these promotions never result in a decrease of their daily feeding and cleaning responsibilities.

Managing Primatological and Keeper Knowledge

As described above, the goal of this particular meeting is to decide how to move from the "indirect contact" stage of the introduction to the "direct contact through the fence" stage. This involves making three major decisions: 1) which of the chimpanzees from the main group should be introduced to the new chimpanzees first (i.e. who will be friendly rather than aggressive, and who likes to stay inside all day); 2) when and how should the main group chimpanzees meet the new ones (i.e. at what time of day should the two groups come together, how should keepers bring them together, when should keepers send the friendly chimpanzees back to the main group); 3) in

which cages should keepers put each of the groups of chimpanzees (see Figure 4.1). Considerations include which groups need the most space, how easy will it be to move each group from one room to another and then back again, where are the chimpanzees more likely to interact, etc.

In discussing these issues, Peggy, keepers, and volunteers each provide different kinds of information and raise different concerns about the habitual and potential future behavior of the chimpanzees in question. Through the analysis of how they raise and respond to these concerns, I demonstrate how claims to knowledge and authority are upheld or contested in interaction, and how negotiating these hierarchies shapes the ultimate plan the group decides on. I begin by discussing the overarching structure of talk in the meetings, analyzing assistant manager Peggy's role as turn mediator, and the way her use of summaries serve as mitigated directives, reinforcing her own authority and erasing keepers' labor. Next, I compare how Peggy, volunteers, and keepers make assessments about chimpanzee personalities and behavior. These assessments are indicative not only of the kinds of claims to knowledge each group makes, but also of what each group thinks of as relevant or convincing evidence in the analysis of chimpanzee behavior. I then examine the different domains in which Peggy treats primatological v. keeper knowledge as valuable. Finally, I analyze an extended sequence during which keepers disagree with management's recommendations. I examine the strategies Peggy uses to push keepers to agree with her position, those the keepers use to demonstrate why they think she is wrong, and the role of mediating figures in coming to a resolution.

Turn Allocation and Summaries

Turn mediation is an important component of meeting talk — something which must be more formalized than in casual conversation in order to facilitate the progressivity of this large,

multi-party, goal-oriented interaction. The matter of who takes the floor, when, and how is deeply entangled with epistemic authority, for an individual cannot insist upon their rights to knowledge if they do not have the opportunity to express them. In casual conversation, participants are expected to share the floor, and there are a variety of strategies one can use to transition between speakers (Schegloff, Sacks, and Jefferson 1974). However, generally in meetings, "one participant is recognized as having special rights to decide who may speak when, what may be talked about, when a present speaker should stop speaking, etc." (Atkinson 1982, 103). In the case of chimp rehabilitation meetings, this person is Peggy, the LWC's assistant manager. Peggy decides when and how often these meetings should occur, as well as who should attend, and what they should discuss. Through the way she structures her talk, she not only selects the topics for discussion, but also allocates turns to particular individuals, and has the ultimate power to declare that the group has reached a decision.

In the following example, taken from early in the meeting, Peggy introduces a new topic, asking first keepers Victor and Thomas, then volunteer Alice, to report on the behavior of Mayos, Lolo, and Madame ("the new girls"):

Example 1

```
01    Peg:  U:hm okay. For this week. Behavioral speaking.
02          How's the:: ne:w, especially girl?
03          Maybe you: ((gaze to Victor))
04          you have some observation. ((gaze to Thomas))
05          They f- they seem fine? They still have stress?
06          (2.4)
07    Vic:  You mean the three::?=
08    Peg:  =Yes the three female.
09          (1.2)
10    Peg:  How they feeling. Their behavior.
11          (1.7)
12    Tho:  Okay their behavior is (.) good, but sometime,
13          Madame also cause some problem when food is concerned.
14          But he^re they still eat.
15          But when there's food Mad[ame
16    Vic:                           [Mayos=
```

```
17    Tho: =>Mayos. I mean Mayos.< is always causing
18         small problem (.) with mostly Madame.
19    Ali: ((nods))
20    Peg: Okay.
21    Tho: Small problem. with Madame [and Mayos.
22    Peg:                            [and Mayos.
23    Tho: Yeah.
24    Peg: During only, more often during the feeding time.
25    Tho: During feeding time.
26    Ali: ((nods))
27    Peg: But during the da:y, it's more quiet.
28    Tho: No during the day I never see them fighting.
29         Just only when food is concerned.
```

In meetings in general, Peggy begins by opening a topic for discussion, posing a question which at first looks open to everyone (line 2), but in this case, which she quickly directs to the keepers (lines 3-4). Throughout meetings, depending on the topic, and/or the way Peggy phrases the question, keepers may be more or less forthcoming with information. Indeed, as I will describe later, rejecting the floor (by remaining silent) is one of the most powerful strategies that keepers use to express disagreement (see example 15). In this case, keepers may be unsure of what kind of response Peggy is seeking. Thomas may be waiting for Victor, the more senior keeper, to respond first, but when it becomes clear that he will not, Thomas provides a positive assessment, followed by a caveat (there are some problems with Madame, line 15). Victor comes in to correct Thomas (line 16), who has mistakenly said the name of Madame (the most passive of the new group), when it is clear he means Mayos (the most aggressive of the new group), who is always starting fights and stealing food from the other chimpanzees.

Victor's correction serves indirectly as corroboration of Thomas' assessment, for he corrects only the name of the chimpanzee, but nothing about the assessment itself. Although he is the most senior chimpanzee keeper and could perhaps be expected to have first rights to the floor, Victor has a reputation for being terse and short with words, whether he is interacting with management, colleagues, or friends. This is something which often frustrates Peggy, who seems

to expect the most senior person to be the most forthcoming with information. However, over twenty years of working together, Victor and Thomas have come to know each other's preferences and opinions (as they relate to both work and communication), and Thomas often speaks for Victor throughout the meeting.

```
30    Peg:  Okay. ((writing in notebook))
31          And with your observation? ((gaze to Alice))
32    Ali:  Uh for me I think they are okay, uhm.
33          Because they play they don't (.) stress,
34          Maybe sometimes I saw some uh
35          stereotyp- stereotypical behavior
36          but not a long time just punctually?
```

Apparently satisfied with the report from keepers, Peggy jots down some notes before posing the same question to volunteers Alice and Sara (line 31), asking specifically for the results of the observations they have been conducting. As Alice is both more experienced and significantly more fluent in English, she responds rather than Sara. She begins with an assessment that is a slight downgrade from Thomas' ("okay" rather than "good"), followed by a justification for her assessment. Her description is more detailed, drawing from categories from the ethogram (see chapter 3). Instead of "small problems," she uses categories like "play," "stress," and "stereotypical behavior." Alice's use of this type of terminology legitimizes her observations, as:

> the use of technical register indicates a superior status and a special knowledge based on long training and specialized qualifications….When technical register is used and embedded in the institutional trappings of the formal proceedings of a meeting, the grounds for negotiating meaning are removed from under the conversation….To request a clarification of the [speaker of the technical register], then, is to challenge the authority of a clinically certified expert. (Mehan 1996, 270)

The power to allocate turns to individuals reinforces Peggy's power to dictate what type of knowledge matters in the decision-making process. Allocating the floor to the keepers before the volunteers aligns with Peggy's self-proclaimed desire to get keepers more involved with decision-

making at the LWC — in her words, to help them take "ownership" of the sanctuary. However, while Peggy may use this strategy to highlight their knowledge as most important to the decision-making process, an unintended effect of this organization is that by going first, their descriptions of animal behavior are open to critique or contradiction by the volunteers whose assessments follow theirs – and whose assessments are legitimized by primatological authority (see next section). This dynamic closely resembles that of the dinnertime conversations analyzed by Ochs and Taylor, in which the way that mothers position fathers as primary recipients "implicitly sanction[s] them as evaluators of others' actions, thoughts, conditions, and feelings" (1993, 461). This dynamic might explain the keepers' silence early in the meeting, and is something Victor orients to explicitly later in the meeting, when Alice provides a recommendation, Peggy asks for Victor's opinion, and he simply nods and waves toward Alice instead of providing a verbal response himself.

In addition to allocating turns, Peggy structures meetings with frequent extended turns-at-talk in the form of summaries, which, as described in the beginning of this chapter, she uses to outline the purpose of the meeting as well as a list of topics for discussion. However, she also uses summaries throughout the meeting to open and close sequences, initiate new topics, and finalize decisions. In the following example, the group has decided which of the main group chimpanzees are most likely to be friendly with the new ones, and Peggy has suggested that they should make a schedule for which chimps should meet each other each day. The keepers have objected, saying this is not something they can control. After some discussion, Peggy produces the following summary:

Example 2

```
01    Peg:  okay. you choo^se uh:: who (.) want to stay.
02          but it's goo^d (.) at least, (.) we always have,
03          we:::, uh::: uh in uh the ten days we will uh do^ it,
```

```
04          the old individual ha:ve enough time.
05          (.) because it's always Suzanne and Ewake?
06          they need also to see with Paquita, and uh and Achidi.
07          so. see with uh:: Sara, or whoever take data,
08          who can be ready.
09          [....] it would be nice for them to try with Achidi.
```

Throughout this sequence (and throughout meetings more generally), Peggy shapes her talk in ways which both collectivize and minimize the work keepers will have to do. In lines 2 and 3, she uses the pronoun 'we,' implying that work will be shared by keepers, volunteers, and even herself. However, it is the keepers alone who will do the time-consuming, dangerous work of convincing chimpanzees Suzanne and Ewake to move through a series of overhead tunnels and sliding doors into the cage next to the new chimps (see chapter 5). Not only is it not part of Peggy's normal duties to assist keepers with their work, but she will in fact be out of the country for most of this stage of the process.

Peggy's phrasing further erases keepers' labor as she makes chimps the agents of her sentences, rather than the keepers, who are responsible for making the chimpanzees' actions correspond to the plan. The chimpanzees will only "have enough time" (line 4), be able to "see with Paquita," (line 6) or "try with Achidi" (line 9) if the keepers are able to segregate them from the main group, keep them inside, and then convince them to move to the correct room at the correct time. The claims Peggy makes about what should happen during the introduction, combined with her beliefs that meetings are democratic spaces and summaries represent mutually agreed upon decisions, disguise the hierarchical nature of meeting interactions. Rather than representing group consensus, at their core, these summaries function as a series of mitigated directives from the manager to the keepers.

Assessing Chimpanzees

When Peggy selects a topic for discussion and allocates it to either keepers or volunteers, generally she is hoping to elicit some form of assessment of chimpanzee behavior (Example 1, lines 12-14, 32-36). Indeed, the majority of most meetings are spent discussing whether particular chimpanzees are friendly or aggressive, happy or stressed, making friends or isolated, eating well or losing weight. These assessments of chimpanzee personalities and behavior are the evidence which inform decisions over whether to introduce an older chimpanzee to a younger one, if keepers need to implement different training or feeding strategies, if a chimpanzee should be kept inside or sent outside. The progressivity, and ultimately, the success of the entire introduction, is built out of hundreds of these small assessments (and others' reactions to them) strung together over months.

Assessments inherently make claims about the speaker's access to the subject of evaluation, as well as claims about the speaker's basic competencies in perceiving, recognizing, and naming states of affairs (Pomerantz 1984). As such, assessments involve an assertion of epistemic authority, or "the knowledge claims that interactants assert, contest and defend in and through turns-at-talk and sequences of interaction" (Heritage 2013, 370). "I know Ewake is a calm one," "I think Ewake is a calm one," or "Do you know if Ewake is calm one?" all express different levels of commitment and rights to making an assertion about the nature of a particular chimpanzee. Interactants make decisions about which of these forms to use with regard to what they "have experienced and can lay claim to have access to and to know" (Heritage 2013, 371). However, what counts as knowledge and/or relevant experience varies depending on the evaluation or decision being made. Peggy may have the most institutional authority, but she also has the least direct access to chimpanzees. Keepers' authority comes from their long-term and intensive direct daily contact with chimpanzees, but volunteers' observations carry with them the authority of

scientifically-respected primatological methodologies.

Managers, keepers, and volunteers therefore each have different authority to do an assessment, and do them in different ways. As the assistant manager, Peggy has very limited direct contact with the chimpanzees under discussion, but great authority within the institution to elicit assessments, summarize them, and decide whose assessments count and how. In meetings, Peggy's assessments generally take the form of "I know" + an adjective describing their personality. For example, when discussing which of the main group chimpanzees are good candidates to meet the new group, Peggy produced the following assessments:

Example 3: "I know Ewake is a calm one, and she used to stay inside."

Example 4: "For example, we keep uh Suzanne, Maya, and Ewake because I know they are calm."

Example 5: "Suzanne start to be old, and Ewake she like to become the new mom."

In contrast to Peggy, keepers' authority to assess chimpanzees comes from decades of direct daily contact with them. This contact involves not only observing the group at rest, at play, or during feedings, but also interacting with them directly as they feed them, break up fights, and convince them to move to different locations. Keepers' assessments generally take a narrative form, either describing habitual actions or a recent incident that illustrates their behavior. For example, in this meeting, they have been discussing which chimpanzees would be calm enough to stay inside during the day. Peggy has suggested a young female chimpanzee named Messang, but Victor has disagreed. Thomas provides an assessment to corroborate Victor's opinion that Messang would not be a good candidate:

Example 6

```
01    Tho:  Yeah Messang. Messang is like that.
02          Because when you put her in that cage,
03          She can be fighting with them.
```

```
04          [. . . .] Because remember the day,
05          you ((to Jon)) told me they are throwing rocks.
06          So when they are there like that.
07          You try to see what they can do.
08          They throw shit (.) all over the gate.
```

This assessment begins with a general description of Messang's personality and likely behavior. Thomas follows by providing evidence of a particular incident that illustrates that behavior – an incident witnessed by Jonathan, another keeper present in the room. Thomas concludes with another general assessment which points toward Messang's likely future behavior: if she is kept inside all day, she is likely to rile up other chimpanzees or cause damage to the facilities.

Senior volunteer Alice walks a middle ground between Peggy and the keepers – like Peggy, she is French, has advanced degrees, and orients to primatological methodology as the most reliable evidence of chimpanzee behavior. However, she also spent months doing manual labor alongside keepers, and maintains deferential, respectful, and generally friendly relationships with them. Alice's assessments generally take the form of adjective + description, often drawing directly on the formal scientific terminology of the ethogram. For example, as discussed in Example 1, when Peggy asks for Alice's opinion on how the three young chimpanzees are doing she says:

Example 7

```
01    Ali:  Uh for me I think they are okay, uhm.
02          Because they play they don't (.) stress,
03          Maybe sometimes I saw some uh
04          stereotyp- stereotypical behavior
05          but not a long time just punctually?
```

Junior volunteer Sara also attends meetings, but due to her discomfort in English, she almost never contributes directly to conversations. Early in her stay, she struggled greatly to understand even the basic content of the meetings, and would ask me or Alice to stay behind and translate them for her afterward. As her time in Limbe – and comfort in English – progressed,

however, she ultimately was able to follow most meeting conversations, as evidenced by discussions I had with her afterward. While Sara does not speak during meetings, she does provide informal daily reports based on her observations to both Peggy and Alice in French. These reports generally rely heavily on categories from the ethogram, or on descriptions of behavior that Peggy and Alice then reframe for her in terms of ethogram categories. Peggy also references these informal conversations during meetings, thereby voicing Sara's observations for the group. For example, after Alice brought up the kinds of stress behaviors she saw the new chimpanzees exhibiting, Peggy pointed to Sara and said "you saw the same thing. Because we spoke about this." Sara nodded emphatically in confirmation, but remained silent. Sara's case illustrates just how much weight Peggy allots to primatological assessments – despite the fact that Sara is a novice both as a primatologist and speaker of English, Peggy scaffolds her participation in the meeting so that the results of her observations are on record and can be treated as evidence to inform the introduction process.

Orienting to Primatological Expertise

The formal observations of volunteers Alice and Sara were a frequent topic during meetings. The results of these observations (in the form of assessments) were used as evidence to evaluate chimpanzee behavior and the likelihood of positive outcomes in the introduction. Indeed, Peggy orients repeatedly to the category of "observation" or "data" throughout the meeting:

> Example 8: "With your observation with the second door open, what did you see?"
>
> Example 9: "In maybe a month we open the second door to see with the observation of Alice and Sara if we have new information."
>
> Example 10: "Try between 10 and 2 o clock. So the girls [Alice and Sara] also they know and they take data."

Example 11: “See with uh with Sara or whoever take data who can go in.”

Example 12: “If it is okay for everybody, we will start like this for tomorrow.
And the girls will be there to take the data.”

Volunteers’ use of established primatological methods in their observations legitimizes their assessments, tying them to over a century of scientific protocols and categorizations. Although Alice and Sara are both in their 20s and have much less experience working with primates than keepers (in Sara’s case, only a few weeks of experience), the fact that their observations are framed as scientifically driven gives them great weight in the meeting – to the point that Peggy sometimes gives volunteers the authority to tell keepers how to do their jobs.

This is particularly apparent in how Peggy orients to Alice and Sara’s observation schedules. In this example, the group has been discussing at what time of day the new chimps should have contact with the older ones. Peggy concludes by telling keepers to “try between 10 and 2 o clock so the girls [Alice and Sara] also they know and they take data….so we can see how they behave.” Here, not only are keepers’ schedules determined in part by the volunteers’ availability, but Peggy frames these formal observations as the only legitimate evidence of what occurs between the chimpanzees. These formal observations receive legitimacy and authenticity as evidence in their ties to the fields of biology and primatology, but also in the fact that they produce written documents and use scientific terminology.

Keepers will also obviously be present and monitoring chimpanzee behavior during this time, but it is the formal observations that count in the meeting as “seeing.” Volunteers’ authority to “see” in this way outweighs their lack of experience, to the degree that Peggy instructs keepers to ask volunteers which chimpanzees should be used on particular days, as occurred in the summary analyzed above, where Peggy tells keepers to “see with Sara or whoever takes data [which chimpanzees] can go in.” In this case, Peggy wants to be sure that the new chimpanzees

will have enough time with old chimpanzees Paquita and Achidi. Because Sara will be conducting formal observations of the old and new chimpanzees each day, Peggy gives this 21-year-old undergraduate the authority to dictate a schedule to senior keepers.

Finally, the esteemed position given to primatological expertise is visible in the amount of time spent during meetings discussing the volunteers' observation schedules. This is a topic that surfaces at least once or twice in every meeting, and often requires extended conversation. For example, at the end of this meeting, Peggy spends three full minutes (almost 10% of the entire meeting) explaining Sara's schedule to keepers. Sara is coming to the end of her two month stay in Limbe, and during her last couple of weeks, she will sometimes be assisting keepers with cleaning and feeding, but more often doing observations, working one-on-one with NGO manager Guillaume to analyze data, or sightseeing around Limbe. Peggy's description of this schedule is so complex that finally Jonathan, the head keeper in charge of setting work schedules, says "I'm a bit lost with the program she will have, but when she's available [to help keepers] she should let us know."

Deferring to Keeper Expertise

While Peggy validates primatological expertise as evidence of which behaviors occur, as well as for scheduling, there are numerous topics on which she defers to the knowledge of keepers. These include keepers' knowledge of individual chimpanzees' habitual behavior – particularly when it contradicts her or the volunteers' understandings. In this portion of the meeting, the group has been discussing at length which of the chimpanzees from the main group should be introduced to the new group first. Peggy begins by suggesting a handful of names — individuals she "knows" to be "calm," "friendly," or "nice." The keepers agree with some of her choices, but say others

would not work. For example, chimpanzee Maya is very friendly but will become stressed if she is kept inside all day. Next, keepers and volunteers each suggest additions to Peggy's list, discussing pros and cons for each chimpanzee. At the end of this discussion, Peggy summarizes the complete list of "friendly" chimpanzees, then breaks the list down, asking for keeper approval after each name:

Example 13

```
01    Peg:  So, (.) what we have, ((reading from notebook))
02          It's (.) >Maya, Suzanne, Ewake, Messang, Damien.<
03          Who used to be inside.
04          There is someone else? ((gaze to Alice))
05    Ali:  Paquita.
06    Peg:  Paquita.= ((writing in notebook))
07    Vic:  =°Paquita::, Messa::ng,
08          (2.5)
09    Peg:  ((gaze to Victor)) Okay. Maya don't like to::,
10          be::, [enclosed.
11    Tho:        [Yeah yeah yeah. [Maya don't like-
12    Vic:                         [So she will li^ke to be there.
13          Just because of them. But (.) after some time,
14          she don't like. She wants to go out.
15    Peg:  Okay.
16    Vic:  She will just want to go out. ((waves))
17    Peg:  Suzanne Ewake is not an issue? ((gaze to Victor))
18          (0.7)
19    Vic:  Suzanne Ewake, (.) yes.
20          Can [stay inside.
21    Peg:      [eh:: Messang. ((gazes to Thomas))
22    Tho:  [yes
23    Vic:  [Messang can stay inside °yes.
24          (0.9)
25    Peg:  ((gaze to notebook)) Paquita? ((gaze to Victor))
26          (0.9)
27    Vic:  Yes.
28    Peg:  And Damien but not too much.
29    Vic:  Damien, ((shrug)) Yes.
30    Peg:  He don't like to stay i:[::n,
31    Vic:                          [He don't like to stay.
32          >because at times,< he will want
33          that we should open the door.
```

Peggy begins by summarizing the list she has written in her notebook, based on the group's discussion so far. She looks to Alice in line 4 to see if she has missed someone, and Alice adds Paquita. Victor, normally known for being tight-lipped, begins quietly listing friendly chimpanzees. In lines 9-10, Peggy looks to Victor, repeating the concern he raised about keeping Maya inside. Both keepers are quick to agree, with Victor providing an elaboration of Maya's habitual behavior (lines 12-16). Peggy moves quickly through the rest of the list, using phrasing and intonation that is K+ (lines 9-10, 17, 21, 28), but waiting for the keepers' approval and, occasionally, justifications before continuing to the next name.

Although the original list of names was collaboratively generated (by Peggy making suggestions, and then giving the floor alternatively to keepers and volunteers), Peggy only adds each name to the finalized list (which Peggy writes in her notebook, and refers to during the rest of the meeting) with the explicit approval of the keepers, often repeating their earlier caveats or concerns, and giving them the floor to elaborate upon them. She thereby treats the keepers as the ultimate experts on this topic, which may explain why Victor is more forthcoming here than elsewhere (see examples 1 and 15).

Peggy also defers to keepers on topics that involve the physical mechanics of their work, such as which rooms should be used for the introduction. In this example, the group has agreed upon which chimpanzees should be included in the introduction, and when they should go in. They must now decide which rooms they should use.

Example 14

```
01    Jon:  ((gaze to Peg)) it's not inside with them.
02          it's just next door to them.
03    Vic:  ((nod))
04    Peg:  no it's not wi^th them eh,
05          it's [in the big hall, ((circular gesture))
06    Tho:       [(...) in the big hall. ((circular gesture))
```

```
07    Peg: I don't know what is the most practical for you.
08         I don't know if, uh, ((grabs notebook))
09         Because, (0.3) okay they are here. ((points to notebook))
10         So::, for now it's this door who are open.
11         So who- what is the more practical for you.
12         To send thi:s, ((points)) individual in this cage
13         so they can interact [here? ((points))
14    Vic:                      [Ye:s.
15    Peg: O:r, open thi^s one so they go here. ((gaze to Vic/Jon))
16    Jon: [Either way.
17    Vic: [((head shake))
18    Jon: They just need to share a wall.
19    Vic: So it's looking like this. ((points to Peggy's notebook))
20         >Because if we want to send them back.
21         Then they will not go.<
22    Peg: Okay so they keep this do[o:r, ((points))
23    Vic:                          [yes they keep it=
24    Peg: =a:nd,= ((moves pencil across notebook))
25    Vic: =and send yes. ((waving to notebook))
26    Peg: It will be good also:, for these girls to have more space.
27    Vic: Yes.
```

Head keeper Jonathan confirms that the old and new groups will be in cages next to each other, not in the same room. Victor nods his understanding, and Peggy clarifies that one of the groups will use the "big hall" (Cage 5, see Figure 4.1). Thomas further demonstrates his understanding and agreement by speaking in unison with Peggy, and mimicking the circular gesture she uses to indicate the larger cage (line 6). But they still must decide which other room to use: either the new group can stay in Cage 4, while the old group takes Cage 5; or the new group can take Cage 5, while the old group takes Cage 6. Peggy uses a diagram in her notebook similar to Figure 4.1 to demonstrate these possibilities to the group, but defers to keepers in making the actual decision, framing the deciding factor as "what is the more practical" for the keepers (lines 7, 11) — i.e. which group will be easier to move to which cage. Here Peggy frames herself as K- over how the keepers' work occurs.

Moving chimps from room to room is a complicated and often tedious process (see chapter 5). Sometimes chimpanzees will follow keepers' verbal commands or can be lured with food, but

at other times, they have their own ideas about which room is the most desirable, and will refuse to go where they are told. There are a lot of variables affecting this process, including the keepers' individual relationships with each chimpanzee, the chimpanzees' personalities, their status in the group hierarchy, the location of other chimpanzees of higher or lower status in the hierarchy, which foods are desirable to each chimpanzee, the weather, how many doors and/or tunnels the chimpanzees will need to pass through, etc.

The majority of these different variables are things the keepers will know best, as they work the most closely on the ground with the chimpanzees. The success of this process (i.e. whether or not the chimpanzees arrive in the selected cages) depends entirely on the keepers' work. While Peggy makes her own suggestions or asks for both keeper and volunteer input on other issues, here she frames the knowledge of what cage to use as entirely within the domain of keepers' knowledge. Again, as we saw in example 13, when Peggy treats keepers as experts, they are more forthcoming with their talk, providing both caveats and suggestions, and ultimately finding a solution that will work best for keepers while also being beneficial to the young chimpanzees (line 26).

Managing Disagreements

Peggy intends the meeting space to be one which equalizes the hierarchy between managers and keepers, and she defers to keepers over topics like individual chimpanzee personalities and preferences, as well as the physical mechanics of moving them from room to room. However, treating keepers as authorities is not necessarily the norm in these meetings, and when her priorities do not align with theirs, she often uses language which both minimizes and collectivizes their work.

In this example, the group has finalized which of the older chimpanzees are good candidates to meet the new group — Suzanne, Ewake, Messang, and Paquita. Peggy is now shifting the conversation to *when* and *how* the two groups should meet each other — topics which are split across Peggy's domain of expertise (knowledge of a broad range of rehabilitation practices, chimpanzee well-being), and that of the keepers (these particular chimpanzees' personalities and habitual behavior, the mechanics of moving chimpanzees from place to place).

Example 15

```
01    Peg:  So maybe one day we will have Suzanne Ewake and Messa:ng,
02          and the other day Suzanne Ewake and Paqui^ta,
03          Let's see these four, but not (.) oblige them to stay.
04          (0.6)
05          Just because they they choose in the morning to stay,
06          and you open. I don't kno^w it's an idea ah:.
07          Just, (.) I don't want to force them. To be always.
08          Inside, if they don't want to be inside.
09          (1.2)
10          For now. (.)
11          Because we are not yet in the reintroduction process,
12          (.) where we will kee^p individuals with them,
13          to integrate °as we did for Suzanne and Billy.°
14          We just to see how Madame will interact and also Mayos.
15          (2.5)
16          It's just for fe:::w, it's maybe fo:r, the time I am going.
17          So I coming back in ten days. (.)
18          So maybe in ten days we say okay,
19          no:w, (.) they interact well,
20          There is goo:d uh:, (.) behavior,
21          We think it's good time to start
22          maybe to introduce one individual.
23          (0.6)
24          but for now u:h, (1.1) °I don't know.°
25          I don't know how Madame will react.
26          Maybe she will have a lot of issue,
27          to just (.) °see one individual.° We don't know.
28          (1.0)
```

In this sequence, Peggy takes an extended turn at talk that lasts over a minute. However, while lines 1-8 serve as a summary (similar to the one she opened the meeting with, and a normal strategy she uses to either open new topics for discussion, or close completed ones by stating a

decision), Peggy does not receive the uptake from the rest of the group that she needs to establish this summary as a group decision. She may be hoping for an "okay," nod, or other form of agreement from keepers (as she received in the previous examples when reaching an agreement on which chimpanzees to use and which rooms to put them in), but instead she receives silence (lines 4, 9, 15, 23, 28).

These pauses increase in duration as she elaborates upon her plan, and mark perhaps the most normal form of disagreement on the part of keepers. Remaining silent prevents keepers from having to make a more direct face-threatening move in the form of an outright disagreement. They are also ambiguous: silence may do disagreement, but without forcing keepers to disagree with specific components of what was said. Or silence may be interpreted as confusion or lack of understanding — a common occurrence in this type of intergroup communication, where everyone present is communicating in different varieties of English, and English is everyone's L2 (or L3, L4, etc.). Staying silent instead of voicing disagreement (or admitting lack of knowledge or understanding) is also perhaps more of a cultural norm for interaction for the keepers than for Peggy, as Moore 1999 discusses in the context of education in northern Cameroon.

Peggy responds to this escalating silence with a variety of strategies that push for a response from keepers. First, she reframes her statement of the plan as "an idea," and an idea about which she is even K- (line 6). When this does not receive a response, she elaborates on the reasoning behind the plan (lines 5-13), comparing it to an earlier successful chimpanzee introduction. Later in the introduction, the chimpanzees from both groups will begin to share the same room. Once they go in together, they cannot be separated again until the entire introduction process is complete (which could take months). This is a long time for chimpanzees to be stuck inside (instead of going outside during the day, as they are used to, and only staying inside at night), and can be stressful.

So, while they are still in the early stages of the introduction, Peggy wants to minimize the amount of time older chimpanzees are forced to spend inside.

When keepers do not react to this explanation, Peggy minimizes the seriousness of this step in the process as a whole, saying that goal is just to see what happens, to see how the new chimpanzees react. The idea that this step is "just to see" (line 14) — a passive activity that, in theory, cannot be done incorrectly (although see chapter 2) — erases the very active work that the keepers will have to do in order to make this "seeing" possible (moving particular chimpanzees to particular locations at particular times, solving problems and stopping fights, etc.). It also erases the fact that if this "seeing" is not made possible in the ways Peggy dictates in the meeting (i.e. Ewake refuses to enter a particular cage on a particular day, or an unapproved chimpanzee slips in instead), keepers will be held responsible. Perhaps unsurprisingly, then, this statement is met with the longest silence yet (line 15) – in this case, silence that likely indicates a disalignment with Peggy's description.

Peggy responds to this long pause with another minimization — they will only carry out this protocol for ten days (during which time Peggy will be visiting family in France). Next she describes a possible positive outcome of this plan (lines 18-22): after ten days, they will meet again, and evaluate how the chimpanzees have been interacting. This will allow them to move to the next step in the introduction, where the two groups will be brought into the same room together. Peggy once again brings in her own uncertainty — she does not know that this will be the case, and if things do not go well, that is okay. The goal of these ten days is just to see what will happen.

Peggy's minimizations have the effect of erasing the work of keepers — not only the prospective work involved in the introduction the next day, but also erasing their prior experiences and the expertise they have derived from them. This is a particularly ineffective strategy seeing

that keepers' disagreements often stem from their frustration with Peggy's ignorance of the difficulty of their work. Peggy making a K+ statement about what keepers' work will be like (and especially one which makes it look like it will not be difficult or a lot of work) is particularly obtuse, when keepers' disagreement stems in the first place from the fact that she is K- about how difficult their work will be.

```
29    Peg:  What do you think.
30          (1.8)
31          ((gaze to Thomas)) It's not easy for you to open like this?
32          (4.7)
33    Vic:  °I sa::y,° (0.8) ((head shake)) You give us the program.
34          So these are the:, four or five, ((point to notebook))
35          Okay today, (.) Madame and Ewake. Eh:, (.)
36          Ewake and Suzanne. (.) Inside. (.)
37          They interact let's say the whole day, ((gaze to Peggy))
38          In the evening, (.)
39    Tho:  We send [them back.
40    Vic:          [We send them back.=
41    Peg: =wi^th the grou^p.
42          (4.0)
43    Vic:  When they are still inside.
44          (1.3)
45          With the group- the group is outside.
46          (1.6)
47          Then we send them back, (.) to::, meet the group.
48          (3.4)
49    Tho:  They will fight.= ((smile voice))
50    Vic:  =They will beat them.
51    Tho:  ((laughs))
52    Peg:  They will beat them?
53    Vic:  Y[es.
54    Tho:   [For some time.
55    Vic:  What are you doing [inside?
56    Tho:                     [They will fight.
57    Vic:  (...) and so on. So it used to happen. (.)
58          When you stay away, (.) from the group. You go back again.
59          They have to beat you for some time. ((hitting gesture))
60          [Before they leave you.
61    Tho:  [Even before, they are making plans.
62          So when the animals stay inside,
63          in the evening they want to join with the group,
64          you have serious problems [for some time.
65    Vic:                            [They want to beat you.
66    Tho:  For about thirty [to fifty minutes.
67    Vic:                   [Beat beat beat beat you.
```

The keepers have not responded to any of Peggy's minimizations or reassurances, so instead of waiting for a response for them, she explicitly gives them the floor (lines 29-31) — first, by asking generally what they think, and then, when that receives no response, by directing a more specific question to Thomas (the less senior — and perhaps less intimidating — keeper). She frames this question deferentially, making a guess at the source of the keepers' disagreement (that there may be something she does not understand about opening the cages that will be difficult for keepers). After another long pause (line 32), she finally receives a response — but from Victor (the most senior of the chimp keepers), rather than Thomas, to whom it was directed.

Victor begins by removing some of the ambiguity of the keepers' silence, demonstrating agreement with the list of selected chimpanzees, and then summarizing the plan to demonstrate his understanding of Peggy's proposal. In lines 39-40, Victor and Thomas state together the end of Peggy's plan: the keepers will send the friendly older chimpanzees back in with the main group at the end of the day. Peggy fills in the rest of their sentence in line 41, her timing and intonation indicating again that she sees the plan as simple and straightforward. In so doing, Peggy joins their collaborative description of the plan, verifying that there is no problem of understanding on the keepers' part: everyone present understands what Peggy wants to happen. However, Victor and Thomas' co-statement of "we send them back" was in fact indicating the source of their disagreement — something missed by Peggy in her own contribution to the construction. The keepers are not objecting to the friendly main group chimpanzees Peggy has listed, or the way they will interact with the new chimpanzees during the day. What the keepers believe Peggy has failed to account for is how to bring the friendly main group chimpanzees back together with the rest of their group at the end of the day.

After another extended pause (line 42), Victor finally elaborates on the source of the keepers' disagreement: if some of the older chimpanzees are separated from the main group all day, at the end of the day if keepers simply "send them back," the rest of the main group will be suspicious of where they have been all day, or may feel the need to reassert their dominance over the absent group members. In the keepers' experience, these separations always lead to fights. Thomas joins him to co-narrate this outcome, demonstrating his agreement. This outcome is very obvious — maybe even considered to be common knowledge — to both Victor and Thomas, and we can perhaps read from their silence that they believe this outcome should be obvious to Peggy as well, as an expert in primate behavior. However, in line 52, Peggy instead repeats their statement as a question ("they will beat them?"), leading the keepers to expand at length, co-narrating the whys and hows of the beating (lines 53-67). They use several strategies to explain the seriousness (and obviousness) of this outcome: Victor voices the suspicions of the main group chimpanzees in line 55, and both keepers use the second person pronoun 'you' to put Peggy in the chimpanzees' place. They frame these beatings both as a habitual occurrence (a normal part of chimpanzee behavior, which Peggy should know), and as something that "used to happen" (line 57) — evidence that they have experienced this firsthand.

For the next few minutes, Peggy does not respond, but instead senior volunteer Alice and head keeper Jonathan (both mediating figures in the meeting, as they work closely with both management and keepers) propose alternatives, such as sending the friendly chimpanzees outside with the main group in the afternoon, rather than waiting until the end of the day. Victor and Thomas seem pleased with this solution, and so after a few minutes of discussing the finer points of the plan (with both Victor and Thomas volunteering solutions), Peggy uses a summary to bring the discussion to a close:

Example 16

```
01   Peg:  So:: le:t's see. Uh tomorro:w we can start like this,
02         We choose u:h, the individual who are inside,
03         So Suzanne maybe Ewake and uh. We have four individual.
04         Let's keep for one individual for a week.
05         Suzanne Ewake, Messang and Paquita.
06         The individual who are used to stay inside. (.)
07         And uh try, between 10 and 2 o clock,
08         So the girl also they kno^w and they take data
09         all the time between 10 and 2.
10         So we can see, how they behave. (.)
11         And when I coming back the 29th.
12         So we will see. what's happening.
13         What do you think.
14   Vic:  [((nod))
15   Jon:  [((nod))
16   Vic:  No problem.
```

Conclusion

Meetings bring to a head tensions between the practical expertise of keepers, and the primatological expertise of managers and volunteers. While these different types of expertise occupy separate domains during most of the day-to-day operations of the sanctuary, when making decisions about how a young, vulnerable group of chimpanzees should meet older, potentially aggressive ones, assistant manager Peggy must also decide whose knowledge is valuable, when, and for what.

Despite her institutional authority as manager and interactional authority as turn mediator (as well as her authority as an educated French woman working in a former colony), Peggy sees the meeting room as an intentionally egalitarian space – indeed as an equalizing space, where keepers gain the authority to make decisions. This belief reflects a liberal logic that ignores the realities of actual historical, institutional, and racial hierarchies, and which serves to erase and/or delegitimize labor, especially the labor of people of color. The perpetuation of colonial hierarchies is common in environmental conservation work, as foreign-run and funded NGOs use logics of

global heritage and local ignorance to justify their control of natural resources (West 2006, Agrawal 2005, Sodikoff 2009). Many wildlife sanctuaries in fact originated as colonial game reserves (Walley 2004, Saberwal & Rangarajan 2003), and the LWC's own colonial history is clear in its original manifestation as the Victoria Zoo (see chapter 1).

Ultimately, treating meeting spaces as egalitarian allows managers not only to ignore these hierarchies, but to make themselves feel better about the deeply unequal relationships they have with Cameroonian staff. In terms of workplace interactions, this situation may be compared to Rusty Barrett's description of the use of Mock Spanish by Anglo restaurant managers – similar to how Mock Spanish "index[es] a sympathetic stance toward Latinos without actually indexing a position of equality or solidarity" (2006, 200), meetings create spaces for managers to *feel* like they are giving keepers the opportunity to be more involved in the management of the sanctuary, while still privileging managers' own interactional norms and institutional authority, and without forcing managers to acknowledge keepers' unheralded expertise, and actual concerns about knowledge, risk, and compensation.

When Peggy uses a summary to state a decision, the decision looks collective, even though the physically demanding, dangerous, and unpredictable burden of carrying out this decision is unequally distributed. The act of summarizing also reduces extended discussions and disagreements, as well as the weeks of work which informed them, into a brief plan which everyone is now on record as agreeing to. This is similar to the process Hugh Mehan (1996) describes for how a student moves from the label of "normal" to receive the label of "learning disabled." The student's behavior, combined with testing, and discussions between parents, teachers, psychologists, and school officials are reduced and finally entextualized in the label "LD." While in Limbe, these decisions are not *entextualized*, per se (in that these meetings do not

produce formal written records), the effects are similar in that meetings produce decisions for which keepers are then held accountable. In both Mehan's school and this sanctuary, decisions "become institutionally isolated from the interactional practices that generated them in the preceding events" (Mehan 1996, 259).

Despite Peggy's belief in meetings as egalitarian spaces, the hierarchies she ignores manifest clearly in the way she orients to primatological vs. keeper knowledge, despite the keepers having decades more experience than the volunteers. As assistant manager (and turn mediator), Peggy has the power to decide whose knowledge is relevant and valuable across each of the different decisions that are made in the meeting. Although she defers to keepers' opinions on the personalities of particular chimpanzees, as well as which cages should be used during the introduction, she spends much more of the meeting discussing volunteers' observations and schedules, and framing the introduction process in formal primatological terms, thereby excluding keepers, who do not have access or rights to these types of credentials and knowledge.

Alternatively, keepers orient to meetings as explicitly hierarchical spaces – spaces in which they must be careful about what they say and agree to, or risk a misunderstanding, or, in the worst case, committing to an unfeasible or even dangerous course of action. While they lack the manager and volunteers' primatological authority, they assert their own authority by combining statements of habitual behavior with references to individual events that illustrate this behavior, and which were also directly experienced by others in the room (see examples 6, 15). While keepers use silence to carefully enter into disagreements, managers often view this silence as reticence, complaining that keepers are not more active in meetings and are therefore refusing to take "ownership" of the sanctuary. However, as seen in cases where Peggy defers to keeper knowledge over which chimpanzees to use and which rooms to put them in (examples 13 and 14), keepers are

eager to participate and share information when management treats them as experts. They are most likely to refuse to participate when management act as authorities on keeper work, particularly when management downplays the difficulty of this work (example 15).

As I will demonstrate in the next chapter, keepers might be more likely to participate in the way that Peggy hopes if she created an environment – both within and outside the meeting room – in which keepers felt their footing was more equal. Instead of primarily using a formal setting like a meeting to share information and make plans, keepers would likely be more open with Peggy if she also were present to assist and troubleshoot when keepers carried out the meeting plan. Her presence would not only likely make keepers feel that Peggy could better appreciate the difficulty of keepers' work and the unpredictability which complicates it (see chapter 5), but it would also create space for Peggy and keepers to collaboratively solve problems as they arose, rather than reprimanding them after something did not go according to plan.

Despite disagreements over the nature of meetings themselves, as well as contestation over whose knowledge counts, when, and how, by the end of the meeting the group has made several decisions. They evaluated the condition of the new group, and decided they were ready to move to a new stage in the introduction. They chose four friendly main group chimpanzees to meet the new group first, and they decided which cages to use, and what times of day to send the chimpanzees in and out. And they accomplished all of this, across linguistic, cultural, and ideological boundaries, and from different ends of institutional and (neo)colonial hierarchies. However, the group must now take these decisions outside of the meeting room and put them into action, as keepers care for and move chimpanzees from room to room so they can interact with each other. This unpredictable process involves an entirely different set of knowledge, skills, and

hierarchies – including hierarchies between chimpanzees, and between chimpanzees and humans – as I will explore in the next chapter.

CHAPTER FIVE
Chimpanzee Agency and Unpredictability in Animal Keeper Work

This chapter examines communication between animal keepers, volunteers, managers, and chimpanzees, as keepers carry out the unpredictable and often dangerous work involved in enacting a plan to integrate two groups of chimpanzees. These plans are created in meetings between managers, keepers, and volunteers that occur regularly throughout the introduction process, bringing to a head differences between primatological and keeper knowledge, which occupy separate spheres during most daily work at the Limbe Wildlife Centre (see chapter 4). The goal of these meetings is to provide updates on the progress of young chimpanzees Mayos, Lolo, and Madame as they are gradually integrated into a group of thirty mature chimpanzees, as well as to make decisions for how the next phases of this process should occur. Accomplishing these goals involves a particular set of communicative norms and linguistic skills: assistant manager Peggy allocates turns and chooses topics for discussion, shaping her turns to portray both decisions and the work involved in carrying them out as both collective, and involving minimal work. Keepers alternately use silence strategically to resist plans they disagree with, or ground their disagreements in narratives that illustrate their firsthand experience with how things can go wrong. Finally, meetings always take place exclusively in English (nobody's first or preferred language), although they are greatly informed by the informal conversations in Pidgin and French that occur throughout each day – conversations that are unequally available to the different participants in the meeting room.

When the decisions made in meetings are put into action during animal care, they involve many of the same issues regarding establishing understanding, managing authority, balancing primatological and keeper knowledge, and navigating language-related issues. While meetings are

generally pre-planned, goal-oriented, and involve participants with clear institutional roles (Asmuß and Oshima 2012), the work involved in carrying out the decisions made in meetings is generally much less structured. It also involves additional complications related to constraints with time and space, and the presence of dangerous and unpredictable non-human actors with their own understandings and motivations.

These complications manifest in a process I originally described in my field notes as "chimp tetris," after the 1980's video game in which a player manipulates oddly-shaped blocks so that they fit compactly together into rows. However, while keepers are manipulating particular "blocks" (chimpanzees) into particular locations at particular times, the blocks they are moving are not inanimate objects with a finite and predictable number of possible variables. Instead, they are intelligent and potentially violent wild animals with their own thoughts, preferences and desires. When transferring chimps between cages, keepers have to account for and manipulate a much broader set of variables, including relationships between different chimpanzees, relationships between chimpanzees and humans, and chimpanzees' personal preferences toward food, the weather, etc.

In order to understand how these contingencies affect the keepers' ability to carry out the introduction plan established during the meeting, this chapter follows the trajectories of action (Goodwin 2006, Goodwin and Cekaite 2018) involved in chimpanzee rehabilitation. While work in conversation analysis has established a framework for understanding how people manage their own and others' rights to knowledge and authority in interaction (see, for example, Heritage 2011; Heritage and Raymond 2006; Stivers 2005; Stevanovic and Peräkylä 2012; Stevanovic and Svennevig 2015), less work has been done to examine how these rights change over time and across contexts, and how participants manage these changes. I therefore follow Asmuß and Oshima

in viewing "institutional roles [as] local achievements [which] are subject to continuous renegotiation throughout interaction" (2012, 83) and across different interactional contexts. In the case of this chimpanzee introduction, the ambiguity and shifting nature of participants' rights and responsibilities to make and carry out decisions comes to a potentially dangerous head, as agitated chimpanzees threaten not only the introduction plan, but the safety of chimpanzees and humans alike.

Resolving these high-stakes problems and successfully carrying out the introduction requires a great deal of expertise, troubleshooting, and cross-species communication skills on the part of keepers. Despite the complexity and centrality of their work, keepers are often treated as if what they do is unskilled manual labor. Making a realistic and feasible plan for the introduction requires flexibility and the ability to quickly adapt to the complications created by agentive and often uncooperative chimpanzees. As animal keeper Thomas emphasizes, this troubleshooting can only be done when one is physically present to see what is going on: "At the chimps it is not easy. We can say something now, you go to the field, things change. At the chimps section, you cannot say 'this should happen,' no."

'Chimp Tetris': Communicative Strategies, Complications, and Risks

By the end of the meeting described in the previous chapter, the group had decided that new chimpanzees Mayos, Lolo, and Madame were ready to have indirect contact with certain calm and friendly older chimpanzees from the main group. The next day, in addition to their normal cleaning, feeding, and maintenance duties, chimpanzee keepers Thomas and Wilson have the additional responsibility of separating main group chimpanzees Suzanne and Ewake from the rest of the large group and transferring them through a series of sliding doors and overhead tunnels

into a cage next to the new chimpanzees, so that they can interact with each other through the bars of their cages (see Figure 5.1). To successfully move these chimpanzees to the correct location, keepers have to account for the status of the chimpanzee they need to move in the group hierarchy, the chimpanzee's relationship with each animal keeper, the chimpanzee's favorite foods, their personal preferences for staying inside v. outside, and the weather, among other variables.

For example, elderly matriarch Suzanne was selected during the meeting as one of the best candidates for having first contact with the vulnerable new chimps. She is calm, unaggressive, still has good standing in the main group's dominance hierarchy, and is easy-going enough to stay inside all day without becoming stressed or picking fights. However, she is also set in her routines and becomes agitated when she is not fed on time. As we will see, Suzanne's participation in the introduction process depends on the keepers' ability to convince her to deviate from her normal routine, separate from the friends and young chimpanzees she normally spends her day with, and take her breakfast late. If a more dominant chimpanzee is already located in a room they want to send Suzanne to, she may refuse to move. Keepers may motivate her by placing extra desirable food in the room they want her to move into (pineapples or mangos instead of her normal breakfast of bananas), but she may need to pass between three or four different rooms, and if she eats too much too soon, she will be content to stay where she is instead.

Keepers must negotiate these variables for each chimpanzee involved in the introduction process, while simultaneously preventing any of the other thirty hungry, impatient chimpanzees from the main group from entering the wrong cage, and still finishing the rest of their cleaning and maintenance work as quickly as possible. The longer it takes them to finish their morning duties, the hotter the day becomes — Limbe is located very close to the equator, and most of the year 90-100% humidity with temperatures over 90 degrees is the norm. In addition to the heat, running

water is frequently cut during the hottest parts of the day (generally between 11am and 3pm). If keepers do not finish feeding and transferring chimpanzees early, by the time they begin cleaning cages, there will be no running water and they will be forced to haul bucket after bucket of water from the nearby river instead.

In addition to these practical complications, moving chimpanzees from room to room poses increased physical risks to both humans and other chimpanzees. Although chimpanzees are only about two thirds the size of humans, they are considerably stronger and can be very aggressive (O'Neill et. al. 2017). Large hands adapted for climbing and swinging through trees are also excellent at hitting, grabbing, gouging, and breaking fingers. Chimpanzee dentition is nearly identical to humans, with the exception of their carnivore-proportioned canines, believed to have evolved not for eating meat, but rather as a weapon to intimidate and attack (Plavcan and Ruff 2008). If keepers bring the wrong chimpanzees together, or bring them together too soon, they may fight or injure each other. As mentioned earlier, a year prior to this introduction, Mayos, a member of the current new group, was nearly killed by aggressive male chimpanzees when she refused to mate with them. They hit her, stomped on her, and gouged one of her eyes out. She required months of quarantine and intensive veterinary care to recover.

The process of transferring chimpanzees from room to room involves increased risk of chimpanzee-human altercations as well, and sanctuary protocol goes to great length to prevent extended contact between the two species. While keepers know certain chimpanzees to be friendly and passive toward humans (especially humans they know well), others must be watched more carefully. If, in a hurry to coax a chimpanzee, clean a cage, place food, or stop a fight, a keeper forgets to firmly relock a tunnel or door, chimpanzees may decide to transfer themselves, coming into contact with other chimpanzees they should not meet, or, in the worst case, escaping entirely

from their enclosure. Escapes do not happen often,[10] but are very serious events. The entire sanctuary must be evacuated, and keepers are put in danger as they attempt to recapture the escapee. All senior animal keepers bear scars – puncture wounds from sharp teeth, jagged lines from scratching nails, and in one case, a chunk missing from the side of a keeper's nose from a particularly gruesome encounter with a chimpanzee.

'Chimp tetris' is therefore high stakes, highly-skilled work, requiring a great deal of physical strength and stamina, as well as specialized knowledge. Keepers must be able to not only reliably identify thirty agitated chimpanzees in constant motion, but they must also know each individual's personality and habitual behavior in order to make decisions about who should move where, when, and how. In order to keep themselves and others safe, they must also be able to both communicate with chimpanzees, and interpret their behavior. This communication is often verbal, involving simple commands in English or Pidgin[11] such as "pass" (move through a door), "come and take" (move toward a keeper to receive food), or "stop" (if a chimpanzee is doing something dangerous or undesirable). Volume and pitch play central roles in determining the effectiveness of these commands.

Nonverbal information is essential to this communication as well: gaze, body positioning, posture, gestures, and the keeper's placement in the room in relation to chimpanzees and doors all factor into how a chimpanzee interprets a command, and the likelihood that they will follow it. When these communicative tools are not enough, keepers supplement them with material objects.

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[10] Between January and September 2017, only three chimpanzee escapes occurred. Two of these escapes were caused by escalating rivalries between dominant males, combined with electrical failures due to a cultural festival in town which overloaded nearby transformers.

[11] Due to the abbreviated nature of these commands (generally only one or two words), and the large amount of overlap between English and Pidgin lexicons, it is impossible (and irrelevant) to distinguish whether keepers' commands occur in one language or the other. As seen in examples 2 and 3 below, keepers do sometimes provide longer lectures to chimpanzees, and these generally occur in English rather than Pidgin.

This generally takes the form of food and treats – sometimes placing a banana in the room where they want the chimpanzees to enter is enough, but other times they require more desirable food such as mangos, pineapple, or peanuts. Indeed, just as primatology volunteers and animal keepers use different types of professional vision (Goodwin 1994; see chapters 3 and 4) to make predictions about future chimpanzee behavior, the chimpanzees themselves may be seen as using their own form of professional vision to make inferences and predictions about keepers' behavior, strategizing where to move and how to interact with them in order to accomplish their own goals (of staying inside or going outside, being close to or far from certain other chimpanzees, receiving particular types of food, etc.).

At least as important as all of these communicative tools is the relationship between keeper and chimpanzee. Senior keepers Victor and Thomas have both been working with this group of chimpanzees for over twenty years. The chimpanzees therefore both know and respect their authority, as they are the ones who bring them food every morning and care for them. Victor's communicative style with the chimpanzees is more direct and task-focused, while Thomas is friendlier and more likely to stop to squeeze an outstretched hand or slip someone a treat. However, due to their long-term relationships with the chimpanzees, both keepers' commands are highly effective. Other keepers face greater difficulties – they may give similar commands in similar ways, but chimpanzees are less likely to comply, forcing keepers to use stronger encouragement or reprimands, or simply take a greater number of efforts before achieving success.[12]

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[12] Keepers would sometimes exploit chimpanzees' expectations about particular human's behaviors – in particular, which humans have the power to open and close doors. As I assisted keepers and recorded video each day, I eventually became someone who the chimpanzees knew, but who they did not expect to be able to open or close doors. Therefore, if chimpanzees were refusing to move from room to room, keepers would occasionally use me as a decoy. After placing extra desirable food items in the cage the chimpanzees were refusing to move to, the keepers would leave me the keys and make an exaggerated show of leaving the chimpanzee enclosure. A few minutes after the keepers left, the chimpanzees would move to the new cage to take food, and I would sneak over and lock the door behind them.

Routine Chimpanzee Care

In addition to the complications and dangers of chimp tetris, the chimpanzee introduction greatly increases the number of other daily responsibilities keepers face. When there is no introduction in progress, chimpanzee care begins around 8:15 after a morning staff meeting. A keeper or volunteer goes to the kitchen to pick up a wheelbarrow containing 200 pounds of bananas, then pushes it across the sanctuary out to “the island,” a large indoor/outdoor enclosure for chimpanzees located across a small river from the rest of the sanctuary. Keepers or volunteers then walk through the empty outdoor enclosure, tossing several hundred bananas as far as they can throw. This encourages normal scavenging behavior in the chimpanzees, once they are sent outside to eat. Another keeper takes a pocket-sized current tester and walks the perimeter of the fence, checking the strength of the electricity. About half the time (particularly in rainy season), the current comes back too low, and keepers must search for snapped wires, climbing plants, or debris that may be affecting the reading.

Once the electric fence is operational, keepers enter the aisle that runs between the six chimpanzee cages (see Figure 5.1). The thirty chimpanzees from the main group wait eagerly in their two overnight cages, hooting excitedly as the keepers arrive, anticipating being released outside to take their breakfast. Each keeper stands by a separate sliding door leading outside, unlocking, then pulling down the bar that opens the sliding door (see Figure 5.2). Each keeper moves his bar in tandem, clanking it against the bars of the cage and calling “Tside tside tside tside tside! Everybody outside!”

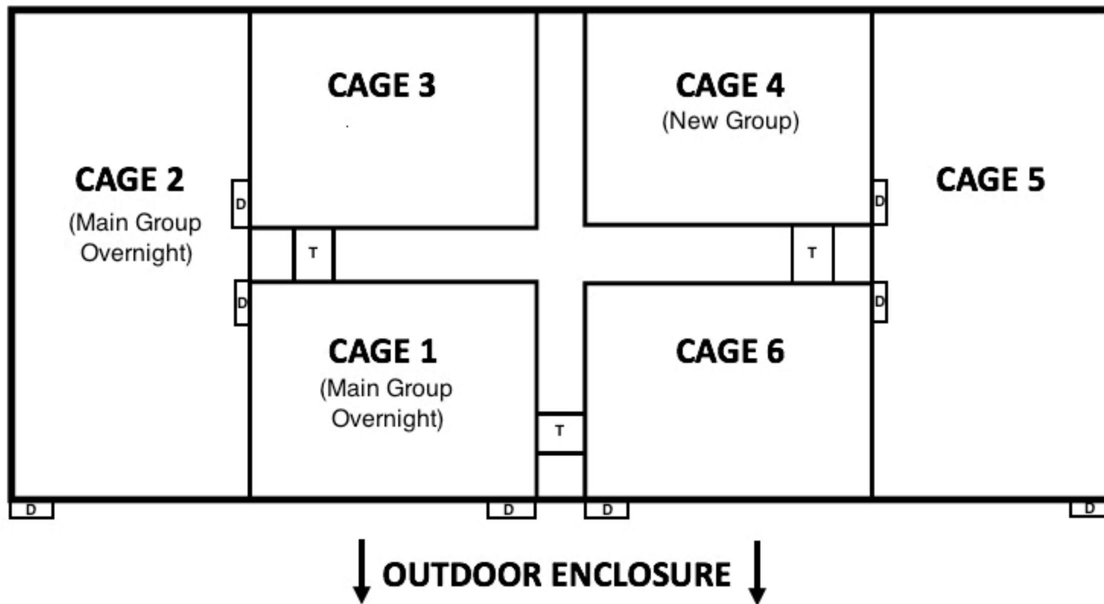

Figure 5.1: Map of Main Group Indoor Enclosure
'T' and 'D' mark overhead tunnels and sliding doors for chimpanzees to move between cages

Figure 5.2: A keeper opens a sliding door to release eager
main group chimpanzees into their outdoor enclosure

Figure 5.3: A volunteer and a keeper watch as chimpanzees rush outside to begin scavenging for food

Chimpanzees flood through the doors (see Figure 5.3) – the dominant males pushing smaller chimpanzees to the side, chimpanzees lower in the pecking order trickling out toward the end, occasionally needing extra verbal encouragement from keepers. Once all the chimpanzees have exited to the outdoor enclosure (bottom of Figure 5.1) and are scavenging for food, keepers lock the sliding door and open the human-size doors. With the help of one or two volunteers, they begin cleaning cages – first using brooms and shovels to rake up feces, fruit peels, and grass, then using a hose and large squeegees to spray down the shelves and floors, pushing dirty water toward the drain until each cage is clean. If all goes well, this process takes about two hours from start to finish.

Time	Task
8:00	Morning Staff Meeting
8:15	Pick up bananas from kitchen
8:30	Check on chimpanzees Spread bananas in outdoor enclosure Ensure electric fence is operational
9:00	Send all chimpanzees outside
9:15	Clean cages 1 and 2
11:00	Break

Table 5.1: Chimpanzee keeper routines on a normal (non-introduction) day

Since the beginning of the introduction of young chimpanzees Mayos, Lolo, and Madame, however, the process has become more complicated and time consuming. Instead of only cleaning cages 1 and 2, where the main group stays overnight, keepers now also must clean cages 4 and 5, as the new group occupies one cage, and members of the main group are brought into another cage to begin interacting with them. Because the new group stays inside, they must also be transferred first out of their main cage so that it can be cleaned and food placed inside. They must then be transferred back inside. Young, playful, and often a bit bored or stressed, the new chimpanzees may cause trouble by refusing to go where they are told. To compensate for this additional work and time, normally one keeper tests the fence while the other takes care of the new group, and volunteers spread bananas in the outdoor enclosure.

Once the fence is operational and the new group has been cleaned and fed, chimp tetris begins. Keepers walk around cages 1 and 2, peering inside to find the particular friendly chimpanzees that management has selected to participate in the introduction that day. They then take up different stations: one by the door inside, and the other outside. Senior keeper Victor leads a winnowing process — first ensuring that the selected friendly chimpanzees are secure in one cage, then releasing the opposite cage, continuing this process until only the desired individuals remain.

However, this process generally ends up being more complicated, as one or two individuals who are supposed to go outside refuse to, and need to be funneled into an overhead tunnel to cage 3. The longer the process goes on, the more stressed the chimpanzees left inside become (as they see the rest of their group outside eating all of the food), and these chimpanzees may refuse to pass from one cage to another, or insist on passing, when they are not supposed to. The worse the process goes, the more cages fill up with chimps. When the selected friendly chimpanzees have

been moved to the introduction stage, whichever ones that insisted on staying inside will be moved to cage 1 and the sliding door to the outside will be opened for any others from the island that want to come inside to rest.

Throughout this process, the responsibility of volunteers is to stay out of the way. Only keepers are allowed to open and close doors, due both to the risk of escapes, and the risk of bodily harm from coming into such close contact with chimpanzees as they move through doors. While keepers coordinate with each other and chimpanzees, running to open and close different doors and coax chimpanzees, volunteers stand to the side, watching and waiting for the cleaning to begin. Finally, once all the chimpanzees are where they are supposed to be, keepers and volunteers clean cages 1 and 2. There is always a sense of urgency involved in the cleaning, as water pressure goes down the later in the morning it gets, and will often run out by 11:00.

After they finish cleaning, keepers place bananas in the cage adjacent to the new chimpanzees, to motivate the friendly chimpanzees to move into it. Once the friendly chimpanzees are in place, the introduction can begin. Primatology volunteers sit outside the barrier between the two cages with notebooks and timers, periodically scanning the group and jotting down notes on behavior (see chapter 3). Keepers stay for a while to ensure there are no major problems or fights, but if everyone is calm, they are able to leave the chimpanzees and take some time to recover from the morning's work.

Time	Task
8:00	Morning Staff Meeting
8:15	Pick up bananas from kitchen
8:30	Check on chimpanzees Spread bananas in outdoor enclosure Ensure electric fence is operational *Clean cages 4 and 5*
9:00	*Feed new chimpanzees* *Chimp tetris (separate friendly chimpanzees, send other main group chimpanzees outside)*
9:45	Clean cages 1 and 2
10:45	*Transfer friendly chimpanzees to cage 5* *Monitor introduction*
??:00	Break

Table 5.2: Chimpanzee keeper routines on an introduction day
Additional introduction tasks marked in italics.

Chimp Tetris: Day One

Although the introduction of Mayos, Lolo, and Madame is not the first time the keepers have integrated new chimpanzees into the main group, they have not carried out an introduction in over a year, and need to establish new protocols. In the meeting the day before, managers, keepers, and volunteers had come up with a plan for how this should occur. However, the unpredictable nature of chimpanzees means that the keepers cannot be confident in the feasibility of the plan until they attempt to put it into action.

To complicate things further, Victor, the head chimpanzee keeper, has the day off on the first day of the introduction.[13] Instead, the introduction is led by Thomas, a senior chimpanzee

[13] Keepers work five to six days a week, switching each week between having one and two days off. To ensure there are enough keepers for each section, days off are staggered but fixed – i.e. Victor is always off Tuesday one week, Tuesday and Wednesday the next, etc.

There are two possible explanations for why management decided to begin the introduction on a day when Victor would not be present. The first is that the introduction itself is a time sensitive process – until the young chimpanzees can survive in the main group, they must stay inside and relatively isolated. Although they are provided with extra enrichment (in the form of treats, ice blocks, greens, etc.), they become easily bored or stressed. Therefore, the faster the introduction occurs, the better.

The second possible reason is that assistant manager Peggy was leaving for France, and would be gone for two weeks. She wanted to be available to monitor the first day of this new stage of the introduction,

keeper, and Wilson, another senior keeper who has lots of experience with chimpanzees, but who now spends most of his time working with gorillas. They have two volunteers to assist them: myself (wearing a GoPro), and primatology volunteer Sara, who is responsible for helping with cleaning and feeding only until 10:00, at which point she stops to begin her observations.

At first, the morning proceeds according to plan. The four of us prepare the outdoor enclosure before feeding the new group and cleaning cage 4. Thomas and Wilson then begin the winnowing process, peering into cages 1 and 2 to determine the location of Suzanne and Ewake, the friendly chimpanzees selected to participate in the introduction. When both chimpanzees are in cage 2, Thomas shuts the door between cages 1 and 2, and releases a dozen or so chimpanzees from cage 2 outside. They repeat this process, calling across cages to each other in Pidgin to verify the location of the chimpanzees in question, and to carefully time the opening and closing of doors so that Suzanne and Ewake do not accidentally slip outside.

They repeat this process for approximately ten minutes, until there are about a dozen chimpanzees left in cages 1 and 2. These chimpanzees include Suzanne and Ewake, but also several others who have refused to go outside. The keepers are now becoming concerned about time and water pressure: they must still clean cages 1 and 2, but both are currently occupied by the stubborn chimpanzees. They attempt to empty cage 1 by transferring Suzanne and her companions through an overhead tunnel to cage 3. Although Suzanne and two others move through the tunnel easily, several more chimpanzees stay behind in cage 1. The keepers then attempt to empty cage 2 instead, which is only occupied by Yabien, a young low-ranking female who has chosen to avoid confrontation with more aggressive members of the group by staying inside. After much coaxing, Yabien passes to cage 3 to join Suzanne and the others, and the keepers can finally begin cleaning

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and to help in case any problems occurred. This did not, however, mean that she assisted keepers with their tasks, or was present for chimp tetris (see below).

(see Figure 5.4).

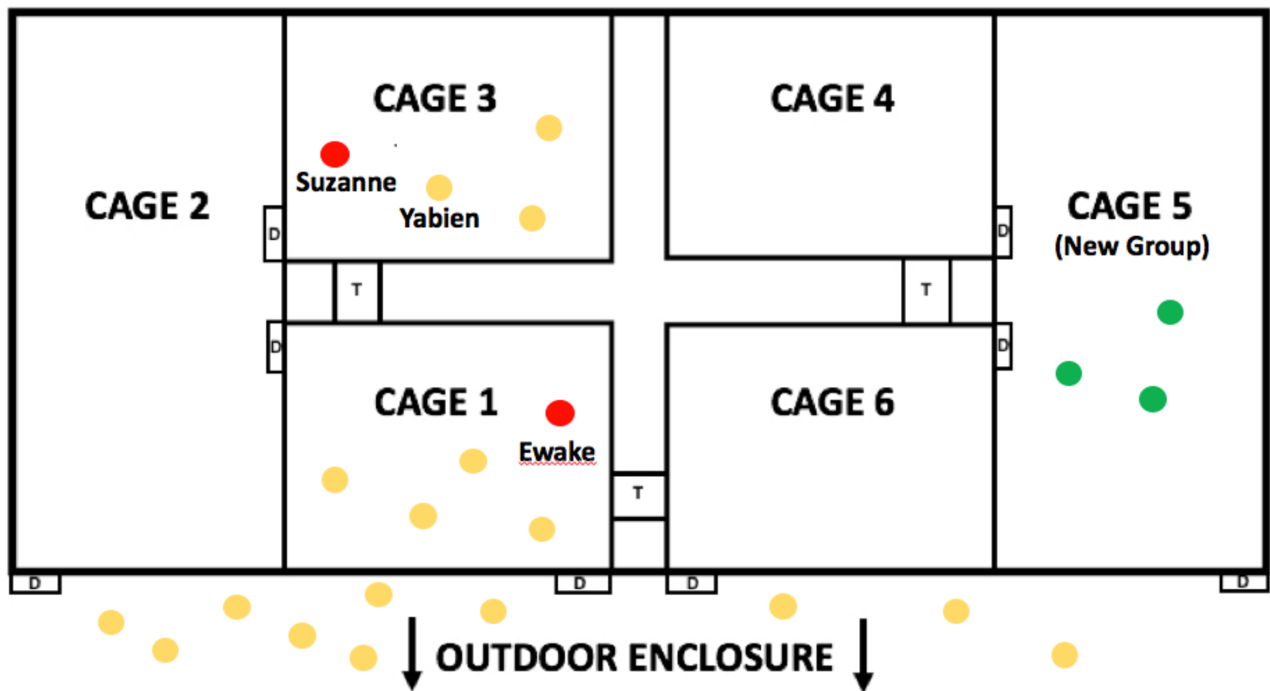

Figure 5.4: Location of chimpanzees during Example 1
Green circles = new group chimpanzees; Red circles = introduction chimpanzees;
Yellow circles = other main group chimpanzees

Example 1: "Yabien will not go with the girls"

The keepers unlock the door to cage 2 and begin gathering brooms, buckets, and other cleaning supplies. For the last fifteen minutes, volunteer Sara and I have been observing the keepers' work and attempting to stay out of the way. In our status as volunteers, we do not have the skills or the authority to open and close doors or move chimpanzees. However, Sara is not only a volunteer, but also an aspiring primatologist apprenticing under assistant manager Peggy. She has come to the LWC to learn how to conduct an introduction process, and will use the outcomes of her data to produce an honors paper for her Bachelor's degree. She is therefore personally invested in the progress and outcome of the introduction, as well as in the well-being of the chimpanzees involved in it.

Through her training over the last few weeks, she has learned to reliably identify all thirty of the main group chimpanzees, code their behaviors (see chapter 3), and understand the plan for the introduction. However, Sara is also a native French speaker, with limited English, and almost no ability to understand Pidgin.[14] She has therefore been unable to understand the keepers' conversations over the course of the morning, where they have discussed (mainly in Pidgin) how to carry out the plan, and deal with the practical contingencies that have arisen along the way – such as Yabien refusing to go outside.

Both the keepers and Sara have recognized that Yabien has created a problem. However, the keepers see this as a problem related to their own domain — the mechanics of transferring chimpanzees from room to room and finishing the cleaning on time. They have discussed in Pidgin how to manage this, and decided to leave her in cage 3 for now in order to finish cleaning before the water runs out. Unable to understand the keepers' discussion, Sara sees Yabien as a problem related to her domain — making sure the introduction follows the plan from the meeting.

```
01    Sar:  Yabien will not go: with the gi^rl eh,
02          (1.3)
03    Tho:  No e's always with Suzanne.
04          e doesn't want to go outside, ( ) send them tha:t way.
05    Sar:  Suzanne et Ewake:?
06          (0.7)
07    Tho:  eh?
08    Sar:  Suzanne et Ewake?= ((point to chimps))
09    Tho:  =Ewake is here.
10          (0.9)
11    Sar:  But not Yabien eh. ((wave))
12          (2.3)
13    Wil:  huh?
14          (1.8)
15    Sar:  Yabien t^oo?
16          (1.3)
17    Wil:  [(Wait) ((stop gesture))
```

[14] Interview with Sara, 6/13/17.

```
18   Tho:  [no we have to- because we cannot- Suzanne cannot go
19         without (knowing) Yab[ien.
20   Wil:                       [No questions now,
21         we are still cleaning. when we finish cleaning,=
22   Sar:  =oka:y.=
23   Wil:  =we will let someone out.
24   Sar:  okay.
25   Wil:  now we want to clean first.
26   Sar:  okay (fine)
27   Wil:  yes:: ((smile at Rosalie)) (1.8) cleaning first.
28         (1.8)
29         before we will do what, (.) the program, (.) says.
30   Sar:  yes yes. (.) oka:y.
```

Sara opens with a declarative with a tag, asserting that Yabien will not go in with the new group. There is a pause in line 2, as keepers attempt to interpret Sara's utterance. Thomas then explains that Yabien will not be part of the introduction, but does not want to leave Suzanne. Sara slips slightly into French, perhaps hoping that Thomas (a fluent French speaker) will also switch to explain what is happening. He continues in English, however, interpreting Sara's utterances as confusion over which chimpanzees are in the cage (line 9). Sara reformulates her problem in line 11, again asserting that Yabien should not be with Suzanne. Sara then tries a third formulation in line 15 — "Yabien too?" Across these attempts, Sara uses a variety of semiotic resources, including chimpanzees' names, gestures, and changes in intonation.

Thomas begins another explanation, but Wilson stops him, declaring with "no questions now" that Sara does not have the right to know the plan at this time. Between lines 20 and 29, Wilson explains this slowly, pausing frequently, but using falling intonation to demonstrate that the matter is not open for discussion. He closes by acknowledging his awareness of the official plan and his intention to follow it (line 29). Sara recognizes his annoyance, repeating 'okay' (lines 22, 24, 26, 30) to demonstrate her willingness to agree. While she may still not understand exactly what has happening, she has accepted that as a volunteer, she does not have the right to disagree

openly when keepers tell her what to do.[15] Sara's (lack of) authority as a volunteer is in conflict here with her self-appointed responsibility to ensure that the introduction process proceeds according to plan. However, while she is personally invested in the outcome of the introduction, unlike the keepers, she will not be held responsible if things do not go according to plan.

The humans have now reached an understanding, but the chimpanzees in cage 3 do not know what is happening. While Wilson, Thomas, and Sara have been sorting out each other's epistemic statuses (Heritage 2011), the chimpanzees have been waiting for their breakfast. As the four of us walk outside, Suzanne stands at the fence, palms up, doing a polite non-verbal request (see Figure 5.5).

Figure 5.5: Chimpanzee Suzanne (left) makes a non-verbal request for food

[15] The hierarchy between keepers and volunteers is explicitly outlined in the LWC's volunteer handbook, as well as during orientation activities, where management explains that volunteers must always listen to keepers, never approach animals alone, etc. For primatology volunteers like Sara, however, this hierarchy becomes more ambiguous as she is required to both follow directions from keepers, but also provide recommendations for their actions. This leads to tensions between keepers and some primatology volunteers, who keepers complain do not behave respectfully toward them. However, Sara received much of her training from Alice, who is very deferential to and well-regarded by keepers. During their trainings and informal conversations, I witnessed Alice both model for and explicitly articulate to Sara that as volunteers, they must always follow keepers' directions and not openly disagree with them (particularly during animal care).

Example 2: Suzanne's Escalating Requests

Thomas, Wilson and I stand outside the indoor enclosure behind cage 3, pulling on large red rubber gloves and disposable paper face masks to protect us as we clean. While we gather our equipment, Sara is also gathering hers. However, instead of cleaning supplies, she has gone to her backpack and retrieved a notebook, pen, camera, and ethogram. It is now close to 10:00 – the scheduled time for her observations to begin, although after the morning's problems the introduction itself is nowhere near close to starting.

On the other side of the bars, watching us closely, is Suzanne. She has been following keepers from inside the cage as they move around, and has now given up on her non-verbal attempts to ask for food. She has begun hooting, her cries rising in volume until they begin to drown out the human talk, and the keepers are forced to respond.

```
01    Suz:  ((hooting)) oo, oo, oo, oa, oa:, oa:,=
02    Tho:  =Suzanne.=
03    Suz:  =OOA, ooa, OO[A::.
04    Tho:               [wait for your food ya.
05    Suz:  aa:. ooa:, OOA,=
06    Tho:  =what. food is coming.=
07    Suz:  ((screaming)) IAA, IAA, IAA,=
08    Tho:  =let us finish first.=
09    Suz:  IAA, IAA, IAA, [IAA,
10    Wil:                 [who is that.=
11    Suz:  AAA. AAA. AAA. AAA.=
12    Wil: =Suza::::nne.
```

Chimpanzees were not consulted on the morning protocol. While Suzanne began by asking non-verbally (see Figure 5.5), she was ignored. So here, she uses additional semiotic resources to make her request more insistent — moving from gesture to vocalization, then a hoot to a scream, and increasing the volume and duration of her calls. Instead of food, she receives a verbal response from keepers. Thomas reassures her that she will be fed and describes their plan (lines 2-8).

Suzanne's cries escalate, and Wilson responds in the way that one might answer a child throwing a tantrum. He calls her name loudly, elongating the second syllable with dramatic falling intonation (line 12). Suzanne's outrage continues over the next several minutes, drowning out keepers' attempts to talk to each other as they prepare to clean.

Example 3: The Fight

Suzanne finally quiets down as Sara prepares to begin her observations, and Thomas, Wilson and I clean cage 2. Thomas sprays the cage down with a hose while Wilson and I sweep chimpanzee feces, discarded leaves, and fruit peelings into large piles. Before we can finish, however, we begin hearing a series of loud chimpanzee screams, followed by the thud of rocks thrown at the fence. An unforeseen consequence of placing the new group in cage 5 (as decided during the meeting) is that the main group outside is now closer to them than ever before (see Figure 5.6). Suspicious of the new group, the dominant males have started throwing rocks at them and fighting. This sets off a chain reaction until chimpanzees on both sides of the barrier are screaming, throwing things, and attacking each other. Thomas and Wilson rush to break up the fight, shouting urgently in Pidgin — with this amount of fighting, they fear a chimpanzee escape is imminent.

To alleviate tension, Wilson opens the outer door to cage 1 and a dozen upset chimpanzees stream inside, screaming, stomping, chasing, and hitting each other. As they finally begin to calm down, Thomas instructs Sara to quickly grab some bananas and put them in cage 4 to lure the new group back to their normal cage, and out of sight of the angry chimpanzees outside.

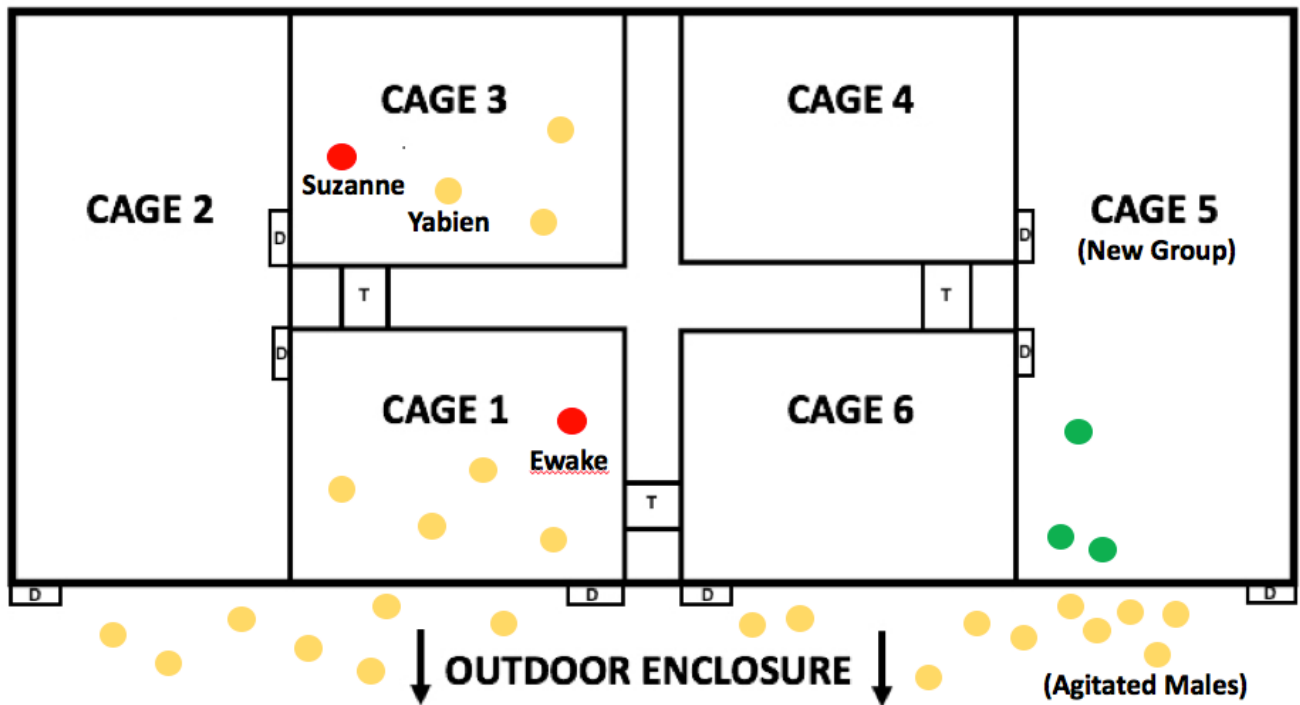

Figure 5.6: Location of chimpanzees during fight.
While in the meeting, the group decided to place the new group in cage 5 so they would have more space, an unforeseen consequence is that the main group outside (including large aggressive males) can now see them more closely than ever before, and have begun throwing rocks and attempting to fight with them.

Although the main group has started to calm down, the commotion has made Suzanne in cage 3 increasingly agitated. Suzanne is rather elderly, and was chosen for the introduction because of her normally calm demeanor. However, now the increasing stress of the change in routine, lack of food, and angry groupmates has transformed her. As the humans rush to prepare cage 4, Suzanne's screams increase in volume, and she begins stamping, jumping up and down, flailing her arms.

Figures 5.7-5.9: Chimpanzee Suzanne flails her arms, jumps up and down, and screams as keepers and volunteers attempt to continue their work

Wilson comes inside with an armload of elephant stalk – six foot tall grasses with sweet roots that will attract the new group chimpanzees back to their old cage, and keep them occupied. “Suzanne don’t worry we are coming,” he tells her as he passes her cage (Figure 5.8). After spreading the grasses around the cage, he exits and begins teasing the still screaming Suzanne. “Yes, put on pressure. Put on pressure!” Similar to example 2, this response to Suzanne treats her cries as intelligible and meaningful – a request for food, or insistence that the keepers address her situation. But again, Wilson speaks to Suzanne in a similar way that he might tease a fussy child: his response acknowledges her complaint, but also takes a stance that Suzanne’s grievance is not serious or worthy of his immediate action. Wilson likely takes this stance as much for the other humans present as for Suzanne, framing Suzanne’s cries and the rest of the morning disturbances as annoyances, rather than threats or emergencies (like the outdoor chimpanzees’ fighting and rock throwing earlier).

The keepers have been waiting to feed Suzanne until they can transfer her to the cage they will use for the introduction — if she has already eaten, she will have no motivation to leave her current location. However, she is now so upset that she may injure herself or her cagemates, and the disruption she has caused is also preventing the humans from progressing with their work. In the hopes of calming her, Thomas instructs Sara to give Suzanne some bananas. Sara rushes to the

aisle outside cage 3 and begins sliding bananas through the bars to Suzanne (see Figure 5.9). Suzanne grabs them eagerly, sucking them from their peels and stuffing multiple at a time in her mouth. However, even with a mouthful of bananas, she continues to scream and stomp.

As Sara attempts to pacify Suzanne, Thomas locks cage 4 and begins calling to the new group, who have been alternately hiding from the conflict, or shouting and waving threateningly at the chimpanzees outside. "Everybody take take! Everybody take! Everybody take take!" As he calls to them, Thomas opens the sliding door between cages 4 and 5, and all three chimpanzees pass quickly back to cage 4. Thomas locks the sliding door, and the four humans congregate in the center aisle as Suzanne finally quiets down.

"You people should stay quiet now. We want to clean eh," Wilson calls into the sudden silence. "When we finish cleaning, we will give you your food," he explains. As Wilson lectures chimpanzees, Thomas has been formulating a plan. The keepers have been able to prevent an escape — the worst possible outcome of the morning — but they must now deviate from the plan made in the meeting the day before, in addition to somehow managing to finish the cleaning before the water runs out.

```
01    Tho:  Sara. Go up and call Peggy.
02    Sar:  Ok?
03    Tho:  Yeah let him come down so we want to see
04          how we can do the program now
05    Sar:  ((exits, walking quickly to main offices))
06    Tho:  because, if we want that they should be here
            ((point to C5))
07          one of the [animals will escape.
08    Wil:             [yeah let her see.
09    Tho:  Yeah. Let her come and see then we see what we can do (…)
10          the way we see is difficult because they have start
11          to bring down the fence ((point outside))
12          and when they stone the fence ((throwing gesture))
13          they will break it and some of them will go out (…).
```

```
14    Ros:  Okay.
15    Wil:  She should come and see,
16          to say it with the mouth doesn’t mean that is easy.
17    Ros:  Yeah.
18    Wil:  Yeah it’s good that she should be here.
19    Tho:  So that we know what if we want to change
20          the program or how we are going to do it
21          because if not there will be a serious problem now.
22    Wil:  Let us send them and if it happens to go out
23          ok we face the consequences together.
```

Now that the original plan has failed, keepers face a double bind. They are responsible for carrying out the plan, but due to problems with the chimpanzees, the plan is now impossible. And although keepers are the only members of the introduction team with the authority to move chimpanzees from room to room, they do not have the authority to decide on their own to move the chimpanzees to a different location than the location approved during the meeting. While they are also the only people with the practical expertise and knowledge of the physical constraints and mechanics of using one cage over another, keepers fear that management will hold them responsible if they deviate from the plan.

Thomas therefore sends volunteer Sara to bring Peggy out to the island. Throughout this example, both keepers orient to the importance of “seeing” the problems that have occurred (lines 3, 8, 9, 10, 15). In the meeting, keepers, managers, and volunteers all used their professional visions to project a likely positive outcome for the introduction. However, as the keepers emphasize, due to the unpredictable nature of chimpanzees, these visions will always be limited in accuracy when they are applied to hypothetical future situations. The most – and perhaps only – relevant professional vision in this circumstance is one which occurs in the here and now, which analyzes and adapts to chimpanzees’ actions as they unfold in time and space.

While Sara hurries to the manager’s office, about a ten-minute walk away, keepers begin to formulate a new plan:

24   Tho: Because if what we have to do now
25   is that we have to send Suzanne
26   to the other room ((point to C5))
27   Ros: Yeah.
28   Tho: and interrupt with this other room. ((pulling gesture))
29   you understand me?
30   Because I have been used to with Suzanne,
31   you send Suzanne at the big room ((point to C5))
32   then they interact.
33   Ros: On this side, ((point to C5)) yeah.
34   Tho: But there, ((point to C4)) they will be fine
35   because they know that Suzanne is always there alone.
36   Ros: Yeah yeah.
37   Wil: Is this door repaired chep? ((point to C6 door))
38   Tho: Huh.
39   Wil: Is this door repaired. ((point to C6 door))
40   Tho: Yeah. Every door, everyone is (…)
41   Wil: Then we will send these guys here. ((point to C5))
42   And send Suzanne here. ((point to C6))
43   Tho: Huhmm no we will send Suzanne through this way,
44   ((points across C6 to C5)) ok (…)
45   Wil: (…) man will be out, they will be out if they are not out
46   ok they will all like to come inside here and it will fail.
47   Tho: At the chimps is not easy
48   we can say something now, ((point to ground))
49   you go to the field,
50   things change yes ((wave))
51   at the chimps section you cannot say this should happen
noo,
52   as you, you see what happen now
53   Ros: Yeah.
54   Tho: if we don't do that you will see escape will come out
55   instead of we to avoid escape ((point outside))
56   we will see how we can do it.
57   Wil: Yeah. Then the chimps will decide on their own.
58   because they are now fighting and attacking each other.
59   Tho: And now they are coming here ((point to C1))
60   we have not even clean this room,
61   everybody is coming now inside.
62   ((chimpanzees hooting from C1 and C3))
63   Tho: Weh. May we just clean.
64   Wil: Yeah let's clean, let's clean first

Between lines 24 and 46, Thomas and Wilson discuss how the introduction should continue, now that the new group cannot go in cage 5, as originally planned (see Figure 5.6). Thomas proposes instead that they send Suzanne and Ewake to cage 5, and keep the new group in cage 4. Wilson suggests an alternative arrangement (lines 37-42), but Thomas, as the senior chimpanzee keeper, vetoes it (line 43). With a new plan emerging, the keepers revert to their complaints about the inadequacy of plans made it meetings. Chimpanzees have their own thoughts, plans, and desires, that often do not correspond to those of humans, and are not always easily predicted. If the humans' plan is not flexible enough to account for chimpanzees' agency and abilities, "the chimpanzees will decide on their own" what will happen (line 57). To prevent this from happening, keepers again emphasize the importance of seeing things firsthand, rather than simply saying a plan and expecting it to happen (lines 47-58).

Thomas stresses this not only through his words, but also through his gestures and movement through space. He uses numerous deictic gestures and paces back and forth throughout the corridor during this interaction, despite the fact that Thomas, Wilson and I all have the same visual access to the space, and have all witnessed what occurred a few minutes earlier. While Thomas' gestures and movements therefore do not necessarily provide new information to us (in the same way that they will, momentarily, for assistant manager Peggy), they have the effect of highlighting (Goodwin 1994): of allowing me and Wilson to see the space and its potential problems through Thomas' eyes.

The structure of the plan and the process of its creation during meetings ignores Thomas' professional vision. His concerns and complaints in this sequence may be read as an attempt to justify his interpretation of events, as well as an expression of frustration with the way the institutional structure of the introduction delegitimizes his expertise, leaving him vulnerable to

reprimand and, in the worst case, physical danger. And on top of all of the complications of the introduction process, keepers must still finish their regular morning responsibilities of cleaning cages before the water runs out, a problem they reorient to as they wait for Peggy to arrive.

Example 4: Reaching a New Consensus

Thomas, Wilson and I clean cage 2 while we wait for Sara to return. The keepers chat in Pidgin, complaining that the cleaning is taking too long and the water is running out. “From one problem to another,” Wilson says. After about twenty minutes, Sara returns, bringing with her not only assistant manager Peggy, but also Jonathan, the head keeper, and Alice, a French primatology volunteer who has been working at the sanctuary for over a year. We stop cleaning and meet the newcomers in the center aisle. Thomas explains in English what has just happened: when the new group went to cage 5, the main group outside got upset and started fighting with them, and the keepers worried there would be an escape. He then begins proposing the plan he and Wilson have come up with in the interim.

```
01    Tho:  We try to send them that side,
02          leave Suzanne this way
03          and send the others this way and that other way
04          you know with chimps you question before you work.
05    Ali:  Yeah
06    Peg:  No no problem. If it’s not working like- like
07          to introduce the small ones in the big cage,
08          try to send (…) if not (…)
09    Tho:  That is what we want to do now.
10    Peg:  Okay.
```

In example 3, while waiting for management, Thomas and Wilson already developed a new plan. However, although they are the only people with the necessary knowledge to reformulate the plan, they do not have the authority to decide to enact it. As Peggy may have a different set of priorities, and was not there firsthand to see what happened, keepers must worry that she will not agree with their interpretation, and will instead blame them for the slow progress,

and the near escape. Instead, Peggy listens attentively to Thomas' explanation, and quickly defers to the keepers' plan.

At this point, the conversation fissions. Peggy, Alice, and Sara turn to each other and begin discussing the situation in French. The keepers move a few feet away, and begin discussing the situation in English. "What is the plan now?" Wilson asks Jonathan and Thomas. This conversation occurs entirely between keepers, who would normally speak Pidgin together (see chapter 1). Their choice of English is therefore particularly significant: while Peggy, Sara, and Alice have chosen to discuss the morning's events in a language that is not available to all members of the group, the keepers have chosen English, the main lingua franca of the sanctuary, and the language that is most available to the largest number of speakers. Although it is normal for keepers to begin a conversation in English, and then switch to Pidgin partway through, this does not occur in this instance. Jonathan's explanation of the new plan and Wilson and Thomas' suggestions and clarifications all occur in English.

Here the language choices of the two groups are indicative of who is welcome as a participant – or even an overhearer – in the conversation. Keepers' continued use of English signals that everyone in the room can participate in their conversation – a willingness or even a desire for the new plan to be a joint construction between the keepers, managers, and volunteers. The use of English is an expression of the public character of the plan, provided in the language most conducive to uptake and feedback but also externalizing plan details that can be ratified or modified by hearers. Its use by keepers ironically mirrors Peggy's professed goals for formal meetings, and frequent disappointment in what she sees as keepers' unwillingness to participate and contribute ideas in that setting (see chapter 4). However, now it is Peggy herself who is refusing to participate in the group conversation, by physically segregating herself from the

keepers and by choosing to speak French, indicating that only herself, Alice, and Sara are ratified participants in her discussion.

After a few minutes of these parallel discussions in English and French, Peggy turns back to the keepers, and switches to English. She has agreed earlier that putting the new group in cage 5 for the introduction will not work, and has readily agreed with the keepers' suggestion to leave the new group in cage 4, and transfer the friendly main group chimpanzees to cage 5 instead during the day so the two groups can interact. However, now she proposes that the keepers transfer the new group to cage 5 at night, when the main group is inside and out of sight, so that they have more space and more light. The keepers agree, thereby establishing a new plan for the introduction.

They must now put this plan into action and finish their morning work. Alice offers to run back to the office to get some peanuts, a special treat for the chimpanzees that might help persuade them to move. Peggy returns to her office while Jonathan offers to stay and help the keepers with their extra work. As we pick up our tools and walk back to the cage, Wilson asks the other keepers in Pidgin what is the plan (*"waiti be the program na?"*). The use of Pidgin here underscores the significance of the keepers' use of English to discuss the plan a few minutes earlier. Pidgin is clearly their preferred language, and the use of English is therefore marked, and indicative of their willingness to leave the previous conversation open to everyone.

Wilson's question also marks the fifth time the group has discussed making a new plan. First, Thomas and Wilson decided how the plan would need to change immediately after the fight occurred (example 3). However, as they did not have the authority to deviate from the pre-determined plan, Thomas had to repeat this plan to Peggy and gain her permission (example 4, part one). The plan Thomas and Wilson came up with did not become the official plan until it was repeated back to them by Jonathan – who is both a keeper and a member of management. This

plan was then modified by Peggy (example 4, part two). Finally, the new plan is repeated a final time between keepers in Pidgin as we begin cleaning cage 1. Once it has been established, Thomas and Wilson complain to Jonathan in a mix of English and Pidgin why the decisions made in meetings are not sufficient:

```
11  Wil:   ((to J)) In the morning, all of you will come.
12  Jon:   Tomorrow.
13  Wil:   Yeah.
14  Tho:   E no ea^sy oh.
           It is not easy.
15  Wil:   Yes. Tha^t is how we are do^ing it.
16  Jon:   Yeah.
17  Wil:   They should no^t come when we have (.)
18         done it the other way,
19         and they should say no we should have done it tha^t way.
20  Jon:   You mean to so^rt the two that will stay inside.
21  Wil:   Ye:s. (.) Let them come and see how difficult it is. (3.0)
22         When you put it on the other side they will say
23         no^ you should have se^nt him this way.
24         (.) without kno^wing the difficulty that was there.
25  Tho:   No. Weh. Weh. (…) man weh e no di understand chimpanzee,
           No. Weh. Weh. This person doesn't understand chimpanzees
```

Example 5: Success

The three keepers and I are finally able to finish the morning cleaning, while Sara monitors the new group of chimpanzees. As we put our equipment away, senior volunteer Alice returns with a scoop of peanuts. As discussed in chapter four, although Alice now works primarily with management and conducting primatological observations, she has served as a volunteer at the LWC for over a year and a half, and for much of that time she worked closely with keepers, assisting them with the daily labor involved in caring for chimpanzees. Alice therefore walks somewhat of a middle ground: the longevity of her time volunteering as well as her apprenticeship under Peggy lend her some managerial authority. However, as a volunteer, she does not have the authority to move chimpanzees or disagree with keepers. Furthermore, Alice's willingness to listen to keepers and help them with their work has earned her their respect and friendship. Now, with

all the cages clean and chimpanzees calm, Alice attempts to assist as keepers begin the final stage of chimp tetris.

```
01    Wil: Alright.
02    Jon: Yabien dey for dey (…) palava.
           Yabien is there (…) problem.
03    Tho: E get for (…) you know say e and Suzanne (…) no:,
           She has to (…) you know that Suzanne and her (…) right
04    Wil: Yabien has to be in a group for her.
05    Tho: No e get for be because e and Suzanne,
           No she has to be there because Suzanne and her,
06         e no fit gree for leave Suzanne you no hear (…).
           she will not be willing to leave Suzanne.
07         ((Wilson opens tunnel, chimps cross))
08    Wil: Ok Suzanne. Come take come take.
           [chep (…) open that door.
09    Ali: [Suzanne come take.
10         (1.5)
11    Ali: Suzanne. ((shaking peanuts)) Yeah. Good Suzanne.
12    Wil: Good madam.
13    Ali: Come on.
14         ((Suzanne passes through tunnel))
15    Ali: Good girl.
16         ((Wilson closes tunnel between C1 and C3))
17         ((Thomas opens tunnel between C3 and C6))
18    Tho: Suzanne come take. Pass. Yabien pass.
19         ((three chimps pass through tunnel))
20    Jon: [Open here? ((C6))
21    Ali: [Goo:d jo:b guys. ((to chimps))
22    Tho: Yeah open.
23    Wil: Yeah open there.
24    Jon: (…)
25    Wil: Yes.
26    Jon: Now e dey for the programme nor?
           Now she is included in the programme right?
27    Tho: E now e no di green leave Suzanne
28         na e makam the just send e inside the programme.
           She knows she doesn't want to be separated from Suzanne
           that is the reason why she is in the the program.
29    Wil: No senam may e go.
           No send it so she can go
30    Tho: Anyway we leave e so no?
           Anyway we will leave it like that right?
31    Jon: May wou leave e for di room.
           Let's leave it in this room
32    Tho: Yeah just lock dem just lockam.
           Yeah just enclose them just close it.
```

In lines 1-6, the three keepers discuss in a mix of Pidgin what to do with Yabien, who has still

refused to go outside. Once they are all on the same page, Wilson begins transferring the chimpanzees from cage 3 through the tunnel to cage 1, while Thomas prepares to open the tunnel between cage 1 and cage 6. As keepers call short commands to chimpanzees, Alice follows along, shaking a cup of peanuts to entice the chimpanzees and using a soft, high voice to coax them along. For perhaps the first time that morning, the chimpanzees are agreeable to the humans' plans, and Suzanne, Ewake, and Yabien move easily into cage 6, receiving praise from Alice (line 21).

While all three chimpanzees are now in cage 6, only Ewake and Suzanne should enter cage 5, where they will have indirect contact with the new group through the fence. Jonathan stands at the sliding door between cages 5 and 6, preparing to open it. Despite Jonathan's superior status as head keeper, he defers to chimpanzee keeper Thomas before opening the door (line 20), checking again about whether or not Yabien is supposed to enter cage 5. Thomas and Wilson explain the situation to him again – Yabien is not part of the morning's plan, she just does not want to leave Suzanne, so they will have to separate her at the last minute. Fortunately, she is the last to enter cage 6, and Jonathan is able to open the door to allow Suzanne and Ewake to enter cage 5, then deftly close it before Yabien can pass through as well, following Thomas' instructions to trap her safely in cage 6 (line 32).

Chimp tetris is now complete. Alice and Sara pull out notebooks and cameras and begin photographing the introduction and jotting down observations. While shy chimpanzee Madame hangs back, Mayos and Lolo rush to the shared wall of the cage to hoot and wave their arms at Ewake and Suzanne, who return their excitement. The three keepers monitor their interactions for a few minutes, but when it is clear there will be no large fight, they are finally able to return to cleaning and finish their work.

Conclusion: Seeing vs. Saying

In the introduction to *The Mushroom at the End of the World*, Anna Tsing writes:

> Precarity is the condition of being vulnerable to others. Unpredictable encounters transform us; we are not in control, even of ourselves. Unable to rely on a stable structure of community, we are thrown into shifting assemblages, which remake us as well as our others. We can't rely on the status quo; everything is in flux, including our ability to survive. (2015, 20)

Although she is talking broadly about living during the Anthropocene, at different scales her words apply aptly to the complicated positions of the Limbe Wildlife Centre's animal keepers. They are faced with the precarity of working for and navigating hierarchies within this institution, where management's expectations for keepers' daily responsibilities regularly shift, and where, every few years, management itself shifts entirely and keepers must try to understand the expectations of a new set of white, European managers. As stewards of wildlife conservation, keepers also conduct their work amidst the precarity of environmental change, and shifting definitions of both what it means to conserve wild animals, as well as how they should live and care for their families in an environment where cost of living is rising while their pay stays the same. The assemblage involved in chimpanzee rehabilitation thus spans globalization, local and national economies, as well as the transnational nature of environmental conservation funding, and the intersection of indigenous multilingualism and language ideologies with colonial history and its language ideologies. Each of these macro components churns and (re)produces the ongoing practical functioning of chimpanzee care and rehabilitation.

At the very small scale of chimp tetris, keepers are also extremely vulnerable – both physically and in terms of their ability to complete their work – to the chimpanzees they work with. As demonstrated during the introduction process, chimpanzees have their own sets of desires, frustrations, motivations and goals. They may refuse to move where keepers want them to go, or, if given the opportunity, may move to places where keepers specifically do not want them to go –

where they might injure themselves, other chimpanzees, or humans. As they learn the routines and personalities of each other and the humans who care for them, chimpanzees develop what might be thought of as their own version of professional vision. This enables them to predict future behavior of both chimpanzees and humans, and use those predictions to strategize to achieve their desired outcomes – whether that means cajoling a keeper into giving them a special treat, or avoiding a more dominant chimpanzee.

The intelligence of chimpanzees is something that is no doubt well understood by Peggy, Alice, and Sara with their backgrounds in primatology. However, how this intelligence leads to unpredictability and, in the case of keepers, to risk, is something that the primatologists often do not seem to take into account. Managers and primatology volunteers view the introduction process longitudinally – as a step-by-step process, where different quantitative measures will determine when it is time to move to a new stage. Alternatively, in order to keep themselves and the animals they care for safe, keepers must view the introduction process from the here-and-now, perpetually ready to adjust to the unexpected. For these reasons, Thomas complains that “at the chimps [it] is not easy. We can say something now, you go to the field, things change.”

CHAPTER SIX
Conclusion: Communication and Successful Conservation

In the four months following the events described in chapter five, the introduction of young chimpanzees Mayos, Lolo, and Madame into the main island group proceeded more or less according to plan. Each day, keepers cleaned the new group's cages, prepared the outdoor enclosure, and performed chimp tetris, releasing the majority of the main group outside while separating two chimpanzees from the "approved" list, and sending them into the cage next to the new group so the two groups could interact through the fence.

Alice and Sara monitored these interactions, and the volunteers, keepers, and managers continued to meet every other week to discuss how the introduction was going. As predicted, Mayos and Lolo (the two stronger chimpanzees) were very enthusiastic – and occasionally aggressive – with the main group chimpanzees, while Madame (the smallest, weakest, and most poorly socialized of the group) hung back and exhibited more signs of stress. Management predicted she would improve over time. The carefully selected friendly chimpanzees did indeed prove to be friendly rather than aggressive toward the new chimpanzees, although elderly Suzanne ended up being most interested in napping and eating all day, and was not interacting with the new chimpanzees as much as everyone had hoped.

In June 2017, about a month after the beginning of the indirect contact stage, Sara, under the mentorship of NGO manager Guillaume, completed a quantitative analysis of the data she had collected, and made PowerPoint presentations of the results to her undergraduate advisors, as well as to the LWC staff. She received a high grade on her honors project, and returned to France to apply to graduate school. Around this same time, Alice, who had spent a year and a half volunteering at the LWC, ran out of funding and also returned to France. Without any primatology

volunteers, the introduction process continued, but did not produce any formal observations, much to assistant manager Peggy's frustration (see chapter 2, example 1).

I continued working alongside chimpanzee keepers and recording staff meetings until the end of my own fieldwork in September 2017. Madame's difficulties meant that the introduction process as a whole was proceeding more slowly than management had anticipated, but finally, three weeks before I left, keepers and managers decided that the new group was ready to begin sharing a cage with friendly members of the main group. Without any primatology volunteers to monitor this much more dangerous stage in the process (chimpanzees could – and almost certainly would – chase, bite, and hit each other, as they determined where everyone stood in the dominance hierarchy), the burden of observing and monitoring fell to keepers, and in some cases, to myself, as Peggy asked if I could conduct informal observations in the afternoons to see how Madame in particular was faring.

While Mayos and Lolo were able to hold their own and even quickly became friendly with the selected main group chimpanzees, Madame struggled. She spent much of her day isolated, running from any new chimpanzees that approached her. She began losing weight, too afraid to compete with the others for food. Keepers' duties increased as Madame now needed special care – to alleviate group tensions and help Madame gain some strength and confidence, keepers now made numerous additional trips to the island cages throughout the day, bringing extra greens and treats, strategizing to distract the more dominant chimpanzees so they could sneak food to Madame.

Six months later, when I returned to the Limbe Wildlife Centre in March 2018 for a follow-up visit, the introduction was still in progress. On my first day back at the sanctuary, a long-term volunteer I knew from my previous time in Limbe asked if I had been out to the island yet. I said

no, and she shook her head. “You won’t even recognize Madame.” As planned (although still more slowly than they had hoped, due to Madame’s difficulties), keepers had gradually increased the number of main group chimpanzees inside with Mayos, Lolo, and Madame, until now they had been integrated into about half of the group, and were nearing the end stages of the process. Madame had continued to struggle, however, and had lost all the hair on her head due to the stress.

Keepers and chimpanzees had settled into their new routine, although keepers seemed to be losing patience with Madame. On my first morning returning to work with the chimpanzees, we finished cleaning the new group’s cage, and chimpanzee keeper Victor attempted to transfer them back to their main room. Madame refused to enter. She paused by the sliding door, looking through, but quickly backed away as a larger chimpanzee approached. Victor shouted at the larger chimpanzee, who backed away, and Victor began coaxing Madame to pass. After a few minutes, he was successful. As he locked the door, he turned to me. “Still problems with Madame,” he said. As we watched, Madame stood alone with an armful of leaves and began screaming at a chimpanzee far on the opposite side of the cage, who had been paying no attention to her. Victor shook his head. “See? Mayos and Lolo no problems, but Madame shouts for nothing. She is asking them to beat her.” Despite Madame’s continuing struggles, management seemed optimistic about the progress of the introduction.

The next month, the LWC’s monthly newsletter announced the successful completion of the introduction process:

> Our enrichment efforts have also paid off in the Chimp Island enclosure: the three new structures are complete and linked together by ropes. These new structures not only provide a nice playground for the chimpanzees, but also helped to facilitate the introduction of *Mayos*, *Madame* and *Lolo* to the group by increasing activity rate (locomotion, play behaviours) in the group, and therefore reduce boredom and conflict risk. Despite the challenges of this introduction (having a group size of more than 30, *Madame's* limited social skills and the change in dominance when *Papa* took over *TKC*!) we are pleased to announce that the reintroduction was a success! There are still a few other individuals to integrate, but we are thrilled the group can now enjoy the outside space together.
>
> (LWC Monthly Newsletter, April 2018; emphasis in original)

It appeared that Mayos, Lolo, and even Madame were now fully integrated into the island group, and would be able to enjoy a large outdoor space and the companionship of other chimpanzees, as the group had begun planning for over a year earlier.

In September, however, I received a message from one of the LWC's long-term volunteers. "Did you hear about Madame?" I hadn't. "She died two weeks ago." According to the volunteer, they didn't know exactly what happened, but it seemed she had never thrived in the large group. "For me, sometimes management waits too long to help," the volunteer said. "They don't observe enough and they don't listen to the keepers," who had apparently been telling management that Madame was not doing well.

A few weeks later, the Limbe Wildlife Centre's Facebook page announced Madame's death, including a short video montage of photos of her, captioned with a description of her personality, time at the LWC, and friendships with other chimps (see Figure 6.1).

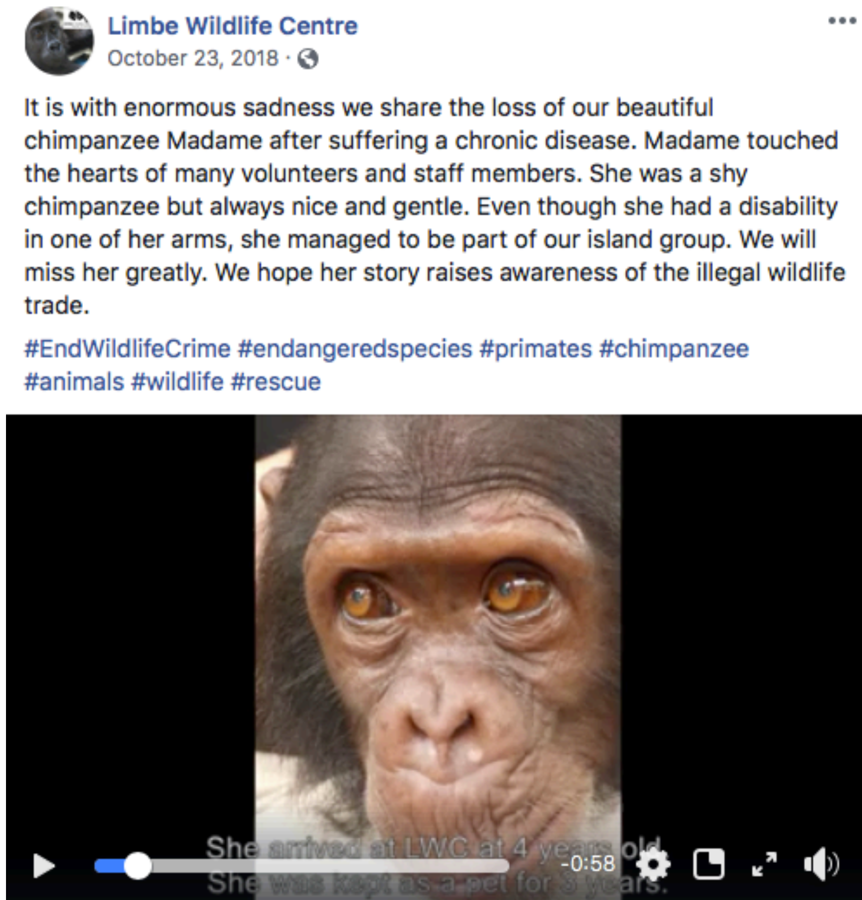

Figure 6.1: The Limbe Wildlife Centre's Facebook announcement of the death of chimpanzee Madame.

The (Im)possibility of Successful Conservation Work

In light of Madame's death, is it possible to conclude that this carefully planned, labor intensive introduction process was, in the end, completely successful? This brings me to the question at the heart of this dissertation: with all of the different people, expertise, languages, ideologies, and inequalities operating simultaneously within this sanctuary – what does it mean for the Limbe Wildlife Centre, and other conservation institutions like it, to do conservation successfully? In chapter one, I described the LWC as a successful institution based on several factors: the longevity of its programs, its international reputation and certification through the Pan-African Sanctuary Alliance (PASA), the number of visitors it hosts and animals it rescues each

year. Each day the staff of the LWC feed all of its 250 animals, clean dozens of cages, maintain fences and other enclosures, provide animals with veterinary care and social rehabilitation, and run well-regarded volunteer, education, and tourism programs.

However, the Limbe Wildlife Centre is also a space that reflects and often reifies many of the inequalities and colonial structures inherent in much transnational work in general, and conservation work in particular (Tsing 2005, West 2006, West 2016, Bornstein 2005, Agrawal 2005). Throughout the dissertation, I have explored these inequalities at the levels of language usage, expectations and evaluations of work, training and allocation of resources, and expertise in observing and working with animals. However one defines 'successful conservation,' and even if one defines the LWC as a successful conservation institution, it is clear that this success does not come easily. At the level of day-to-day operations, the Limbe Wildlife Centre – like most sanctuaries – frequently struggles with insufficient resources. They are short-staffed, relying on unskilled foreign volunteers to make up the labor deficit. The staff they have complain that they are underpaid, and their pay has not kept up with the dramatic increase in cost of living in Limbe over the past decade, or with the extent of their skills and expertise (see chapters 4 and 5). Each day, hoses, buckets, brooms, wheelbarrows, and other essential equipment break and are patched back together until they are semi-functional. They will not be replaced until a generous volunteer makes a donation. NGO managers and government managers disagree over the allocation of financial resources, whether there is enough money each month to supplement the fruit that makes up the majority of the animals' diets with more expensive sources of fat and protein.

Belief in successful conservation becomes even more difficult when examining the large-scale picture of conservation in Cameroon. The LWC's official slogan is "Rescue – Rehabilitation – Release." According to their website and promotional materials, the sanctuary is supposed to

serve as a temporary waystation for animals confiscated from the illegal wildlife trade to be rehabilitated before being integrated back into the wild. However, in reality, there is generally no "wild" left for these animals to go back to. While the sanctuary regularly releases parrots, turtles, and snakes into the nearby botanical gardens after they regain their health, primates – with their complex social structures and desirability to humans as bushmeat – require a protected area and continual monitoring. Throughout my time in Limbe, the managers were frequently in discussion with government officials over the logistics of setting up a protected area in a nearby forest, but this involved numerous bureaucratic hurdles, in addition to longer-term problems involved in deterring hunting in the area, avoiding pre-existing natural populations of wild primates, and ensuring that the LWC's primates – most of whom had spent the majority of their lives in captivity – would have the skills necessary to survive in the wild.

Due to the frequency of animal confiscations, and the difficulty of finding wild spaces to return them to, Cameroon's sanctuaries are nearly always at capacity, and new animals are constantly arriving – sometimes walked in by government officials with paperwork in hand, other times left in crates outside the sanctuary in the middle of the night. Because of this, Cameroon's three main sanctuaries are in frequent collaboration and negotiation with each other. Cross-sanctuary conversations commonly involve requests or offers to exchange animals – for example, "Our chimpanzee nursery is full, and we've just had another baby arrive. But we've got room for two guenons – can you take the chimp, and we'll take your new guenons?" While they always manage to find at least a temporary solution, the overall situation does not seem to be improving.

Even NGO manager Guillaume was vocal in his belief that large-scale conservation problems in Cameroon would only get worse over time. While preparing material for a teacher training workshop at a nearby agricultural school, Guillaume complained to me about what he saw

as the futility of conservation work. “We can work in a positive way,” he told me, “but the benefits are too small to see a real impact.” Turning to his computer, Guillaume pulled up a spreadsheet of human population growth statistics. The chart was broken into “Developed” and “Underdeveloped” countries, and used modeling software to analyze population statistics from the past hundred years, then project potential population growth for each country over the next hundred years.

First he showed me Cameroon, telling me that the population has nearly doubled since 1960, and is expected to keep increasing exponentially as far as they can predict. He said Nigeria is even worse, with something like an anticipated population of 400 million by the year 2100. Reflecting a classic colonial preoccupation with African reproduction (see, for example, Young 1995), Guillaume blamed these growth rates on Africans’ misguided desires to have lots of children. Uncomfortable with his logic, I asked him to show me the population growth predictions for France. He began clicking through the spreadsheet, at first saying he thought France was more or less stable, but then, after looking at the charts, admitting that it was expected to grow a fair amount – “but not nearly at the rate of Cameroon or Nigeria.”

According to Guillaume, population growth in Africa means that even if the LWC and similar organizations can find a forested place for the animals they rescue, there will be too much pressure from human populations after 20 or 30 years. “There will be no forest left because people will have had to turn everything into housing or food,” he said. Protected spaces will become smaller and smaller, and the conflicts between the people protecting them and the hunters wanting to use them will turn increasingly violent. “We are lucky it’s not violent yet in Cameroon,” Guillaume said. “Right now, hunters still run when they see ecoguards, and ecoguards don’t shoot hunters. But it’s probably only a matter of time.”

Toward the end of this conversation, I asked Guillaume why he was here, why he chose to do this work if he believed it was ultimately pointless. He grinned. “I know it is a losing fight, but even a losing fight is still worth fighting. You take a punch, you fall down, you get back up again. Maybe you will lose in the end, but you can still do good work along the way.” He went on to say that he wanted to create opportunities for hard-working people in Cameroon, so that they could do good work and support their families. And of course he also wanted to support the well-being of the animals at the sanctuary, especially the ones they might be able to send back to the forest one day. “At least we can try and do a good job, even if we know we will lose.”

During my return visit to Limbe in March of 2018, I held an informal presentation and discussion about the findings of my research so far. Approximately twenty staff, managers, and volunteers attended. During this presentation, I explained my interest in what makes the Limbe Wildlife Centre successful, and asked the group what they thought successful conservation looked like. The majority of answers from managers and staff revolved around the LWC’s education and community programming – “we know we are successful when attitudes are changed,” “when local stakeholders are involved,” “when we see children learning and thinking differently about animals.” Dr. John Kiyang, the LWC’s head veterinarian, commented that every year, the LWC is seeing less animals come in to the sanctuary than in the past, which he interpreted as a sign of a decrease in the number of animals that were being hunted or kept as pets. Assistant NGO manager Peggy said that she measures success through the well-being of the animals, when we can see that the chimpanzees don’t have to be alone, or the parrots can be released. NGO manager Guillaume framed things instead large-scale, saying that the LWC is doing a tiny part. To know if conservation is successful, you have to think internationally, and quantitatively. How many of this

species were there ten years ago? How many are there now? How many do we think there will be in ten years?

Success in the case of environmental conservation work is not a binary. It is therefore perhaps better to speak in terms of conservation programming and outcomes as “more successful” or “less successful.” In the case of the chimpanzee rehabilitation, there were many successes: Mayos and Lolo were integrated into the large and complex social structure of the main island group, and will now be able to build relationships, forage, explore, and play outdoors. Sara received training that will help her become a primatologist, and keepers gained familiarity and developed strategies for carrying out difficult work. The LWC collected data that will help them secure funding for future projects. No chimpanzees escaped, and no humans were injured.

However, what could have made this rehabilitation – and the institution as a whole – *more* successful? To begin, many problems (both logistical and communicative) could have been avoided or ameliorated if management elevated keepers’ knowledge and authority. While there are certainly many obstacles complicating this, a first step might be for management to be more involved in the day-to-day practical aspects of keeper work – as chimpanzee keeper Thomas said, to “see” alongside keepers when a plan is implemented, rather than depending on reports after the fact.

Why language and conservation?

At the end of the presentation, as I took questions from the group, NGO manager Guillaume asked me what I thought was the relationship between communication and successful conservation. This is a question I introduced at the beginning of the dissertation, and one which was posed to me by many of the people who generously read and offered feedback during the early

stages of this project. What do language and environmental conservation have to do with each other?

In chapter one, I described the correlation between linguistic and biological diversity – 60% of the world's languages are spoken in only 9% of the world's land area, and this 9% also contains 50-90% of the world's biodiversity (Nettle and Romaine 2000, 32; see also Nettle 1998). The conservation of the world's biodiversity is therefore occurring in landscapes with long histories of multilingualism. This fact, combined with the transnational nature of contemporary environmental conservation work (Parreñas 2012, Tsing 2005, Walley 2004) means that environmental conservation nearly always involves people from different linguistic and cultural backgrounds, communicating not only across histories of inequality and different ideologies about conservation and the management of natural resources, but across languages and beliefs about communication as well.

When I responded to Guillaume during my presentation, however, I began by referring to his definition of successful conservation. For him, successful conservation was measured in terms of the global number of animals per species each year, by how many acres of forest was protected. I, however, thought (and continue to think) there is a lot we can learn from looking at these same situations small-scale and qualitatively. All of these large-scale patterns and measures begin, are generated out of, are maintained or disrupted by small-scale interactions.

This is, of course, only part of the answer. From an institutional perspective, the LWC's reputation for success comes from a combination of a) the international prestige and funding generated by foreign scientists, volunteers, and NGO workers; and b) the less visible, less prestigious, but most essential work of Cameroonian animal keepers, who conduct the day-to-day physical labor and interactions with animals that enable their rehabilitation and maintenance.

These two sides each require different languages, and their associated linguistic capital: European languages obligatory for reaching a broad international and scientific audience, and Cameroonian languages to carry out the long-term, local work of maintaining the sanctuary.

Throughout the dissertation, I have also tried to answer this question at other levels – by examining the LWC's language ideological assemblages (chapter 1), to the shifting meanings of terms like 'observation' (chapter 2), to the conversations involved in socializing primatological vision (chapter 3). I analyzed the conversations through which managers, keepers, and volunteers made decisions (chapter 4), and the questions these conversations raised about what kinds of knowledge count in these decision-making processes, and who is held accountable for their outcomes (chapter 5).

The LWC is seen as successful in large part because it can reach so many different audiences (schoolchildren, local and foreign tourists, volunteers, Facebook followers, government officials, local workers). Its ability to reach these different audiences is directly related to how well it can communicate in various languages. The fact that so many different languages are present at the LWC does inevitably lead to miscommunication and ideological tensions over language usage, but staff also use a variety of strategies to negotiate this – for example, miscommunication can lead to frustration, but it can also lead to laughter.

During volunteer Sara's last week in Limbe, after finishing her data analysis and presentations, she rejoined the chimpanzee keepers to help with cleaning and feeding. On her first morning back, Sara stopped by the office to pick up a paper face mask, a standard piece of the cleaning uniform, and something she had not worn recently while occupied by her observations. When Victor saw her, he frowned and shook his head. "No," he said. "Go back home."

Sara's eyes widened, and Victor broke into a rare smile. "Go home and rest. You have been working hard." He was teasing her. This turned into a running joke between them for the rest of the day. When Victor asked Sara later if she would be working the next day, she told him that no, she would stay at home, sleep, relax. "Yes, stay home," Victor urged her, and they both laughed.

I observed many moments of joking, teasing, and play like this one during my time in Limbe. These moments have not been the focus of this dissertation. Nor do they erase all the deep inequalities and problems that the Limbe Wildlife Centre, its staff, volunteers, and animals face. However, I think these moments matter anyway. While at the LWC misunderstandings were ubiquitous and language often served as a tool to reinforce hierarchies, language was also a tool to contest them, as well as to accomplish tasks, to make jokes, provide encouragement, and build friendships. In future work, I therefore seek to shift focus to what works in these situations and how, as much as what does not. Wildlife conservation work is built out of multilingual, cross-cultural interactions like those that occurred between Victor and Sara. To understand both how this work can be successful, and where and why it fails, we need to pay attention to language, and the way it becomes a terrain through which inequalities are reinforced, or, potentially, ameliorated.

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