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Changing relationship with the land and one another in Pindoyú, Paraguay

Kathryn E. Peters

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CHANGING RELATIONSHIP WITH THE LAND AND ONE ANOTHER IN PINDOYÚ, PARAGUAY

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ABSTRACT

This thesis is about agricultural transition in the face of globalization in the community of Pindoyú, Paraguay. Utilizing the extended case study method, the experiences of people of Pindoyú are documented through participant observation, individual and household interviews, and auto-ethnographies in order to illuminate theory on the articulation of modes of production, moral economy, and Marxist ecology.

Rooted in Meillassoux’s understanding of the domestic mode of production and Wolpe’s extended view of the articulated modes of production, it argues that people in Pindoyú are participating in the capitalist mode of production while also practicing values incongruent with capitalist production. Findings suggest that values and social norms are institutionalized in Pindoyú through the policies and projects of community groups, which serve as a reproductive mechanism for an alternative mode of production. These values have been historically practiced and remain within the community’s collective memory. The findings have implications for community development projects and policies in rural Paraguay and contribute to theory in Marxist anthropology.
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CHAPTER 1
INTRODUCTION

Like much of the world, the rural community of Pindoyú is grappling with change. Nestled in the countryside of Eastern Paraguay, family, work, and community life in Pindoyú has not remained untouched by the changing world around them. Global political and economic changes have given rise to tensions and uncertainty in Pindoyú. How farmers manage their land resembles little of what it did one generation ago. Environmental degradation has led to decreased yields in Pindoyú fields, an unfortunate result of the culmination of global climate change, pollution, and soil degradation (Galifassi, 2008; United Nations, 2013). The introduction of transgenic seed and chemical fertilizers and pesticides has transformed agricultural production (Robin, 2008).

The structure of social relations and labor organization has also transformed within a few generations in Pindoyú. Historically, farmers worked in collective, reciprocal labor agreements between family and neighbors known as mingas. Now, more and more of the population of Pindoyú works as wage laborers, either within the community or as emigrants. An increased need for cash for new commodities like electricity and cell phone minutes has nearly eradicated the historical practice of jopói, informal agreements between family and neighbors of reciprocal gift exchange.

In Pindoyú, the practiced social norms in relation to the land and to one another retain elements of values coherent with traditional subsistence farming. However structures of the global capitalist system have required Pindoyú residents to adopt new practices into their daily lives.
This study explores how increasing participation in the global economy at the national level has affected the community of Pindoyú, as apparent through human relationships with the land and one another. As changes are perceived differently by different members of the community of Pindoyú, the study explores how the community, as individuals, in groups, or in institutions, is upholding or challenging these changes. In other words, the fundamental research questions are as follows:

- How elements of the changing economic structure have transformed human relationship with the land, especially in relation to land-use and food production
- How elements of the changing economic structure have transformed human relations with one another
- How these changes are perceived by residents and how the community, as individuals, groups, and/or institutions promote and challenge these changes

With insights from the experience of people in Pindoyú, I hope to make recommendations for development organizations. In order to formulate appropriate and effective development projects and policies, community development workers in rural Paraguay will benefit from an understanding of the agreements and tensions between the local values of communities and the values inherent in the encroaching capitalist mode of production.

Site Description

The community of Pindoyú is located in the district of General Higinio Morínigo, in the Department of Caazapá, in eastern Paraguay. There are an estimated 100 housing structures in Pindoyú; the population fluctuates seasonally but is generally about 500
residents. Pindoyú receives state government funding for its public elementary and secondary schools as well as a health post that offers free preventative health screenings, general practice, and medicines to anyone with an official government ID card. In addition to the health post and secondary school, a Catholic church, the town’s largest general store, and a plaza with benches, a basketball court, and soccer field define the town’s center.

General stores, or almacenes, are run out of people’s homes. There are at least four in Pindoyú. Each general store supplies basic nonperishable goods like cooking oil, flour, sugar, pasta, spices, and yerba maté tea leaves as well as cookies, soda, beer, wine, and caña, liquor made from sugarcane. The largest general store also sells non-food items like basic clothing, grooming products, cooking and dining wares, school supplies, and gift trinkets. All items are usually more expensive at the local stores than at stores in the larger cities because of the extra cost to transport goods into Pindoyú. Perishable goods, like vegetables, cheese, and meat, are available more inconsistently. Unlike the nonperishable goods that travel into town by truck, a large percentage of the perishable items originate from Pindoyú producers.

Livestock and poultry are also often utilized as a form of emergency currency: if someone needs to pay for the bus fare to visit a sick relative or pay for another unexpected expense, they can sell their animals as livestock or meat. If a family slaughters a pig for a birthday celebration, they can save the meat they need, and sell leftovers to the general store – which in turn sells the meat to other residents.

Pindoyú is a fairly isolated community within the center of the Eastern frontier. The map in Figure 1 depicts its location within the Department of Caazapá. The nearest
Figure 1: Map of study site
bus stop is situated 5 km from the center of Pindoyú along Ruta 6, which was paved sometime in the mid-1990s. The bus ride to Asunción, Paraguay’s capital city, takes about six hours, but it is only a twenty-minute bus ride to San Juan Nepomuceno (population 25,000) where the nearest hospitals, banks, and specialty stores are located. San Juan Nepomuceno is the capital city for the neighboring district, whereas the city of General Higinio Morínigo (population 6,000), a ten-minute bus ride in the opposite direction, is the location of the municipality and nearest government officials for Pindoyú’s district.

Within Pindoyú, several local institutions exist, which residents shape and participate in to a varying degree. These institutions include a neighborhood commission, a church committee, two women’s groups, and an agricultural committee. These groups petition to groups outside of Pindoyú for financial and technical assistance; aid arrives to these groups from the Paraguayan Ministry of Agriculture, Paraguayan NGOs, and international NGOs.

**Chapter Outline**

Chapter 2 outlines the methods utilized in this study. Chapter 3 briefly introduces the theoretical context that will be expanded upon as necessary throughout each of the subsequent chapters.

The following four chapters focus on community stories and specifically the emotions and values conveyed through stories. In students’ auto-ethnographic essays, these emotions and values are expressed through words. In interviews and participant
observation, emotions and values are demonstrated through both words and paralinguistic indicators such as pitch, rhythm, and body language.

Chapters 4 and 5 focus on residents’ relationship to the land. Chapter 4 looks at how farmers have experienced environmental degradation and decreased agricultural yields due to climate change, pollution, and decreasing soil fertility. Residents used starkly different rhetoric when endorsing solutions to this environmental degradation. Chapter 5 looks at how residents perceive the introduction of transgenic seed and agrochemical technologies into Pindoyú.

Chapters 6 and 7 focus on the societal and human relationships in Pindoyú. Chapter 6 explores social relations of production in Pindoyú, focusing on the increased need for cash and the resulting wage labor, emigration, and remittances. At the end of the chapter, I reflect upon conversations in the secondary school, as these students will soon be making decisions about how they as adults can best serve themselves, their families, and their community.

Chapter 7 looks at how social norms and values, contrary to those embedded within the capitalist mode of production, are expressed through Pindoyú’s community institutions. While the combined individual and household interviews do not equally embody voices from women in Pindoyú; the experiences of women are incorporated through a detailed examination of two days in where I observed and participated in the process of a group of women processing sugarcane into molasses. I will also analyze the perceptions and practices of the neighborhood commission, church, and agricultural committee: groups in which members of Pindoyú distribute or redistribute goods, wealth, and time.
The concluding chapter draws together strands of moral economy, articulation of modes of production, and Marxist ecology and summarizes recommendations for community development workers in Paraguay.
CHAPTER 2

METHODS AND METHODOLOGY

A qualitative research methodology was utilized in order to analyze holistic social phenomena of how Paraguay’s national participation in the global economy and the changing agricultural production process in Pindoyú, Paraguay, has affected both human relationships with the land and human relationships with one another. Unlike a quantitative, positivist assessment of landscape or economic change, qualitative research methodology aims to answer questions of how and why people perceive landscape and economic change in the way that they do.

Burawoy (1995) describes the extended case method as the collection and analyzation of ethnographic data from a reflexive paradigm that acknowledges the intersubjectivity between the researcher and participants. As an extended case study, I will document and analyze the experiences of community members in Pindoyú in order to illuminate theory on moral economy, articulation of modes of production, and Marxist ecology.

I collected ethnographic data in the form of (1) household and individual interviews, (2) student auto-ethnography essays, and (3) participant observation as shown in Figure 2. Each of these methods informed one another in the field and during analysis. The justification, description, and limitations of each of the three methods of data collection are outlined below.
Figure 2: Three data collection methods informed one another.
Household and Individual Interviews

The household and individual interviews were chosen and designed as recommended by protocol in Slim and Thompson’s *Listening for a Change: Oral Testimony and Community Development* (1995). Twelve individual and household interviews were conducted with adult residents of the community.

Household-level interviews provided a culturally appropriate setting for myself, as a young, unmarried female, to gather data with men. More importantly, household level interviews can provide a context where the participants, through sharing convergent and divergent experiences, reflect on community identity, challenges, and resources. With many of the households in Pindoyú, I had already established a relationship with the entire family and saw many conversations where men, women, and children alike interrupted, disagreed, and joked with one another. For these households, I envisioned dynamic collective interviews with the whole family participating; however, often when it came time for the official recorded interview, only the husband or eldest male son was present while the rest of the household snuck away to tend to their daily chores and responsibilities.

Alternatively, individual interviews allow participation from those who are potentially under-represented or marginalized within a group setting based on their gender, economic, or ethnic standing.

While conducting research, I noticed how the consent process and recording device used during the collective interviews produced an altered, more formal behavior – especially from participating females. My female friends who were outspoken family members in informal settings adapted to social constructed ideas of how a wife should
agree with her husband once I turned on the recorder. In order to avoid unequal representation in the data, I purposefully sought female participants, and especially female community members who are unmarried or widowed, for individual interviews.

Unfortunately, many female community members, including some with whom I have experiences of friendship and collaborative work, expressed doubt in their understanding and right to participate. Many women referred to other potential participants, male relatives or neighbors, as a polite refusal. However, during more informal settings like birthday parties, church, or collective work events, these same women enjoyed informal discussion of the research topic and interests. Participants of all genders and ages usually continued engaging in dialogue related to the interview questions for days after the tape recorder was turned off, and often did so with more enthusiasm. Patton refers participant observation as “a combination of observing and informal interviewing” (1987, p. 87). Utilizing observation and informal interviews, I hope to amend for the lack of female perspective apparent in the formal interviews.

An interview guide (Appendix A) served to initiate discussion and, as each interview progressed, additional operative questions pertinent to the research questions emerged. I chose open-ended questions to avoid leading towards a specific answer and I used precision questions as necessary to prompt or expand the participant’s response (Slim & Thompson, 1995). I sought theoretical representativeness in the study population by selecting both participants who consider themselves to have benefitted as well as participants who feel they have suffered as a result of the change in economic structure in Pindoyú.
One limitation in the representation of the interviews is a result of the time of year that I was able to travel to Pindoyú to conduct this research. During the Southern hemisphere’s winter months, farm work is minimal and many of the poorest residents of Pindoyú leave to work as wage laborers. The residents of Pindoyú who emigrate to work seasonally as wage laborers were not available to participate in interviews. For this study, the experiences of seasonal wage laborers can only be analyzed through the voices of their families.

**Auto-Ethnography Activity**

Students in the 2nd through 12th grade had the opportunity to collect and interpret data through an optional auto-ethnography activity presented in class. Collecting data through the auto-ethnography of children and adolescents makes apparent the priorities and opinions of the future generation of Pindoyú and illuminates which stories are most meaningful for adults to pass down to the next generation. Additionally, the interpretive lens provided by the students offers additional data as well as an additional interpretive lens to the stories of the older generation of Pindoyú residents. The auto-ethnography activities were designed and facilitated in collaboration with teachers at the Elementary and Secondary schools in Pindoyú to be appropriate in both content and level with the intention of enhancing the students’ understanding and appreciation of their own unique culture and family history and engaging the children in self-reflexivity.

Students were to interview an adult member of their household about how food production, land-use, and community life has changed since the interviewee was a child. Students were prompted in the process of collecting data about their own family and
community history through verbal coaching by myself and teachers and students were also given a handout of prompts to take home (seen as Appendix B, C, and D). After collecting data, students were guided in the classroom through the process of making meaning and understanding implications for the future based on the gathered stories.

Students in 2nd and 3rd grade completed pictorial essays (as seen in Figure 3) and presented them to their teachers, their classmates, and myself. Students in 4th through 12th grade were originally prompted to complete written essays (as seen in Figure 4). However, after observing that the majority of students were experiencing more enthusiasm and curiosity from the classroom discussion than from the essay, I began to utilize class time to more thoroughly engage the students in discussion about the topics instead of guiding essay completion. The methodology evolved so that classroom time became a focus group or community interview.

The thoroughness and self-reflexivity apparent in each of the students’ auto-ethnography experience was most influenced by my relationship with each individual teacher. Many of the teachers, especially those in the elementary school, knew and trusted me well as the Peace Corps volunteer who worked with them two years prior. The teachers who live in Pindoyú were more available to collaborate beforehand to create an activity and were naturally more enthusiastic about guiding students toward a better understanding and appreciation their own community.

However, some teachers at the secondary school commute to work from out of town. These teachers were not accessible to me outside of school hours and I was therefore unable to discuss the purpose of the project at length with them. In some of the classes, teachers left the room during the activity. In these cases, the data collected from
Figure 3: Photograph of 2nd and 3rd grade students completing pictorial essays

Figure 4: Photograph of 10th grade students completing written essays
student essays or documented classroom discussion were limited to only a few students while the rest chose not to participate.

Conversely, some teachers were so strongly enthusiastic about the project that their persuasive prompting elicited an entire classroom to write nearly identical essays. This phenomenon is also a result of the dominant educational paradigm in rural Paraguay: rote copying, reciting, and memorizing. The challenge when perceiving these essays is to distinguish between the positionality of the student and the teacher.

**Background on Language**

The quotations from participant interviews and auto-ethnographies are presented as they were spoken or written: in a mixture of both Spanish and the indigenous Paraguayan language, Guaraní. This mixture of languages is referred to in Paraguay as *Jopara* (Guaraní for “mix”). Both Spanish and Guaraní are official languages in Paraguay and the majority of Paraguayans are reported to be bilingual. Paraguayan conversations generally do not occur in either pure Guaraní or Spanish but in *Jopara*. The ratio of Guaraní to Spanish present in an individual speaker’s variety of *Jopara* is dependent on both regional and socio-economic variables. Usually, the more rural and isolated a region, the more Guaraní-intensive their regional dialect of *Jopara*. Individual speakers prefer to express themselves in a more Guaraní- or Spanish-intensive *Jopara* depending on the context in which they are speaking.

Complex and conflicting language ideologies permeate Paraguayan society, as summarized in *Figure 5*. Most Paraguayans are *mestizo*, descended from both indigenous Paraguayan and Spanish conquistadors. However, indigeneity is viewed as a set of social
Figure 5: Language ideologies in Paraguay

- **Spanish**
  - Written Documents; government and business
  - Associated with education, wealth, power, and prestige

- **Guarani**
  - “Language of the heart”; gossip, poetry, and songs
  - Associated with the countryside, marginalization, and resistance

- **Jopara**
  - Guaraní word for "mix"
  - Variations depend on the regional and socio-economic background of speakers
and economic practices rather than a heritage and it is common to express disdain for the practices associated with indigeneity. At the same time, Paraguayans are proud to speak Guaraní and associate its use with resistance against conquest and domination. Guaraní is associated with the marginalization, and the pride of being a campesino (rural peasant farmer). It is often called the “language of the heart”. Guaraní is preferred for song, poetry, and gossip. Spanish, on the other hand, is associated with education, wealth, power, prestige, and belonging to a broader global community. Spanish is the language used in written documents and conversations with strangers: either foreigners or educated city dwellers (Choi, 2003; Saguier, 1987).

Participant interviews often switch linguistic footing between Guaraní and Spanish. The unique sentimental and pragmatic associations of each language provide a methodological opportunity to analyze which language dominates participants’ discussion of the economic transition. Participants were more likely to utilize Guaraní when speaking about empirical knowledge and emotional information while participants were likely to utilize Spanish when referring to the scientific processes of environmental degradation, to new technology in farming methods, or to any information acquired through print, television or radio instead of experience.

Schools are officially bilingual; however, rural schools are conducted primarily in Guaraní while Spanish remains a separate subject matter (Choi, 2003). The younger students’ auto-ethnographies were written in a much more Guarani-intensive Jopara than the older students’ auto-ethnographies. By the 11th and 12th grade level, students wrote essays almost entirely in Spanish.
Most rural Paraguayan families speak predominately Guaraní within the home. In Pindoyú, the older generations speak a significantly more Guaraní intensive variety of Jopara than the younger generations. However, it is becoming more common for families that are connected through remittances to urban centers to speak predominantly Spanish to their children or grandchildren, with the ambition that they will be able to study and work in the cities or abroad as further discussed in Chapter 6.

**Participant Observation**

I lived and worked in Pindoyú as a Peace Corps volunteer for six months in 2010. Previously, I had lived in other rural Paraguayan communities for 18 months. During my time in Paraguay, I designed and taught curriculum in environmental and health education to kindergarten through 12th graders; facilitated workshops with community members surrounding seed saving, soil conservation, no-till, and nitrogen-fixing crops; and attended meetings for the development projects of religious, political, and NGO groups.

I returned to Pindoyú in July 2012 to conduct official research for six weeks. I recorded all observations in a notebook that was later coded. I observed interactions between residents at the general stores, soccer field, church, and homes. Relying on stories gathered through participant observation is one way to amend the lack of female participation in formal interviews.

In qualitative research, theorists have reflected often on how researchers’ status in the community as an insider or outsider influences their positionality. Dwyer and Buckle (2009) suggest that presenting these as dichotomous is overly simplistic. They claim
“noting ways in which we are different from others requires that we also note the ways in which we are similar. This is the origin of the space between. It is this foundation that allows the position of both insider and outsider” (60). My experience of living and working in Pindoyú marks me in some ways as an insider to the community, while my experiences as a white, U.S. American with no family or historical ties to Pindoyú makes me an outsider.

My positionality especially influenced the access I had to participant observation and influenced the interviewing and auto-ethnography processes as well. Additionally, as an outsider, my closest relationships in Pindoyú, and therefore the majority of my informal interview and participant observation data, tend to be with residents that feel more comfortable with foreigners and open to new ideas. I have found that Paraguayans who are more comfortable with Spanish are often more comfortable speaking with foreigners, even foreigners who are conversational in Guaraní. Additionally, community members who have more land, capital, or time to invest in new ideas are often more likely to invest in the ideas of development workers.

**Interpreting Data and Critical Analysis**

Translated transcriptions of individual and household interviews, translated student essays, and field notes were coded according to emerging patterns. The computer software Atlas.ti7 aided in the organization of the coded data. Data was analyzed in terms of both convergent and divergent triangulation between methods as well as across positionality, the complex and multiple identities of each participant.
In the reflexive model of science, the researcher is not separate from the phenomena, but one element of the context, which is inextricably linked the data (Burawoy, 1998). The positionality of the researcher is inherent in the data and therefore inherent in the conclusions drawn from the data. In interpreting data, scientific rigor is maintained through self-reflexivity and transparency.

**Ethical Considerations**

In the case of participant interviews, authorship is attributed to the participant. Each participant over 18 was offered to be identified or remain anonymous. Unanimously, all interview participants wanted to be attributed for their testimony. This document is possible solely because of participants’ knowledge and their willingness to share that knowledge. Fortmann (1995) advances that the most ethical action is to include participant’s names as co-authors to academic papers.

The ideas of students, especially older students, are also fundamental to the assertions of this paper. However, as issues with consent of minors are more complicated, students’ identities were protected and the only collected identifier was the students’ grade level.

To comply with institutional norms, all potential participants received a written consent form explaining the purpose and procedure of the interview or auto-ethnography. Literacy is low in the most vulnerable populations of Pindoyú, including the oldest residents, residents with the least material capital, and women. There is a history of both governmental and financial institutions using written documents and signatures as a way to deceive and defraud rural Paraguayans of their land. Consequently, the convention of
the written consent form was both questionably ethical and a deterrent to some Pindoyú residents from participation.

As I have a relationship with many of the participants outside of the traditional researcher/participant role, I am privy to inter-family and intra-family context that no doubt colored my lens for analysis. As a safeguard for privacy, I chose to omit details of questionable situations that close friends did not specifically mention in their interviews from the report.

Additionally, there were ethical considerations I considered for the sake of the current Peace Corps volunteer working in Pindoyú as well as for any future relationship between community members and Peace Corps as an institution. Between 2010 (when I left Pindoyú after serving as a Peace Corps volunteer) and 2012 (when I returned to Pindoyú to collect data for this thesis), two women’s groups formed in Pindoyú. The current Peace Corps volunteer was working with at least one of them, traveling to nearby cities to obtain ingredients for laundry detergent and dishwashing soap. I quickly learned about contention surrounding the formation of these two separate groups and potentially improper distribution of finished detergents. I did not solicit opinions on the sensitive subject because I did not want my involvement to negatively impact the working situation of the current volunteer within the environment of implied competition and comparison of Peace Corps volunteers. For this reason, I focused my research on community institution participation with the neighborhood, church, and agricultural committee.
CHAPTER 3
THE THEORETICAL CONTEXT

My research questions, approach, and analysis are framed through a lens of Marxist development theory, specifically bodies of work in the articulation of modes of production (Meillassoux, 1964, 1972, 1975; Goudelier, 1972, 1977; Goodman and Redcliff, 1982; Wolfe, 1980), the moral economy (Thompson, 1963; Scott, 1976; Wolfe, 1969), and Marxist ecology (Foster, Clark, & York, 2011; Magdoff & Toker, 2010).

The recent changes in the agricultural production process in Pindoyú are in large part due macro-level political and economic changes. As Pindoyú is a community within the agrarian tradition, changes in the agricultural production process change all aspects of society. Stated in Chapter 1, the three fundamental research questions which guide this analysis include:

- How elements of the changing economic structure have transformed human relationship with the land, especially in relation to land-use and food production
- How elements of the changing economic structure have transformed human relations with one another
- How these changes are perceived by residents and how the community, as individuals, groups, and/or institutions promote and challenge these changes

These questions stem from an interest in how Pindoyú, as individuals and community, are perceiving and responding to macro-level changes. Locally, which values and practices are promoted? Which values and practices receive begrudging compliance out of necessity and lack of other option? Which are resisted and how?
My argument is situated within the theoretical paradigm concerned with articulated modes of production. In Marxist theory, a mode of production is a specific way of producing, including the relations and forces of production. The relations of production are defined as the social structures that regulate the relations between humans in the process of the production of goods and the forces of production are the machines, tools, and raw materials with which material goods are produced. In the *Communist Manifesto*, Marx conceives a rapid dissolution of all pre-capitalist modes of production by the succession of the capitalist mode of production (Marx, 2000a). However, in *Capital*, Marx envisions a more gradual succession (Marx, 2000b) of modes of production. To distinguish the theoretical lens of my analysis from any teleological or endogenous argument, I refer to the practiced non-capitalist modes of production in Pindoyú, not as pre-capitalist mode of production, but as agrarian or alternative modes of production.

Althusser and Balibar’s exegesis on Marx’s *Capital* (1970) was formative to the understanding of modes of production. According to Harold Wolpe (1980), a South African activist and scholar, and Goodman and Redcliff (1982), the paradigm known as the articulation of modes of production emerged in the 1960s by various Marxist thinkers examining agrarian transition – including economic anthropologists of the French Marxist school (Goudelier 1972, 1977; Meillassoux 1964, 1972, 1975). Opposing the dependency school (Frank, 1967) and world systems theory (Wallerstein, 2000), the articulated modes of production paradigm posits that capitalist modes of production and peasant modes of production are not mutually exclusive or dualistic, but interdependent parts of the same regional economy.
Within the articulation of modes of production paradigm, Wolpe distinguishes between two uses of the articulate modes of production: one which he calls “restricted” and oversimplifies the concept of mode of production to merely labor process and the other which he calls “extended” (1980), as shown in Figure 6. The extended definition of a mode of production encompasses the relations and forces of production as well as “the laws of motion” or “reproductive mechanisms” derived from the relations and forces of production (Wolpe, 1980, p. 7). The laws of motion dictate how forces and relations of production reproduce. Wolpe argued for an extended view that allows us to examine the relationship between existing modes of production within the same society and therefore the resistance of the subordinate mode to the dominant mode. Considering the laws of motion, theorists acknowledge that when dual modes of production are present in the same economy, the “expansion of one brings about the demise of the other” (Wolpe, 1980, p. 17). This research is situated within the extended view of the articulated modes of production.

The articulated of modes of production paradigm acknowledges the dominance of the capitalist mode of production at the global scale, while still offering opportunity for analysis of questions of agency, resistance, social transformation and dialectical relationships at the local scale.

The first two research questions of this analysis of Pindoyú focus on 1) human relationship with the land, or the main raw material or force of production in agricultural economies and 2) human relationship with one another, or the relations of production. However, the ideological and political structures, or laws of motion, needed for the maintenance and reproduction for both capitalist and alternative modes of production are
Figure 6: Extended view of articulated modes of production
introduced into the discussion during each chapter. The new agricultural technologies, GMO seeds and petrochemical inputs, introduced in Chapter 5 and emigration, introduced in Chapter 6, are political, economic, and ideological conditions in Pindoyú which reproduce the capitalist mode of production while obstructing the reproduction of alternative modes of production. Chapter 7 looks at the mechanisms of reproduction inherent in the practices of community groups: as some groups reinforce the conditions necessary for capitalism and other groups undermine those conditions in an attempt to protect and strengthen alternative modes of production. Within the agrarian mode of production in Pindoyú, social relations remain centered around kinship, land is owned by the laborer, and tools and machines are owned by the laborer or as collective property in the agricultural committee.

In addition to the articulation of modes of production, this analysis of the changing social relations in Pindoyú draws from the vein of theory in moral economy. Utilized by E.P. Thompson (1963), Scott (1976), and Wolfe (1969), the theory of moral economy argues that capitalist encroachment introduces practices that are morally discordant with peasant societies. I argue that the ways in which Pindoyú subordinate the dominant capitalist and subordinate modes of production are based on moral values that have evolved dialectically throughout Pindoyú’s history. Hegemonic ideology normalizing the values of individualism and inequality – the values inherent in the capitalist mode of production – is heard on the radio and television and taught in public and private schools. However, oppositional values, evident in historical practices in Pindoyú, such as collective work known as mingas and reciprocal gift exchange known as jopói, are still practiced through the subordinate mode of production.
The extent to which community members and groups embrace and resist the dominant and subordinate modes of production is in alignment with individual and collective moral code.

Lastly, theory within the vein of Marxist ecology is drawn upon to examine the relationship between Pindoyú residents and the land. The phrase “relationship with the land” is sometimes used in the United States in a way that romanticizes something lost through the modernization of society. But, if relationship is defined as “the way in which two or more concepts, objects, or people are connected” (Oxford English Dictionary, n. 1), all humans have relationship to the land, relying on the land for food, clean air and water, and materials for shelter, tools, and everything else. Just like there are many ways that two humans can be in relationship, the way that humans are connected to the land can vary. Forms of relationships include reciprocally beneficial connections as well as connections characterized by domination, subjugation, manipulation, and oppression.

The phrase “relationship with” acknowledges mutuality. Within this frame of mutuality, land is not just a passive object that humans act upon. Land is an active, dynamic system. It includes abiotic elements as well as biotic elements, such as insects, fungi and billions of microorganisms inherent in the soil as well as the plants and animals that use the land as habitat. Through natural selection and human intervention, biotic elements change over time, but abiotic elements shift as well and change as geologic formations beneath and above the Earth’s crust create oceans, valleys, and mountains. All of the elements of land, including the abiotic and biotic, continually interact with one another. In ecology, resilience theory is the capacity of an ecosystem to repair itself after a disturbance to restore equilibrium (Holling, 1973). Through this lens, humans’
The relationship with the land could be defined as the extent to which human agricultural settlement impairs or aids the ecosystem’s equilibrium.

The values and practices of society can change through dialectical processes. Even within the web of hegemony, cultural reproduction, and globalization, people change societal customs and laws and, in turn, change the relations, forces, and reproduction mechanisms of a community. The values inherent in relationships with the land and with one another, both convergent and divergent, as observed in practice and interviews in Pindoyú will be analyzed in the following four chapters. By better understanding the unique inter-relationship of various modes of production in a given community as well as the ethical principles on which communities have established, advanced, and resisted dominant and subordinate modes of production, development workers can support communities in promoting policies and developing projects which serve communities’ for an appropriate balance between participation in the global capitalist system and protection of values discordant with the system.
CHAPTER 4
ENVIRONMENTAL DEGRADATION

In the Guaraní language, the word yvy can be translated into both “land” and “soil”. In a very rational manner, yvy is an extension of the monosyllabic word y, which means “water”. Furthermore, many elements of the natural world extend from yvy, including yvyra (tree), yvytu (wind), and even yvypóra, which is translated as “person”, or more literally “land spirit”.

When Pindoyú residents speak of environmental degradation and the resulting decrease in agricultural production, the data revealed an interesting divide between Pindoyú residents. Some Pindoyú residents look to farming methods they describe as “back to the old ways” to solve environmental problems, while other Paraguayans use rhetoric of advancement and modernization instead.

The Younger Generations Perception of the Past

The older generations in Pindoyú have experienced the effects on their livelihoods of many types of environmental degradation: climate change, deforestation, declining soil fertility, and declining water in the streams and aquifers. The younger generation, on the other hand, does not have this empirical knowledge first-hand but have perceptions and stories passed down to them by their families, neighbors, and teachers. Younger generations receive the attitudes and stories of their elders and make their own meaning from them. By and large, the majority of the students recollected a positive environmental past in their pictorial and written essays, as seen in Figure 7. This cultural construction of a collective memory indicates that the older generation believes that a
Figure 7: Student’s pictorial essay depicting environmental degradation
positive perception of the environmental past is useful in some way to their children and the future.

The youngest participants recollected the environmental past especially favorably. 2nd and 3rd graders drew pictures of “antes” filled with birds, trees, ample rainfall, and fish in lakes aside pictures of “ahora” that featured small plants withering from heat and thirst. Older elementary students often responded to the question “What would you have liked about living 50 years ago?” with an excited response that they would like to go hunting and fishing when there was more habitat and wildlife. Secondary students wrote about a time when Pindoyú was beautifully green and full of trees.

When depicting the present, pictorial essays featured plumes of contaminated smoke rising above burning trash or out of a motorcycles’ tailpipe. Written essays from the oldest students condemned practices that lead to deforestation and pollution and contained phrases such as “lleva a la contaminación lo cual destruyo nuestro planeta”1 (auto-ethnography, August 2012).

The youngest students produced very similar auto-ethnographies as their classmates. As mentioned in the methodology section of the introduction, many of the similarities are due to teachers’ strongly influential voices. As students aged, their auto-ethnography responses became more diverse. Older students have had more opportunities to encounter a wide range of attitudes and stories from the older generation, and these students have also gained more experience to color their own lens through which they make meaning.

1 “leads to the contamination which destroys our planet”
The essays of the older students were particularly interesting as a rift emerged between the essays: those who perceived new technology and modernization as the solution to environmental degradation and those who saw the solution in the small-scale, low-technology of the past.

The interviews with community members revealed this same rift between those who idealize the “old” and those who idealize the “new”. As the student essays were de-identified, it is not possible to thoroughly distinguish whether the younger generation’s viewpoint could be correlated with a particular identity or position within the community. An interesting study would be to analyze the extent to which the viewpoint of a younger generation’s viewpoint can be predicted or influenced by that of their older family members.

Rhetoric Favoring the Old

The older generation of Paraguayans who favored the “old” ways to provide solutions to environmental degradation referred to traditional farming practices of crop rotation, no till, and green manures. These essays and interviews used words like “balance”, “repair”, and “restoration” when referring to the methods. This language contrasts to the language of manipulation and domination of the land that the same participants utilized when referring to the utilization of transgenic seed in Chapter 5.

During one interview, an elder in the community personified the soil, comparing it to a young maiden: “Antes iporã ipyahu. Simpre nde pyahu neporã. Ha upéi ituja
iproduc’ima”\(^2\) (Kai Marino, personal communication, July 19, 2012). This metaphor depicts the land as undergoing the natural process of aging, but also infers an understanding that the aging process can be accelerated or decelerated depending on the provided care.

Many participants referred to this process of restoration and recuperation through the work of the agricultural committee. Typical of the others who utilized the language of restoration, Kai Francisco explains: “ko’âga ore jae'e chupe oreçapacita comitéhaiche oñepyru roñontyjey jahechapa ndorecuperái. Ore roime ko'ape. La yvy ojegata. Ore recuperasejey”\(^3\) (Francisco Sotelo, personal communication, July 21, 2012).

In the following passage, Kai Elvio, the President of the Agricultural Committee, demonstrates concern about the decreased soil fertility that he has observed in his lifetime:

\[\text{Pero ndahaei avei romcomplete patei ore la ingenero ojerurure haiche ore. Pero orecomenda ore ko'anga desde hoy ha adenlante la yvy ndojehapyyema. No esta prohibido pero para mantener la naturaleza. Porque ore noentendéi kuri araka'epe kokuemea rohapy ha rodiminuvi la valor de yvy ya. Noentendéi gui nte. (Elvio Diaz Fernandez, personal communication, July 17, 2012, emphasis mine)}^4\]

\(^2\) “Before, [the soil] was good; it was new. The young are always beautiful! And then, after getting old, it produces very little.”

\(^3\) “Right now we are trying to recuperate the soil. Now our committee has started to plant and to see if we can recuperate our environment. If it’s gone, so is nature. Now the committee has been capacity building so that we begin to plant [cover crops] and see if the soil recuperates.”

\(^4\) “Now we work at the level of engineers. But it’s not that we complete everything that the engineers request of us. But they recommended from now on that we don’t burn the soil anymore. \textit{It’s not that it’s prohibited but it is to preserve nature. We didn’t understand} back then that burning the fields diminished the worth of the soil. \textit{We did it just because we didn’t understand.”}
Later on in the interview he briefly mentions many other a priori variables that have contributed to decreased soil quality in the last half century in Pindoyú, including the switch to transgenic crops, the petrochemicals the new crops require, deforestation, and climate change. However, field burning is the only variable which Kai Elvio explicitly links to decreased soil fertility, and it is the only variable of the many for which he can be held responsible.

This felt responsibility is related to the importance and difficulty of analyzing scope and scale when analyzing environmental problems. The “old” methods favoring participants were likely to link their own responsibility to environmental degradation, a phenomenon that seems somewhat unfair given the scope and scale of issues like climate change. However, accepting responsibility for contribution towards environmental problems does engender a self-empowerment that one’s own actions can and do affect one’s environment.

While Kai Elvio regrets his past action, he laments, “we didn’t know”. The utilization of an impersonal pronoun distributes responsibility to everyone who practiced field burning. His claim of insufficient knowledge implies that Kai Elvio is certain that when properly informed, he, and others, will make responsible land management choices.

Revealingly, all of the participants who perceived solutions in the old methods and used the rhetoric of restoration were also members of the agricultural committee. The agricultural committee might present solutions to environmental crisis in this way, or the residents who perceive solutions to be in the old methods might be more attracted to being members of the agricultural committee. Evident in their quotations, the agricultural committee members have an understanding of responsibility regarding their role in
environmental degradation and recuperation. Other global, systematic causes of environmental degradation cannot and should not be ignored, but this understanding of responsibility can be the starting point to empower residents towards self-determination.

**Rhetoric Favoring the New**

In a striking contrast, other participants did not favor utilize rhetoric of “restoration” but instead rhetoric of “moving forward”, “modernization”, and “progress”. They saw the solution to environmental crises in approaches brought to Paraguay by engineers and agronomists from other countries as well as in an open global market.

Aldo, an educated farmer in his twenties, is from a family who is active in the civic life of Pindoyú. He is very aware that he is one of the few young men of his generation who is able to live year-round in Pindoyú as a farmer. He sees farmers’ access to new knowledge about technology and agricultural science as a key component of solving economic hardship and environmental crises:


Often those who utilized the rhetoric favoring the “new” were downright critical of the old ways. Kai Juan is a farmer who benefitted greatly from knowledge and capital gained during seasonal work in Argentina. During his interview, he, like others who

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\(^5\) “The small producer […] doesn’t have access to knowledge. When one doesn’t have the knowledge, they cannot utilize the newest changes in agricultural science. [They work] just like way back then. They can’t move forward. They can’t progress.”
utilized rhetoric favoring the “new”, expressed internalized prejudice against
Paraguayans and the old ways:

Antes, [plantar] la bárbaro no más sin conocer nada. Ahora ya hay mucho
expert ya professional. Hay gente capacitado ya para eso. Eso se aprende
uno al otro. Antes era indocto no tiene experiencia para sembrar. Y ahora
la mayoría sabe lo que está sembrando y como y cuando […] Antes, se
siembra de la luna. (Juan Pinilla, personal communication, July 15,
2012)⁶

Another successful and hard-working farmer from the older generation, Kai
Vicente sat with me for two hours one evening, drinking tea outside his wife’s almácén.
When the town experienced a power outage, he gave me a flashlight and instructed me to
come back tomorrow to finish the interview. His interview in total lasted more than four
hours. Vicente wanted to ensure that I understood his perspective and explained
everything in several ways and with many anecdotes. Consistently through his interview,
Kai Vicente utilized the rhetoric of modernization and progress. He complimented the
federal government’s Department of Agriculture, who he perceives to have connected
small farmers to large factories and given the country access to the global marketplace.
His political allegiance continued throughout the interview as he criticized agricultural
policies under the conservative dictatorship and credited all effective policies to Liberal
president Fernando Lugo.

⁶“Before, [people planted] like barbarians, without knowing anything. Now there are a
lot of experts and professionals. There are skilled people for this. This one learns from
another. Before people were ignorant and didn’t have experience to plant. And now most
know what to plant and how and when.”
After describing in detail the ineffective ways that people used to farm, Kai Vicente declares, “Ha upéi ou ingeniero ore omba’apo téchnicope”⁷ (Vicente Diaz, personal communication, July 22, 2012). He then begins to describe the same agricultural processes advocated by those who utilized the “old ways” rhetoric: ceasing slash-and-burn, employing no-till, and protecting soil from erosion by planting trees.

It turns out that many of the agricultural solutions advocated by the participants utilizing the rhetoric favoring the “new”, like Kai Vicente, are the same agricultural practices advocated by those who utilized the rhetoric favoring the “old”. Both groups supported the same agricultural processes but explained them in different ways. While the group who advocated the “new” attributed the redeeming agricultural practices to the knowledge imparted by foreign agronomists, the group who advocated for the “old” attributed those same agricultural practices to Paraguayan ancestors’ traditional knowledge.

**Historical Origins of the Rhetoric**

It became apparent that the divergent rhetoric of interview participants was correlated with membership in the agricultural committee and families’ political party affiliation. Those who favored language of “restoring the old ways” were members of the agricultural committee and known supporters of the Colorado party. Those who spoke of moving forward, modernization, and progress did not participate in the agricultural committee and are all known to be supporters of the Liberal party.

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⁷ “And then, engineers came and taught us how to work technically.”
To understand the political divergence, it is necessary to understand the political history of Paraguay. From 1954-1989, Paraguay was under the authoritarian rule of General Alfredo Stroessner. His dictatorship is one of the longest in modern world history. Operating under the philosophy of the National Security doctrine and perceived communist threat, human rights were routinely violated under his rule. The Stroessner-era government’s control of the press and disappearance of perceived enemies of the state “kept the population in constant fear, so that Paraguayans even came to doubt their own thoughts, values, and speech” (Horst, 2007, p. 26). In 1989, Stroessner was removed by a coup d’état lead by a general with identical ideology and government goals (Powers, 1992). Though Paraguay was officially considered a democracy with the end of Stroessner’s regime, governmental institutions remained largely the same and civil organizations and oppositional parties remained fragile.

It wasn’t until 19 years after the coup, in 2008, that Paraguay elected a President of the opposing political party, the liberal Partido Liberals. Stroessner’s party, the conservative Partido Colorado had been in power for 61 years. The elected liberal President, Fernando Lugo, during his campaign and time in power, was heralded by many as an agent of economic and social change for Paraguay (LADB Staff, 2008). However, his term was cut short through impeachment by the Colorado congress during June 2012 (Romero, 2012), just days before the interviews were conducted.

Paraguayans are staunchly supportive of their political party and their political leanings are dictated by the political leanings of their family. Liberales will wear bright blue and eschew red clothing while Colorados do the opposite. Each party has their own
special political holiday, when supporters take a day off from work to set off fireworks, drink alcohol, and prepare extravagant meals.

Most intriguing is the way in which those who identify as *Liberales* and *Colorados* speak differently about the time of Stroessner in Pindoyú. When asked about the state of the country during Stroessner’s regime, a self-identified conservative is likely to reminisce on the peace and tranquility of the time. I have heard *Colorados* say that during the time of Stroessner, people could sleep outside and live without locks on their doors. There was no risk of theft or murder because Stroessner’s police had captured all the criminals.

On the other hand, Paraguayan *Liberales* perceive the Stroessner regime through a different lens. In accordance with the assertions of international human-rights watch organizations, *Liberales* speak of a regime were people (perceived enemies of the state) disappeared from thin air and militarized police terrorized the general population.

With the historical deep divide along party lines, as well as the recent upheaval from Lugo’s dubious impeachment, it is likely that interview participants felt passionately about the appropriate political direction for the country. The divided rhetoric could be partially explained by *campesinos* choosing to adopt the rhetoric that they hear their parties’ politicians use. In the global conversation, restoration and regenerative agricultural practices are often promoted by political progressives such as Rachel Carson, Vandana Shiva, Robert Rodale, William Aiken, and Wendell Berry (Beus & Dunlap, 1990). In the conversation in Pindoyú, conservatives promote restorative agricultural methods as homage to the old ways and liberals view restorative agriculture as evidence of the forward thinking of expert engineers and agronomists.
Implications for Community Development

Both groups advocate for similar farming methods including avoiding slash-and-burn and no-till; however, one group attributed the agrarian mode of production as the source of these solutions while others attributed the open markets and knowledge of foreign agronomists from the capitalist mode of production. The challenge for community development workers is to emphasize the collaborative solutions in the agricultural practice within the divergent rhetoric. Using a rhetoric of “either/or” has the potential to isolate one group over another. The farming techniques with the capacity to offer farmers increased production capacity and long-term environmental solutions are neither firmly unique to capitalist or agrarian modes of production.

The development worker also has the responsibility to assist community members in finding their own proper level of responsibility. Practices like slash-and-burn decrease soil fertility and is within the scope of responsibility of the individual community member to change. However, there are also these large scale, global issues, like climate change, which are also affecting soil fertility. For these issues, the development worker can help empower the community to do advocacy and policy work.

Lastly, in Paraguay, the development worker often enters the community through groups like the agricultural committee, and this research implies that the worker needs to be aware of the rifts within a given community that might prevent otherwise influential members from participation in groups.

An avenue for future research could be to analyze at group participation and political power. Based on my limited observations of the transition of members in the
agricultural committee over the last several years in Pindoyú, it is possible that people are more likely to participate in tedious and time-consuming group work when their political party is not in power; the group gives them an alternative venue for empowerment.
Guaraní is a language of many compound words. Many concepts that have a separate word in English or Spanish are added to the verb in long string of prefixes and suffixes. If a verb is reflexive, it will include the prefix “ñe” or “je”. While mbo’e translates to “teach”, ñembo’e translates as “to pray”, or literally “to teach oneself”.

In Pindoyú today, two particular farming methods are utilized regularly that were not available 20 years ago: transgenic (GM) seeds and agrochemicals. The widespread use of transgenic seed and agrochemicals is one of the most apparent differences in farming and relationship with the land comparing today to the previous generation. The majority of genetically modified seeds fall into three categories: those modified for herbicide tolerance, those modified for insect resistance, and those modified in some combination of the two (Magdoff, 2010, p. 23). The term “agrochemical” includes chemical fertilizers and pesticides. The most common agrochemicals in Paraguay include an insecticide called “Mata Todo” and herbicides, like RoundUp, which are applied to fields of GM RoundUp Ready crops.

In contrast to the divergent rhetoric of residents speaking about environmental degradation and its solutions, participants held common perceptions about the utility and function of these new technologies.

History of the Technologies in Paraguay

Pindoyú residents convey a common narrative of Brazilians introducing agrochemicals and transgenic seeds into the country. Brazilians began to migrate to
Paraguay as land prices were comparatively lower in the 1960s (Nickson, 1981). These Brazilian immigrants were able pay for legal titles and therefore receive credit that was unavailable to the newly settled Paraguayans on the eastern frontier (Nickson, 1981). Brazilian settlements are quite large compared to a Paraguayan household estate and often planted with monocrops of soybeans. These settlements were many Paraguayan campesinos’ first introduction to an export-led, supranational agricultural model.

Several participants stated that their bus travels caused them to pass through towns of Brazilian-owned fields where they first saw lines of the impeccable-looking transgenic crops, which are straight, green, and lush for miles. When asked, residents commonly recall that transgenic seed and chemical application was adopted in Pindoyú around 10 years ago.

The Monsanto Corporation first altered the genetic material in the 1980s (Robin, 2008), but the first documented harvest of GMO crops in Paraguay did not take place until 1999 (Palau, n.d.) It is thought that GM RoundUp ready soybean seeds were smuggled across the border from Argentina (Robin, 2008, p. 276). By 2007, “no Paraguayan law authorized the cultivation of GMOs, even though they covered nearly half the cultivated land” (Robin, 2008, p. 275).

Under President Lugo, Miguel Lovera was appointed Director of the National Service for Plants and Seeds Quality and Health (SENAVE), Paraguay’s equivalent of the United States Department of Agriculture (USDA). Lovera was a climate change advocate and encouraged the enforcement of the national registry of commercial plant varieties, which does not permit GM corn or cotton. One of his most controversial moves involved burning 100 acres of illegal GM corn in 2010. However, a few months later
Monsanto was given permission by the Paraguayan government to experiment with the cultivation of GM corn (Torres, 2011). When Lugo was impeached in 2012, his successor quickly removed Lovera from SENAVE. GMO cotton gained inclusion in the national registry though it had yet to receive the safety report required by law from the Environmental and Health ministries (Barnett, 2010). However, the national legality or worldwide controversy surrounding GM crops was not identified as a concern of Pindoyú residents in interviews or participant observation.

The negative impacts of agrochemicals and genetically modified (and patented) seeds are well documented. The most immediate negative impact is to the health of those who apply or live near applications of pesticides and herbicides. While human labor is fundamental to all economies, a healthy body is particularly essential to perform labor in an agrarian economy, where the majority of labor is extremely physical. The World Health Organization has designated many of the agrochemicals used in Paraguay as extremely hazardous to human health (Howard, 2009, p. 40). Exposure through the skin, respiration, or ingestion of contaminated water contributes to a myriad of health problems: the most frequently reported include headaches, gastritis, stomach problems and blurred vision (Howard, 2009, p. 40). The Pindoyú agricultural committee hosts trainings where NGOs and other groups emphasize the importance of proper application, but even the safest application is still a health threat that rural campesinos were not exposed to twenty years ago.

Additionally, the utilization of agrochemicals damages the fundamental means of production in agricultural economies: the land. The agrochemicals utilized on one
particular plot are not contained in just that plot, but persist through environmental cycles: contaminating the water, air, and soil of the region (Palau et al., n.d., p. 21).

Literature tells us that the introduction of transgenic seed decreases the seed diversity of an area: eliminating years of natural and human selected adaptations for the specific climate and soil type of a place. This reduced genetic diversity means that crops are more vulnerable to catastrophic weather and disease events (Foster et al., 2010, p.81; Altieri, 2010, p. 261).

**Pindoyú Perceptions regarding the Technologies**

In student auto-ethnography essays and household interviews, Pindoyú residents acknowledged the potential human and environmental health risks posed by agrochemical use. A few of the older students took a highly principled stance against agrochemical use, like one high school senior who wrote: “Yo digo que hay que evitar el uso de los herbicidas porque daña mucho al ambiente para fortalecer lo positivo tenemos hacer como antes hacían para poder progresar y llevar una vida saludable” (auto-ethnography, August 2012). The younger students often included a farmer with a backpack sprayer and protective gear in their depiction of “ahora”, as seen in Figure 8.

Contrarily, in every single household interview, the adults responsible for the management of the farming methods and economic well being of their household accepted the model of transgenic seed and agrochemicals as norm. Some interviewees acknowledged the negative externalities of utilizing transgenic seed and agrochemicals

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8 “I say we must avoid the use of herbicides that damage the environment in order to strengthen the positive things that we had in the past and be able to progress to lead a healthy life.”
Figure 8: Student’s pictorial essay depicting agrochemical application
and some did not. Whether or not they commented on the negative impacts of the new production method, all interviewees praised the convenience and efficiency of farming with transgenic seed and agrochemicals.

One married couple, Kai Celso and Ña Cata, spoke to the economic benefit of its utilization: “Oconveni ore mboriahupe proque ka’api pata ha opagata hevyve ose” (Sonia Catalina Duarte, personal communication, July 19, 2012). This was said without hesitation only a minute after connecting Brazilians’ rampant use of pesticide to environmental destruction and the cycle of poverty. Within the disconnect between these two statements is an understanding of the disproportionate distribution of the benefits and costs of the use of agricultural biotechnology.

Kai Carlos also justifies the use of agrochemicals by distinguishing large-scale production farms and his own household farms: “Ko’ape Pindoyúpe sa’i la química ojeporu. Grande oiporuvewa. Ko Pindoyúpe para consume, sa’i oñevende la cosa. Ndahechái che mba’e ovende ape.” (Carlos Aquino Benitez, personal communication, July 19, 2012). In his statement, Carlos perceives the utilization of agrochemicals in Pindoyú as just because the chemical contribution is far less than that of large-scale production enterprises. Additionally, his reference to the lack of opportunity to sell implies that he perceives the utilization of agrochemicals in Pindoyú as a just practice because people are simply doing what is necessary to feed their families.

Even the president of the agricultural committee concedes that while the official stance of the agricultural committee is to farm organically, people use agrochemicals

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9 “It is convenient for us poor people because it is more expensive to pay workers to weed with a hoe.”
10 “Here in Pindoyú, we apply agrochemicals sparingly. Big farms use much more. Here in Pindoyú, our crops are for consumption, with only a small part of production to sell.”
because it costs less: “Orgánico ore rocomecondaveva. Ape la gente Mata Todo kuera ousa porque i’costo ndapokápaive japaga haguã” (Elvio Diaz Fernandez, personal communication, July 17, 2012).\textsuperscript{11}

Whether or not farmers explicitly calculate the costs and returns, it is accepted that spending money on the transgenic seeds and Roundup is easier than the perceived costs of finding and compensating laborers to work in one’s field. Kai Juan explains that “[hay más] beneficios. Con la química se puede sembrar diez hectáreas una persona y con asada apenas una hectárea. Una sola persona diez hectáreas se puede manejar tranquilamente con química.” (personal communication, July 15, 2012)\textsuperscript{12}

Using transgenic seed and agrochemicals is a less labor-intensive method of farming. However, the new technique creates a positive feedback loop with the migration of the labor force. As rural Paraguayans, particularly the younger generation, no longer perceive their labor input as essential to the functioning of the family’s farm, they are more likely to migrate to look for work which could contribute cash remittances to the household. Additionally, as rural Paraguayans, particularly the older generation, want to provide their children the opportunity to study and work that they themselves did not have, they are more likely to adopt less labor intensive farming methods, like transgenic seed and agrochemicals, so that their children can leave for other pursuits.

Adding to the complexity of the feedback cycle between the labor force and these new farming techniques is that many of the migratory jobs available to uneducated farm

\footnotesize
\textsuperscript{11}“The official recommendation [of the agricultural committee] is to plant organically. Here, people use herbicide because it costs less.”
\textsuperscript{12}“[There are] more benefits with the chemicals: one person can plant ten hectares. With a hoe, it is distressing for one hectare. Just one person can easily manage 10 hectares with chemicals.”
workers are for the large-scale foreign-owned soybean estates. One interviewee’s brother had worked seasonally at such an operation and affirms that in Pindoyú “ojecopia ichugui isistema de trabajo” (Derlis Guerrero Camacho, personal communication, August 7, 2012). When migratory workers see the functioning of the profitable monocropping enterprises, they return to Pindoyú with an internalized normalization and idealization of the utilization of GM seed and agrochemical inputs.

**Utilized Language surrounding the Technologies**

Looking at the language that interviewees used when speaking about the benefits of the new farming techniques, their words refer to the traditional methods as “distressing” or “heavy”. This connection with the land infers that it is something that is out of control and needs to be managed, or put into submission. One interviewee’s description of the benefits of the transgenic corn also gives a glimpse into the way that this new technology is affecting people’s relationship with the land. “Primero, la avatí transgénico oguantave heta mba’e isequía oguantave. Anteveguare avatí ndoguantái al tiempo. […] Huguy mbareteve. Lo mismo nte ose” (Celso Benetiz, personal communication, July 2012).

The phrase “stronger blood” conjures up images of competition between old types of corn and new types of corn or of competition between corn and the drought. Instead of working collaboratively with the land and environment, the environment is viewed as something that must be overcome - something that must be fought against with human ingenuity.

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13 “People copy their [Brazilian monocroppers] system of working”
14 “First, transgenic corn is more persistent; it can tolerate better lots of things, like drought. The corn from before didn’t tolerate the weather. […] Transgenic corn’ has stronger blood. No matter what it will germinate.”
Pindoyú residents plant transgenic corn without knowledge or concern of its legal status. To some degree, access to information and knowledge surrounding the practices is lacking. But to another degree, Pindoyú residents, like many without access to capital, are working so hard to meet their day-to-day needs that they simply do not have the luxury time or resources to take new knowledge into consideration.

During my time as a Peace Corps volunteer, I heard several public service announcements on the radio from NGOs advocating for saving native seeds. However, when I asked Pindoyú residents, no one could name anyone who plants native seeds anymore. If anyone intended to save their seeds, they would likely be contaminated through cross-pollination of neighbor’s crops (Belcher, Nolan, & Phillips, 2005).

Because environmental and genetic cycles are disrupted through the adoption of transgenic seed and agrochemicals, this method of production cannot be contained and therefore cannot coexist with other methods of agricultural production. Pindoyú households make decisions to gain production efficiency as a tradeoff for health risks and environmental contamination; however, foreign-owned large-scale production still controls the Paraguayan market. Of the 60,000 transgenic soy producers in 2007, only 24% were Paraguayan, the rest of the producers were from Brazil, Germany, or Japan (Robin, 2008, p. 281). 24 million liters of toxic agrochemicals are used in Paraguayan soy production every year by large-scale foreign-owned owned estates (Howard, 2009, p. 40). Multinational corporations, like Monsanto and Cargill, are the true beneficiaries.

As a result, there has been a very significant change in people’s relationship with the land in Pindoyú. Small-scale farmers traditionally owned their means of production
through seed selection and utilization of minimal tools and technology. Now, as more tools, machines, chemicals, and even patented seeds constitute the basis of the means of production, farmers’ inputs have become increasingly expensive and their way of life is less self-determined.

Though the detriments are many, the new farming techniques have encroached onto Paraguayan land and into the life of Pindoyú residents. One young man who has been able to stay in Pindoyú to farm the land, one of the only in his generation, concludes that Paraguayans “ojagarra ventaja orekova perdida”\textsuperscript{15} when they utilize agrochemicals (Aldo Santacruz, personal communication, July 22, 2012).

**Implications for Community Development**

The added expense of inputs (seed and agrochemicals) is likely the most experienced drawback for farmers in Pindoyú. As environmental and agricultural activist Vandava Shiva advances: “Under globalization, the farmer is losing her/his social, cultural, economic identity as a producer. A farmer is now a ‘consumer’ of costly seeds and costly chemicals sold by powerful global corporations through powerful landlords and money lenders locally” (2004). As farmers must buy these new means of production, the adoption of these technologies has interwoven the capitalist mode of production into the agrarian mode of production in the Paraguayan countryside.

Development workers are often eager to steer peasant farmers away from chemical inputs and GM seeds, both of which rely on outside means of production and have long-term risks to soil fertility. But for Pindoyú residents, the decision of whether to

\textsuperscript{15} “grab an advantage that has an injury”
utilize GM seed and agrochemicals is being evaluated from a different subject position than that of environmentalists or activists who have the luxury of considering the future. In Pindoyú, families are often making decisions based on survival in the present day. Several participants were forthright about the ineffectual nature of past community development projects that did not take into account the positionality of rural Paraguayans.

Aldo explained that often the technical experts have received a lot of formal education, but are not familiar with the Guaraní language or the realities of practicing agriculture in Paraguay. Therefore, their suggestions are misunderstood or just plain not applicable for the Paraguayan countryside. Aldo explains that, according to customs of polite behavior, farmers will nod their heads and agree with the development workers who arrive from the outside - even though they are not convinced (personal communication, July 22, 2012).

Ña Cata and Kai Celso have a similar grievance about agricultural assistance. They tell the story of a technical expert who explained in a meeting how to plant citrus trees. After acquiring the grafted citrus tree starts, they planted the trees according to their understanding of the instructions, only to find out several months later when the development worker returned to Pindoyú, that they had planted the trees too close together for optimal fruiting. The couple was clearly upset while relaying the story. They explained that it would be more effective for the technical workers to teach through doing, instead of through words and diagrams. The couple concluded that the problem is that even if the technical worker doesn’t sweat, they still get paid (personal communication, July 19, 2012). This comment was made in a jovial matter, but demonstrates the differences in realities between campesinos and development workers.
A development method that fulfills the suggestions of Aldo, Ña Cata, and Kai Celso is the hands-on and collaborative nature of a communal demonstration plot. As discussed in the beginning of this chapter, many rural farmers have adapted to the new technologies of agrochemicals and transgenic seed without fully calculating the implicit and explicit costs. Due to limitations in labor and resources, Pindoyú residents do not perceive a viable alternative to the adoption of transgenic seeds and agrochemicals. To remedy the lack of complete information, development workers could set up collaboratively owned and managed demonstration plots: comparing side-by-side a plot of transgenic seed managed with agrochemicals and a plot which utilizes traditional methods of native seed, green manures, and companion planting. This experiential comparison would allow farmers to witness first-hand the trade off in costs of labor and supplies as well as the costs inherent long-term soil fertility. With more complete information, farmers can choose whether or not chemical inputs and GM seed are the most viable method for their needs.

The plot farmed without reliance on the new agricultural technologies, in order to demonstrate a true alternative to costly inputs, would need to imagine and create a way that Pindoyú community members can own and manage the means of production collaboratively. This includes communal access to credit for purchasing of physical implements like tools, machines, and land as well as access to shared knowledge about composting, natural and inexpensive pest deterrent strategies, and harvesting and storing seeds. Communally-owned land, tools, and knowledges comprise an alternative means of production that is already being practiced by the agricultural committee in Pindoyú.
Through development projects, structures can be developed to protect communal ownership, even as farmers participate concurrently in capitalist production.
CHAPTER 6
GROWING NEED FOR CASH

In Guaraní, one can talk about the lack of material resources in several different ways. To be broke, or out of spending cash is to be sogue. To be poor in material resources in comparison to others is to be mboriahu. However, the most common self-identification in rural Paraguay is mboriahu ryguatã or “bellyful poor”. With access to food in the fields, Paraguayans remain bellyful; however, as the agricultural production model changes, rural Paraguayans need more and more cash in order to stay bellyful.

This chapter will examine the complex relationships between wage-labor, migration, and remittances through the perceptions and lived experiences of Pindoyú families. As agricultural production relies increasingly on chemicals and technology, less labor hours are required in the fields. As commodities that require specialized labor and resources from outside Pindoyú are increasingly available, more cash is required for livelihood: cell phones and cell phone minutes, motorcycles and gas, household appliances and electricity.

In response to these pressures, an increasing number of residents are leaving Pindoyú in order to find seasonal or permanent work: either at Brazilian-owned Paraguayan estates on the eastern frontier or in urban centers in Paraguay, Argentina, and Spain. Additionally, more Pindoyú residents are both hiring and working as temporary day laborers.

The chapter begins by looking at the perspective of the older generation on the increasing cash economy, migration, and wage laborers. Next, I reflect upon at the insights of high school students, who will soon be making their own decisions about where and how to work and live.
Growing Cash Economy

During the time of the minga and jopói, families’ needs were acquired from the land and through reciprocal relationships with neighbors. Presently, the vast majority of Pindoyú residents supplement agricultural activities in order to make a living. For some, agricultural activities are only peripheral to remittances or seasonal work. Not only must campesinos pay currency for the seeds and petrochemicals now necessary to farm, new commodities requiring cash have become staples in campesinos’ livelihood: running water and electricity, school supplies for children, basic home appliances like gas ovens, refrigerators, and small portable clothes-washing machines, motorcycles and fuel for motorcycles, and cell phones and cell phone minutes. Kai Elvio and Kai Francisco reflect on this change:


Ko tiempo la plata oikoteve iterei. Platama javive osē heta mba’e mensualidad. Por ejemplo, ko electricidad ko’āga oï como heladera, lavarropa, teléfono, ha ūpēpe oreforzave. Ymave ndaipóri la mensualidad. Ha ore papakuera ovive porâve. Ko’āga lo mejor javive porâve pero la yma la efectivo sa’ive oikoteve. […] Ymaguare petei kure’i ojuka, jaslava para un mes. Ha ko’āga la platarâ oikoteve, ropaga mensual heta mba’e. (Kai Francisco, personal communication, July 21, 2012) 17

16 Way back when, many things were cheaper. The way of life was to spend less. Today life is more expensive. I remember until I was 13, I didn’t use shoes. Now, children are born and have shoes immediately. There are more expenses for the poor.

17 In this time, money is needed excessively. Money to live. Lots of things are paid monthly. For example, electricity, refrigerators, washing machines, phones, and that forces us. Way back when, there weren’t monthly expenditures. And our fathers lived better, I think. Now, we live better but back then they needed less cash. […] Way back
Intriguingly, when referring to the process of modernization, interview participants employed language which indicates the perception of these processes being out of one’s control, as though it has a mind and will of its own. Kai Elvio also remarked that “Le neñandúa, modernización ñánde forza”\(^\text{18}\) (personal communication, July 17, 2012). This external force enacting change upon the community is common language in many of the students’ auto-ethnographies as well. The idea of force, whether viewed as beneficial to Pindoyú or threatening, indicates that participants understand that this change is not generated from within the community.

The increasing pressure to obtain cash and the goods that it buys seems to be especially felt by the younger generations. Kai Elvio explained that while he never received money for helping out on the family farm as a youth, he feels it is only right to pay his sons for labor. He humorously illuminates:

Moto, ndaipóri va’ekue, kavaju. Ko’ágă modernacion ñánde forza. […] Ko’a imotoramo ha che ndachemoto ramo ndolegamo’āi la kuñá. Pëichapa. \([La kuñataï]\) ndoikosevéima kavaju ari. Ojepiropa. (personal communication, July 17, 2012) \(^\text{19}\)

In response to this growing cash economy, there has been an expected increase in labor outside the family farm, labor that can provide more consistent cash income. In Pindoyú, this is seen in predominantly two forms: emigration and work within the

\(^{18}\) I feel modernization has forced us to change.

\(^{19}\) There weren’t [motorcycles] back then, just horses. […] If one [suitor] has a motorcycle, and I don’t have a motorcycle, I’m not going to win over the woman. [The young women] don’t want to ride horseback anymore. It burns [the tush].
community for cash. The older generations’ perception on both of these rising phenomena is explored below.

**Migration: We stay put without our neighbors**

I conducted one interview during a sunny afternoon with Kai Marino and his son Carlos. We sat in shaded front yard, while the matriarch of the household was preparing lunch in in the kitchen in the back building. The two men had likely been laboring in their field since sunrise. Another man sat nearby, leaning his chair against the side of the house, remaining in a sliver of shade from the mid-day sun. He was a paid-day laborer, removing the hulls off of dry bean pods harvested earlier that morning. Though he was not introduced to me, I invited him to be part of the conversation. He shyly declined and continued working.

As we shared cold and minty *yerba maté* tea, Kai Marino and Carlos were in good spirits, excited to talk to me, joking and laughing light-heartedly while proudly explaining their place and its history. “How have the relationships between neighbors in Pindoyú changed in the last few years?” I asked. “Orova pa ore vecino kuera. Ore ropyta sin vecino” the son replied as he gestured to the house directly across the street, then proceeds to gesture at structures in various directions on the horizon: one, two, three. These houses stood abandoned and through Carlos’ mischievous grin, I could imagine the ghosts that still live in them: childhood friends who daily walked to school together, memories of past birthday parties, communal animal slaughtering and the resulting shared feasts.

20 “Our neighbors have all moved. We stay put without neighbors.”
Carlos himself has siblings who have left Pindoyú to work elsewhere. Most young adults have left Pindoyú. Of course, increasing emigration is not a unique story to Pindoyú, but a common theme to many rural places around the world.

Pindoyú residents convey a wide variety of attitudes about emigration. Many are proud that their family members have gained employment outside of Pindoyú and are happy to be receiving remittances. Some regret that their family had no choice but to separate so that loved ones could receive an education or make a living. Some conveyed a mix of both of these sentiments.

One family in Pindoyú is run by two intelligent, caring, vibrant grandparents raising several grandchildren: the offspring of children working in Spain, Buenos Aires, and Ciudad del Este. The household seems to always be bustling with visiting family members from Pindoyú and the nearby cities. The adults speak to one another in the Jopara that is typical of Pindoyú. However, whenever directly addressing the grandchildren, the grandparents speak in Spanish or a Spanish-intensive Jopara. The grandchildren’s participation in conversation and events indicates that they clearly understand the Guaraní-intensive Jopara that the adults use to communicate with one another; however, the grandchildren’s interruptions and interjections are in Spanish.

The Spanish directives and explanations do not flow naturally off the tongue of the grandparents: while their words are Spanish, the sentence structure and syntax clearly originates in Guaraní. The grandparents use Spanish, even though it does not come naturally to them, because they hope that their grandchildren will have a life other than that of a Paraguayan campesino. The Spanish replies of the children - whether at home or school - serve as a reminder that the children are only temporary residents of Pindoyú:
destined to move to their parents’ cities once they complete primary school or are old enough to work there themselves.

When these grandparents speak of emigration, they speak proudly of their children’s accomplishments and travels, pointing to framed diplomas and certificates on the wall. Their experience with emigration has been mainly positive.

Kai Juan, a father of two daughters who work in Buenos Aires, also has a positive outlook towards migration. He himself worked for a season in Buenos Aires one year ago: after returning to Pindoyú, he was able to buy cattle for the first time as well as buy additional land for the cattle and hire day laborers to help him ranch. Though he himself is well off, he understands that without starting financial capital, people in Pindoyú cannot survive on farming and ranching alone but need remittances sent from afar. “Que no tiene base y para tener base la mayorfía es para gente pudiente. Nada la chance la gente pobre. Ayuda no tiene nada.” (personal communication, July 15, 2012)

Other residents expressed a more regretful attitude towards migration: it was a necessary, but unwanted result of modernization. Kai Francisco, one of the participants with this perspective, emphasized repeatedly to me that his son, like other young people from Pindoyú, did not leave Pindoyú because he wanted to leave. His son is earning money in Buenos Aires with hopes of saving enough savings to pay for college or technical school one day:

Ore ndombostudiamo’ãi chupe ha ape orepy’akamo’ãi la estudio mensualidad. Péicha rupi oho ndopotái oho pero ohomante por no pyta osufri orendive. Oipota la cosa ha ndorekomo’ãi ape. […] Ore rovy’a

21 “The majority of people don’t have a foundation. To have a foundation is mainly for well-off people. The poor do not have a chance. They have no help.”

Kai Francisco accentuates that Pindoyú is a good place to live but that the younger generation has emigrate in order to find financial resources.

Ña Dora, a woman in her eighties, also communicates that she wishes that her sons didn’t have to work outside of Pindoyú. She lives alone since one of her sons passed away last year. Her two daughters live just down the street with their families: they come visit her daily, bringing meals and company. Still, Ña Dora wishes that her sons who have immigrated to the cities for work could live nearby too. She describes a time when the train came through town and people could sell their produce more easily. Now she says that there isn’t any paid work, or as she refers to it “men’s work”:

La kumba’e trabajo ndaipôri py. Pea la oiva. Pea che memby kuehe o’u va’ekue sapyîte Ciudad del Este o’ukuri ha upéva ndo’usevéî ko’ape porque ndaipôri trabajo. Ha chepota la o’u porque che cheaño ite. (Dora Encarnación Bernal de Perreira, personal communication, July 16, 2012)²³

While some Pindoyú residents prepare their children and grandchildren to increase their mobility to live and work outside of Pindoyú, others lament that their children and grandchildren cannot stay nearby. This divergence is attributable to some

²² “We can’t provide for his education here because we couldn’t sustain the monthly cost of it. For this reason, he left. He didn’t want to go, but he just had to so he didn’t stay and suffer with us. He wants the things that we don’t have here. […] We are happy in our little town. We don’t leave. Those who leave home leave because their situation is bad and they must. It isn’t that they want to leave. They leave to look for opportunities.”
²³ “There isn’t any work for men. My son visited from Ciudad del Este and said he didn’t want to come back anymore because there isn’t any work. And I want him to come here because I’m all alone.”

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degree to the financial benefit families have received from the emigration of their family members.

The families who have monetarily benefitted most from the emigration of family members, like the grandparents who speak to their grandchildren in Spanish, were the families who conveyed the most positive sentiments about their family’s situation. Other residents, like Kai Francisco and Ña Dora, are also proud of the ambition and accomplishments of their family members abroad, but they have not yet advanced their families’ material capital as a result of the emigration. Even with occasional remittances, these families are living day to day without the capacity to invest capital in future, despite remittances sent from other places. During interviews, these residents were more likely to convey the emigration of the younger generation as an inevitable reality - an unfortunate absolute of survival instead of a desired outcome for the next generation.

**Wage Laborers**

Another phenomenon related to the growing need for cash is work for temporary paid laborers within Pindoyú. While this topic was not explicitly addressed in my interview questions, interview participants frequently broached the concept. As mentioned above, a paid laborer was working for Kai Marino and Carlos during their interview. The men didn’t invite him to drink tea with us and he politely declined when I invited him to participate in the interview. Later, when I was leaving, I invited him to an interview at a time and place of his convenience and he again refused.

Kai Sebastian Verón a hardworking farmer of the older generation spoke to me in detail about wage laborers. He used the phrase with marks of disdain in his face and body
language. He is proud that he is a landowner and sees those people who have sold their land (often returning from the cities due to hardship there) as ill fated and shortsighted.


Both my interaction with the wage laborer at Kai Marino’s home as well as attitudes of Kai Sebastian, suggest that wage laborers are not well respected in Pindoyú.

Kai Angel is also from the older generation. Ña Esterlina, Kai Angel’s wife, is a retired schoolteacher and at least four of their daughters are schoolteachers nearby.

Before the regularity of emigration and wage laborers, currency entered rural Paraguayan communities through cash crops - depending on the many variables inherent in agricultural production, including the weather, market, etc. However, the only dependable source of cash in Paraguayan communities, both then and now, is that made as the local police officer, the nurse at the community health clinic, and schoolteachers.

With such a long-standing, dependable source of income, as well as through hard work, planning, and frugality, Kai Angel’s family is one of the more wealthy families in Pindoyú. The family is proud that they have done well, but they also aware that the changing economic, social, and environmental conditions have made it increasingly

24 There are people that move and there are people that stay here without any land. There are those that are comfortable, but the majority has to day labor. They go and work for a boss. For example, in the sugar cane fields. They go to the sugarcane fields; I see them walking by to work as day laborers in the sugarcane fields. That is how the people are. The ones that have land use others.
difficult for other families in the community. When I asked Kai Angel and Ña Esterlina what they do when they see someone in need, they responded that they help others by hiring them as day laborers (personal communication, July 25, 2012).

Superficially, Kai Angel and Ña Esterlina’s attitude towards temporary paid labor seems divergent from the attitude of Kai Sebastian. A way to assist those in need is certainly an optimistic manner to approach the phenomenon. However, it does not address the issue of increasing inequality in Pindoyú at the structural level.

The interviews indicate the predominant social norm that while leaving Pindoyú to find work is expected, but that when one is in Pindoyú, it is respectable in Pindoyú only to work one’s own land. To work as a paid laborer indicates one is short-sighted and unskilled. The negative attitude towards wage labor reveals that some deeply held collective values are being threatened by it. The encroachment of capitalist mode of production - through new markets for cash crop, incoming commodities, and migration - is not seen as threatening as wage laborers, or people owning the labor of others, within the community. Increasing inequality and the community social tensions that are fostered through increasing inequality, offer a likely explanation for why the practice of hiring and working as wage laborers is so contentious.

**Perception of the Younger Generation**

In Pindoyú, the enrollment for any given high school grade is only a fourth of the enrollment of any given elementary grade. After 6th grade, the children of the wealthiest families leave Pindoyú to study in more prestigious schools in the city. Teenagers from poorer families in Pindoyú do not have the luxury of high school; they are relied on to
work. Some young women leave Pindoyú to live with a distant family member in a city, work in the service industry, and send home remittances. Young men are likely to live and work temporarily between many occupations: seasonal agricultural work at home, agricultural work nearby Brazilian-owned estates, and construction or service-industry jobs in cities. Therefore, the young people still enrolled in school by 10th grade are typically from some of Pindoyú’s more affluent families.

In their auto-ethnography essays, the students did not specifically include the concepts of migration or wage labor into their essays, as the prompts did not specifically request such information. However, during reflection discussions with the students in 10th, 11th, and 12th grade, the students were continually drawn back to the topic.

The vocal students expressed the inevitability of their own emigration with both excitement and regret. They didn’t want to leave their families, friends, and loved ones, but viewed it as inevitable if they were going to utilize the education that they were acquiring. They were animated about the potential for future jobs, future higher education, and city life. (personal communication, August 2)

Derlis Guererro is a recent graduate of Pindoyú high school and one of the few of his generation to remain in Pindoyú in order to pursue agricultural endeavors. Derlis has left Pindoyú seasonally to pursue sales work. He offered many reasons why so many young people leave: there are few markets to sell produce; climate change has increased the risk of working in the fields; the cost of inputs has increased. He thought, however, that one reason was the most compelling:

Principalmente la pyahuva ndomba’aposevéi kokuepe. La primeramente ou desde la enseña desde de la escuela es como algo malo la trabajo de
la chacra. Se dice que ‘tiene que estudiar por no oka’api opya kokuepe’. (personal communication, August 7, 2012).

The mobility of global values, often purported through educational systems, threaten and marginalize local practices. However, according to the critical pedagogy of Freire, school can also be a place where students are taught to think critically about hegemonic ideas and oppositional theory is reflected upon, and even put into practice (Freire, 2000). Aldo, another young person who has been able to make a living in Pindoyú, proposes that the solution to learning how to both question and accept new ideas does indeed fall within the scope of secondary school:

Eso [mentalidad cerrada] es el principal fracaso y para solucionar ese fracaso, se tiene que implementar un programa de educación en el colegio mismo entonces se están enseñando para que le de vida a opiniones diferentes. Oñemongeta poráve haguä. Porque ndoñemongetái voi py. La ose, ohendu ha naporandái ha ndaintercambáiái heseve. Ha ndeacceptái avei lo peor. (personal communication, July 22, 2012).

Implications for Community Development

The currency which supplements the agricultural economy of Pindoyú, as a result of wage labor within the community or remittances from emigrated relatives, is the only way that families can stay afloat in the new economic reality. In some ways, this currency offers more stability than the communal system of the past. For example, if the corn

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25 Firstly, the younger generation does not want to work in the field. The idea is taught in school that it is something bad to work in the field. They say that ‘you have to study so that you don’t stay put hoeing the fields’.

26 This [close mindedness] is the main failure and in order to solve that failure, you have to implement education in the same school. Be taught to give some thought to different opinions in order to converse better. But people don’t have conversations from early on and the result is that people don’t listen, don’t ask questions, and you can’t change them. And the worst is that they don’t accept [new things].
doesn’t produce well in a season, families can use currency to buy cornmeal, white flour, potatoes, pasta, or rice. In other ways, the need for currency for survival forces families to participate in the capitalist mode of production and robs them of autonomy.

Families need cash to buy agricultural inputs, school supplies for children, electricity, and running water. As communities like Pindoyú increase their participation in the capitalist mode of production, they are able to increase their cash flow. But at what cost does this come to the social and cultural capital of these communities?

Some rural Paraguayans are benefitting from migration; they perceive the remittances to be worth the disruption of family life. Nevertheless, for those who view migration as a necessary but unwanted exercise, it is, in my opinion, the most vital task of the community development worker in rural Paraguay to assist the community in creating real options for young people to stay in Pindoyú.

As suggested by Derlis and Aldo, the school imparts not only skills and capacities, but values too. Development workers would greatly benefit the community by working alongside open-minded teachers in order to inspire students to envision and enact endeavors to increase and improve living and working conditions within Pindoyú. Global ideologies and capitalist advancements will continue to ensure that migration is an option for the younger generation. With careful development planning, and strategic participation and non-participation in capitalist markets, staying in places like Pindoyú can become a viable option as well.

In my experience as both a Peace Corps volunteer and researcher in Pindoyú, those who frequently work as paid laborers do not participate as frequently or as vocally in community institutions or community decision making. Though the positionality of a
community development worker, much like my own positionality, might make it difficult to access the voices of those who are most marginalized in Pindoyú, the contribution of those who work as wage-laborers is important so that those with the least resources can benefit from development projects.

Although it is outside the scope of this research, interviewing those who migrate seasonally or those who have emigrated quasi-permanently from Pindoyú, would provide a more complete and sophisticated discussion of migration as well as recommendations for how to initiate and foster projects to decrease the appeal and need of emigration.
The word ŋembyahyi is not considered a courteous adjective, and is rarely used in company. The word is generally reserved when talking about cats or dogs who are begging for food. To call someone ŋembyahyi is the worst insult to one’s relatives and neighbors. The fact that ŋembyahyi is an insult not to the hungry person, but to those nearest the hungry, exhibits the persistence of a moral obligation to share food with those in need.

Even with the best and most appropriate technology and methods, agriculture is still a risky and unpredictable way to make a living. In the past, it has been the informal systems of social capital: the minga and the jopói, reciprocal labor-exchange networks with neighbors that has fed and sheltered Pindoyú families when crops have failed. Pindoyú residents claim to no longer practice the minga or jopói, but the values of interdependence, collaboration, reciprocity, gift giving, mutuality, and redistribution of wealth still exist within the practices of both individuals and institutions today in spite of concurrent participation in the global, capitalist economy.

Women making sugar cane molasses

One day during July 2012, approximately ten to fifteen women gathered at a centrally located house to process sugarcane. Paraguayans grow sugarcane to provide forage to their cattle during the winter. The women were processing their excess cane plants into molasses. Families then use the molasses to sweeten hot drinks and desserts.

One woman owned a mechanism made from lumber, a wheel, and a crank, which squeezed the liquids out of the cane. The crank was physically laborious and performed
voluntarily in rotation, with the majority of the work completed by boys between the ages of eight and twelve, wanting to impress their mothers and one another with their strength. After enough liquids were squeezed out of the plants to fill a large, shallow pan, they were boiled over an open fire to thicken the liquid into molasses. Finally, the women poured the finished molasses into plastic liter bottles that once held soda. The women and their children gathered like this for two days: drinking tea, talking, and laughing.

During the process, I happened to overhear one woman express worry about the upcoming distribution of the molasses. She claimed to have brought more cane than the others, and desired to have enough molasses to sell some. After her comment, the other women did not engage her conversation; her interjection was publically ignored.

After all the cane was processed, the distribution process appeared to be informal, quick, and without much dialogue. The amount of molasses each woman received was based not upon the amount of cane she had brought or the number of hours she or her children had spent laboring. Bottles were firstly distributed equally among the women: two liters to each participant. Then, a brief and rapid discussion determined the distribution of the remaining bottles: women briefly spoke out to make a case for others based on financial strains. Without public opposition, the remaining bottles were given to three women: a widow, an unmarried older woman, and a woman who was experiencing financial hardship in the face of an unsupportive husband.

The women who were financially less secure, largely as a result of not having a partner for household income generation, were given the remaining bottles. This distribution of the molasses was rooted in the value of the collective good and mutual obligation. The public objection from the one member of the group indicates that the
values of the collective good and mutual obligation are not completely unchallenged by other values, but they were the values practiced in the group on this particular day in this particular process.

Additionally, the labor in the sugarcane processing was perceived and given as a free, abundant resource. The line between labor and play is often blurred in the Paraguayan campo, especially in collective projects where labor activities allow neighbors to gather and socialize. While labor is a discipline for the purpose of extraction of surplus value (Escobar, 2008, p. 81) in the capitalist mode of production; labor, play, and socialization are intertwined still in the sugarcane processing and distribution of the Pindoyú women’s committee.

Although the women and their families participate in the capitalist mode of production to provide for many of their daily needs, these women also practice a coexisting mode of production when implementing daily tasks such as processing sugarcane into molasses. The actions of the women’s committee exhibit collective values that are alternative to the values imposed by dominant, capitalist mode of production. As the women put these values into their practice as a committee, the productive forces (of using communal tools and practicing collaborative labor) and productive relations (benevolent distribution of wealth) are institutionalized, evidence of a reproductive mechanism of an alternative mode of production. As the women put these values into practice in front of their children, the children internalize these values as the collective values of the community, which can be understood as another reproductive mechanism of an alternative mode of production.
Participation in Community Institutions

While I listened to the perceptions of Pindoyú residents, I became increasingly interested in what compelled some people to participate in community institutions and what compelled others to abstain from such groups. As mentioned in the introduction, several community institutions exist in Pindoyú, including a committee connected to the Catholic church, a neighborhood committee that reports to local government, two women’s committees, and an agricultural committee. The agricultural committee is comprised of predominantly - though not exclusively - of men. The meeting I attended in July 2012 was attended by about 20 Pindoyú residents, including one woman who was one of the most vocal participants.

An interesting phenomenon emerged as I questioned community members about the committees: the efforts of the local agricultural committee and two women’s committees seemed to have polarizing effects in the community. Members claim that the groups’ efforts will surely be the saving grace for all of Pindoyú while nonmembers are sure that the groups’ efforts are in vain or simply foolish and misguided.

As with the agricultural committee and women’s committees, there are Pindoyú residents who choose not to participate in the neighborhood commission or in the church committee. However, the efforts of these groups are not nearly as controversial or polarizing. While not everyone agrees entirely on the process or projects of these groups, both the neighborhood commission and church committee are accepted as positive endeavors in the community. Unlike the other committees, Pindoyú residents do not define their identity with whether or not they choose to participate in the neighborhood commission and church committee.
Almost all interview participants had a positive anecdote to share about the activities of the neighborhood commission, whether or not they were a part of the group. Na Prisiliana describes the activities of the neighborhood commission: “Oõramo ha hasyva upéva ojejapo la actividad ha oñehunta plata y ome’ẽ chupe hospitalpe” (personal communication, July 15, 2012).

In a similar vein, all participants viewed the church committee positively whether or not they were a part of the group. Many, like Kai Celso, believe the church responds to a higher authority and is therefore exempt from the corruption of those groups with a political mission:

Ape la autoridad siempre la Iglesia católica. […] Porque muy católica la gente ha la pa’i hei’va, pya’e la gente va a traer; ojerpecta; creíbleve. Politico, aparte. Pero creíbleve la Iglesia católica (personal communication, July 19, 2012).

Both the neighborhood commission and the church committee were without reproach. On the other hand, the agricultural committee was extremely polarizing. Proponents of the agriculture committee offered ideological reasons, like lifting up the community and strength in numbers, as well as strategic reasons, such as getting attention and resources from outside organizations and people.

27 If someone is sick, an activity is put on in order to collect money and give it to the hospital.
28 Here, the authority has always been the Catholic Church. […] Because the people are very Catholic and whatever the priest says the people are quickly going to take to heart. They are going to respect it. It is more credible. Politics are different; the Catholic Church is more credible.
Those who are not members of the agricultural committee had plenty of criticisms. The following quotations are from three different farmers. They demonstrate the breadth of reasons for disapproval of the agricultural committee.

Che nadi’kuáái nadimē ite che ajea. Pero por lo menos, ofaltave organización técnico. Ojejapo la técnico he’i háicha. [...] La idea iporà iterei pero a veces ndojejapíri (personal communication).29


Ndaipóri progreso. Oñitenta omba’apo en comité pero ndakatúi oñeorganiza 100 por 100. 50 por 100 ramo oñemba’apo. Porque responsabilidad y transparencia ofalta. Primer lugar oï: ou la ayuda los miembros, los técnicos, los responsable, los que en cabeza, oguãhèmba en una vez la ayuda, oiporu por su beneficio personal o sino katu oheckavoí estrategia para su beneficio personal (personal communication).31

These criticisms are all blunt and delivered fervently - very unlike the covert and indirect manner in which I was used to hearing criticisms from Pindoyú residents. When I asked members of the agricultural committee why they believed some people chose not to work in the group, they cited the hard-work, dedication, and responsibility required

29 I don’t know because I’m not there. At the very least, the organizations are lacking technical expertise. The idea is great but sometimes it doesn’t happen.

30 They aren’t farmers. In the committee, there is very little land: that’s one thing. Another thing: there are many members that don’t want to work. Another thing: many of the associates are old. That just won’t work. They are going for no reason. They won’t use the tools. And they hoard the tools that they do have.

31 There isn’t any progress. There is the intention to work in committee but 100% cannot be organized. Maybe if 50% will work. But now it is lacking responsibility and transparency. In the first place, some members, some of those responsible, those at the end, those who have come once for help, use it for their personal benefit, or look for a way to get personal benefit.
were not appealing to some people. Kai Elvio provides an interesting theory divergence in values:

La independiente a veces omba'apo porque en cuando en la asociación ndaparejói gi. Alguno la asociaciónpe ndok’ese porque ndek’eramo parejo opy’ève la pyahu cause ose. Ndomba'apo guasu’i peguarã etero ojapo la beneficiorã (personal communication, July 17)."  

According to Kai Elvio, people who don’t work cooperatively have different values than those who do. Those who do not work cooperatively do not want the benefits of their work to be distributed amongst those who cannot work as efficiently. These are two different ways of conceptualizing what constitutes a morally just economy.

With plans in the works for a cooperatively owned and managed factory for producing manioc root into flour, the agricultural committee is the most radical form of social organizing in Pindoyú. The neighborhood and church groups raise money for people who need help to weather isolated events, without challenging the capitalist mode of production which gave rise to the situation. The agricultural committee is seeking to change the way that the means of production is owned and managed – to strengthen the alternative mode of production so that it can become a larger percentage of the productive forces in Pindoyú. Such a large endeavor and radical intention is, of course, more contentious - especially by those who perceive themselves as the benefactors of in the rise of increasing inequality under the capitalist means of production.

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32 Those who work independently are sometimes not in the associations because not everything is equal in an association. Sometimes people who work quickly, those who are young, leave. They don’t want to work a lot because everyone will get the benefits.
Implications for Community Development

As evident in the sugarcane processing, labor is often joyful, social, and somewhat impromptu in the Paraguayan campo. In the agrarian mode of production, peasants own their labor and it is an extension of their own creativity. Development workers can utilize the collective value of joyful labor by incorporating social activities for the entire family during all stages of projects.

Surface level projects, like those of the neighborhood and church committees, which aide community members who have gone through disasters or medical emergencies, are still needed and helpful. However, policies and projects with long term effects on productive forces, productive relations, or the laws of motion are the projects that will make the most impactful and radical change. These policies and projects are not born overnight, but take careful strategic planning and community buy-in.

The agricultural committee plans to construct a communally-owned manioc flour factory on communally-owned land; completely altering the way that the means of production are owned and managed in a capitalist system. However, this alternative ownership of the labor, land, tools, and knowledge needed for agricultural production has been practiced in Pindoyú historically. These values, practiced in the time of the minga and jopói, have remained important within the collective memory of Pindoyú residents - despite increasing participation in the capitalist system. The agricultural committee is implementing these old values in a new way. Reframing the contentious manioc flour factory project, to appeal to that collective memory could possibly assist the agricultural committee to obtain more widespread buy-in.
CHAPTER 8
CONCLUSION

Pindoyú’s unique political, economic, social, and cultural history has direct influence on the collective values practiced today. These collective values are often in contrast to the values imposed upon the community by increasing participation in the global, capitalist mode of production. Pindoyú residents maintain an agrarian mode of production and promote other alternative modes of production through participation in community institutions. Strategic community development planning can assist these individuals and institutions in assuring that these alternative modes of production remain viable, and in turn, Pindoyú’s unique, local values are upheld.

Fundamental questions of this research centered around the changes in people’s relationship with the land, relationship with each other, and the degree to which individuals and local institutions upheld or challenged these changes. Individual and household interviews, auto-ethnographies with 2nd through 12th graders, and participant observation were conducted and analyzed in order to illuminate theories in the articulation of modes of production, the moral economy, and Marxist ecology.

Participants utilized strikingly divergent rhetoric to describe the same solutions to environmental degradation. The division coincides with political party lines, which is not surprising given Paraguay’s turbulent political history. However even more interestingly, the divergence also aligns with participation in the local agricultural committee. Therefore, sustainable community development should focus on the common ground
between groups: the actual agricultural practices, and not the dividing language surrounding them.

At the same time, both conservatives and liberals have begun to utilize agrochemicals and GMO seeds within their fields over the last 10 years, allowing capitalist forces of production into their subsistence farming practice. Environmentalists strongly oppose the use of these technologies because of their harmful effects to the environment and human health. Residents understand there are drawbacks to the utilization of these new technologies, but they do not envision a viable alternative to GM seeds and agrochemicals and are often making decisions based on immediate needs.

Development workers can help guide rural Paraguayans towards farming practices that will meet their immediate needs for subsistence as well as protect their environment and way of life. As many rural Paraguayans prefer experiential learning, introducing comparative demonstration plots - one managing the land traditionally and the other through GM seeds and agrochemicals - would allow residents to see and comprehend various agricultural practices side by side.

Additionally, people’s relationship with one another is changing in Pindoyú. Nearly all Pindoyú residents must supplement their subsistence farming practice with cash income, either through family members’ remittances, seasonal migration, or wage labor within the community. The distain portrayed in residents’ rhetoric when commenting on the practice of wage labor reveals a resistance to the encroachment of the capitalist mode of production and the inequality which results. The interviews suggest that it is morally acceptable to work within the capitalist system as an emigrant, but work within Pindoyú should be on one’s own land.
The women’s committee demonstrated the reproductive mechanisms of an alternative mode of production promoting alternative values through a two-day molasses-processing project. The women each brought raw materials and tools to a centrally located house and proceeded to take collaboratively labor while chattering and laughing. After the molasses had been processed, each woman received two bottles with a remaining three bottles quickly distributed to the women that the group saw as most vulnerable in society, namely those without supportive financial partners. The institutionalization of these alternative productive relations and forces into the women’s committee, as well as the presence of the women’s children, exhibit reproductive mechanisms and the women’s determination to ensure their values are practiced in the future.

While Pindoyú residents were united in the support for the efforts of the neighborhood and church committee, residents were polarized in their views of the efforts of the agricultural committee, which is in the midst of organizing for projects to support the communal-ownership of land, tools, labor, and knowledge. The agricultural committee is fundamentally advocating for an alternative mode of production, one that is rooted in the collective memory of values practiced in Pindoyú’s history through the minga and jopói. The surrounding controversy could be assuaged if the projects are reframed as reinvigorations of these communal practices that everyone remembers so fondly. The existing dialectical tension surrounding the agricultural committee foreshadows an exciting but unsure future for Pindoyú.

Listening to the voices and existing practices, community development workers can better incorporate collective values and existing local institutions into projects and
policies. Like Pindoyú, many communities in rural Paraguay are finding the appropriate balance between participation in the global, capitalist economy and self-determination through projects supporting, promoting, and creating alternative modes of production rooted in historical values.
REFERENCES


APPENDICES
### Oral Interview Guide

<table>
<thead>
<tr>
<th>Question</th>
<th>Translation</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most importantly, I want to hear about the changes you have perceived in Pindoyú during your life. You are the experts.</td>
<td>Lo más importante, quiero oír hablar de los cambios que ha percibido en Pindoyú durante tu vida. Ustedes son los expertos.</td>
<td>Aikuaase la cambio oikovane reikovaje Pindoyúpe. Pende ha’e la experto kuera.</td>
</tr>
<tr>
<td>What are the strengths and assets that exist in Pindoyú?</td>
<td>¿Cuáles son las fortalezas y bienes que existen en la comunidad?</td>
<td>Mba’epa la iporâveva o la imbareteveva oîva Pindoyúpe?</td>
</tr>
<tr>
<td>What are the challenges currently facing Pindoyú?</td>
<td>¿Cuáles son los retos que actualmente enfrenta la comunidad?</td>
<td>Mba’e problema Pindoyú oenfrenta ko’arape?</td>
</tr>
<tr>
<td>How do people of Pindoyú use the land and natural resources now compared to before?</td>
<td>¿Cómo la gente de Pindoyú usan la tierra y los recursos naturales de manera diferente ahora comparando a antes?</td>
<td>Mba’echipa la gente ape ohecha la yyvypeporure ha recursos naturales kuera rehe comparando yma ha ko’anga?</td>
</tr>
<tr>
<td>Is there a difference in the types of crops planted? What is the role of rotation and chemicals?</td>
<td>¿Hay alguna diferencia en los tipos de cultivos sembrados? ¿Y del uso de la rotación y los productos químicos?</td>
<td>Oîpa otra clase de temity ipyahuva noñenoty’i va’ekue? Ha mba’echapa ojeporu la qimico kuera? Ha ojejapopa rotacio de cultivo?</td>
</tr>
<tr>
<td>Are more family members leaving Pindoyú for work? Seasonally or permanently? Does your family rely heavily on the remittances to survive?</td>
<td>¿Hay más miembros de la familia dejando Pindoyu para el trabajo? Temporal o permanente? ¿Las familias depende mucho de las remesas para sobrevivir?</td>
<td>Mba’e repa ko’anga hetave miembros de familia oheja icomunidad oheka haguâ trabajo otro tetâme o ciudadpe? Ha la familiapa odepende de la plata oguerukava rehe tera oguereko otro ingreso hogapype?</td>
</tr>
<tr>
<td>How have relationships with other people in the community of Pindoyú changed?</td>
<td>¿Cómo son las relaciones con otras personas en la comunidad de Pindoyú han cambiado?</td>
<td>Ocambiapa la relacion Pindoyúpe entre vecino ojoayudapa ohechamo oikotève?</td>
</tr>
<tr>
<td>How has trade of goods, money, and services changed?</td>
<td>¿Cómo era antes, ha cambiado el comercio de las necesidades básicas, el dinero, y los servicios?</td>
<td>Mba’e cha anteve la gente ojapo okubri haguâ la inesidades kuera ógapye porque sa’i va’ekue la almacén omba’e jogua haguâ?</td>
</tr>
<tr>
<td>Who has power or a voice in the decision making in Pindoyû? How has the power and decision making changed over time?</td>
<td>¿Quién tiene el autoridad en la toma de decisiones en Pindoyû? ¿Cómo ha sido el poder y la toma de decisiones con el tiempo?</td>
<td>Mavapa la odesidiva ko komunidade ojejapo hagûa la kosa? anteve mavapa la omandava ha mba’ eichapa ojedesidi la kosa?</td>
</tr>
<tr>
<td>What are some of the ways you, your family, or community groups can resist the negative impact of the modern economy?</td>
<td>¿Cuáles son algunas de las maneras en que usted solo, su familia, o grupos de la comunidad pueden resistir el impacto negativo de la economía del mundo moderno?</td>
<td>Mba’eichapa pejapo pende familia kuerandive terà comunidadhaicha pe afronta haguâ la crisi la cambio oî pyahuva?</td>
</tr>
<tr>
<td>What is the role of different organizations/institutions/groups in reshaping the local economy in response to these changing conditions?</td>
<td>¿Cuál es la función de las diferentes organizaciones, instituciones y grupos en la reestructuración de la economía local en respuesta a estas condiciones cambiantes?</td>
<td>Mba’eichapa omba’apo la organizacion kuera omombareteve haguâ ha oaguanta haguâ la crisis oîva?</td>
</tr>
<tr>
<td>Are these organizations/institutions/groups actually meeting the expressed needs from the community? What are their strengths and weakness? What do they need to function better?</td>
<td>¿Las organizaciones, instituciones y grupos actualmente cuenta con las necesidades expresadas por parte de la comunidad para sobresalir? ¿Cuáles son sus fortalezas y debilidades? ¿Que les faltan para funcionar mejor?</td>
<td>Ko’avapa ha’e la organizacion o grupo oikoteveva la comunida ojeprosesa haguâ? Mba’eicha rupi la ikanxy ha mba’ epa la oikoteveva imbarete haguâ la organizacion oho haguâ adelante?</td>
</tr>
<tr>
<td>Describe to me your image of the perfect Pindoyû.</td>
<td>Describir a mí la imagen de la Pindoyû perfecto.</td>
<td>Remonbè’u cheve mba’ eichapa reñe’ imagina la Pindoyû perfecto mba’ epa oguerekova’erâ?</td>
</tr>
</tbody>
</table>
Level: 2-3 Grade

Objective: To discover and appreciate local knowledge. To reflect upon empirical knowledge in order to apply it to decision making in the future.

Conduct an Interview
In an interview with an elder of your family or a neighbor, ask them the following questions.

Question 1: In Pindoyú, how do farmers use the earth and soil differently than they did 20-40 years ago?
   How have the tools changed?
   How have the types of crops planted changed?
   How has the way that farmers labor, in groups and individually, changed?

Question 2: How do the natural resources in Pindoyú differ now compared to 20-40 years ago?
   How has the soil changed?
   How has the air changed?
   How have the streams and aquifers changed?
   How has the climate changed?

Draw What You Have Learned

During class, draw a picture of life in the past in Pindoyú on the left side of a page. On the right side, draw a picture of life now in Pindoyú.
Nivel: 2° y 3° grado

Objetivo: Descubrir y apreciar en el conocimiento local. Reflexionar sobre conocimiento empírico con el fin de aplicarla a la toma de decisiones en el futuro.

Hacer la entrevista
En una entrevista con un mayor de tu familia o un vecino, pida a las siguientes preguntas.

Pregunta 1: En Pindoyú, ¿cómo los agricultores utilizan la tierra y el suelo de manera diferente de lo que se hizo 20 a 40 años atrás?
   ¿Cómo han cambiado las herramientas?
   ¿Cómo los tipos de cultivos sembrados han cambiado?
   ¿Cómo ha cambiado la forma en que el trabajo a los agricultores, en grupos o individualmente?

Pregunta 2: ¿Cómo los recursos naturales en Pindoyú difieren ahora de 20 a 40 años atrás?
   ¿Cómo ha cambiado el suelo?
   ¿Cómo ha cambiado el aire?
   ¿Cómo ha cambiado los arroyos y el acuífero?
   ¿Cómo ha cambiado el clima?

Dibujar lo que aprendiste
Durante la clase, hace un dibujo de la vida antes en Pindoyú por la izquierda de una pagina. Por el derecho de la pagina, hace un dibjo de la vida ahora en Pindoyú.
Level: 4-5 Grade

Objective: To discover and appreciate local knowledge. To reflect upon empirical knowledge in order to apply it to decision making in the future.

Conduct an Interview
In an interview with an elder of your family or a neighbor, ask them the following questions.

Question 1: In Pindoyú, how do farmers use the earth and soil differently than they did 20-40 years ago?
  How have the tools changed?
  How have the types of crops planted changed?
  How has the way that farmers labor, in groups and individually, changed?

Question 2: How do the natural resources in Pindoyú differ now compared to 20-40 years ago?
  How has the soil changed?
  How has the air changed?
  How has the streams and aquifers changed?
  How has the climate changed?

Write an Essay

Part 1: Who did you interview? Describe the relationship between you and the interviewee and how long they have lived in Pindoyú.

Part 2: Summarize the empirical knowledge you discovered during the interview.

Part 3: Imagine that you live in Pindoyú 20-40 years ago, What do you like about the life back then? What do you not like about the life back then?
**Nivel: 4° y 5° grado**

**Objetivo**: Descubrir y apreciar en el conocimiento local. Reflexionar sobre conocimiento empírico con el fin de aplicarla a la toma de decisiones en el futuro.

**Hacer la entrevista**
En una entrevista con un mayor de tu familia o un vecino, pida a las siguientes preguntas.

**Pregunta 1**: En Pindoyú, ¿cómo los agricultores utilizan la tierra y el suelo de manera diferente de lo que se hizo 20 a 40 años atrás?
- ¿Cómo han cambiado las herramientas?
- ¿Cómo los tipos de cultivos sembrados han cambiado?
- ¿Cómo ha cambiado la forma en que el trabajo a los agricultores, en grupos o individualmente?

**Pregunta 2**: ¿Cómo los recursos naturales en Pindoyú difieren ahora de 20 a 40 años atrás?
- ¿Cómo ha cambiado el suelo?
- ¿Cómo ha cambiado el aire?
- ¿Cómo ha cambiado los arroyos y el acuífero?
- ¿Cómo ha cambiado el clima?

**Escribir un ensayo**

**Parte 1**: ¿A quién le entreviste? Describe la relación entre tu y el entrevistado y por cuanto tiempo el entrevistado ha vivido en Pindoyú.

**Parte 2**: Resumir lo que dijo el entrevistado como un cuento de él o ella.

**Parte 3**: Imagina que vivías en Pindoyú 20 a 40 años atrás,
- ¿Cuáles son las cosas que te gustaba de la vida antes?
- ¿Cuáles son las cosas que no te gustaba de la vida antes?
Level: 6 – 12 grades

Objective: Discover and appreciate local knowledge. Reflect on empirical knowledge in order to apply it to decision making for the future.

Conduct an Interview
In an interview with an older family or a neighbor, ask the following questions. For each change that the interviewee describes, make sure you know what the interviewee also believed to have caused this change occurred. The most important thing is to discover the stories of the interviewee.

Question 1: In Pindoyú, how farmers use the land and soil differently than it was 20-40 years ago?
   - Have the tools used changed?
   - Have the types of crops grown changed?
   - Has the way farmers work changed: in groups or individually?

Question 2: How do natural resources differ in Pindoyú now compared to 20-40 years ago?
   - How is the soil different?
   - How is the air different?
   - How are the streams and the aquifer different?
   - How has the climate changed?

Question 3: How do you differ now the knowledge and interest of people in Pindoyú in the environment and natural resources 20-40 years ago?
   - In the knowledge of medicinal plants?
   - In the practice of fishing and hunting birds and other animals?
   - What about traditional skills and crafts such as weaving and others?

Question 4: What did people in Pindoyú do 20-40 years ago to cover their basic needs within the home because there were not many stores?
   - What things were necessary to buy?
   - Where did they obtain everything to complete the household’s needs?

Write an Essay
Part 1: Who do you interview? Describe the relationship between you and the interviewee and how long the respondent has lived in Pindoyú.

Part 2: Summarize empirical knowledge discovered during the interview

Part 3: Your reflection and interpretation through the following questions:
   - Why do you think that some of these changes took place?
   - What do you think are the positive aspects of these changes?
   - What do you think are the negative aspects of these changes?
   - What do you think these changes mean for the future of Pindoyú?
   - How can act to resist the negative changes and strengthen positive changes?
Nivel: 6° a 9° grado y 1° a 3° curso

Objetivo: Descubrir y apreciar en el conocimiento local. Reflexionar sobre conocimiento empírico con el fin de aplicarla a la toma de decisiones en el futuro.

Hacer la entrevista

En una entrevista con un mayor de tu familia o un vecino, pida a las siguientes preguntas. Para cada cambio de que el entrevistado describe, asegúrese de conocer también lo que el entrevistado cree que ha provocado este cambio ocurrido. Lo más importante es descubrir los cuentos del entrevistado.

Pregunta 1: En Pindoyú, ¿cómo los agricultores utilizan la tierra y el suelo de manera diferente de lo que se hizo 20 a 40 años atrás?
  ¿Cómo han cambiado las herramientas?
  ¿Cómo los tipos de cultivos sembrados han cambiado?
  ¿Cómo ha cambiado la forma en que el trabajo a los agricultores, en grupos o individualmente?

Pregunta 2: ¿Cómo los recursos naturales en Pindoyú difieren ahora de 20 a 40 años atrás?
  ¿Cómo ha cambiado el suelo?
  ¿Cómo ha cambiado el aire?
  ¿Cómo ha cambiado los arroyos y el acuífero?
  ¿Cómo ha cambiado el clima?

Pregunta 3: ¿Cómo difieren ahora el conocimiento e interés de la gente en Pindoyú en el medio ambiente y los recursos naturales de 20 a 40 años atrás?
  ¿En el conocimiento de las planta medicinales
  ¿En el conocimiento de la pesca y la caza de aves entre otros animales?
  ¿Las habilidades tradicionales y artesanales como el tejido entre otros?

Pregunta 4: ¿Cómo hacia las personas en Pindoyú hace 20 a 40 años atrás para cubrir sus necesidades básicas dentro del hogar porque no había muchos comercios para comprar?
  ¿Cómo que cosas lo que eran necesario comprar?
  ¿De dónde obtenían todo para completar la canasta familiar?

Escribir un ensayo

Parte 1: ¿A quién le entreviste? Describe la relación entre tú y el entrevistado y por cuanto tiempo el entrevistado ha vivido en Pindoyú.

Parte 2: Resumir el conocimiento empírico que descubriste durante la entrevista

Parte 3: Tu reflexión e interpretación a través de las preguntas siguientes:
  ¿Por qué crees que algunos de estos cambios se llevó a cabo?
  ¿Qué crees que son los aspectos positivos de estos cambios?
  ¿Qué crees que son los aspectos negativos de estos cambios?
  ¿Qué crees que significan estos cambios para el futuro de Pindoyú?
  ¿Cómo podes actuar para resistir a los cambios negativos y fortalecer los cambios positivos?