Understanding Development as a Process: Capabilities and aspiration in agricultural communities of Peru

Mary Michelle Vigen
May 5, 2010
Professional Paper
Candidate for Master of Public Policy, 2010
Humphrey Institute of Public Policy, University of Minnesota

Abstract:
Amartya Sen’s Capability Approach challenges development scholars and practitioners to define development as the expansion of the ability of individuals and communities to determine their own futures. One of the central aspects of the Capability Approach is human agency, which recognizes the process by which people and communities develop themselves. To better understand development and how humans achieve it, I embarked on an exploratory research trip throughout Andean agricultural communities of Peru. My observations supported a notion of development as something constantly occurring, an organic process that underlies and supports the existing standard of living of the individuals and communities I visited. This paper challenges the Western concept of development that is often seen as a program or intervention. If development is a process that people cultivate and own for themselves, rather than something given to them, development practitioners must re-evaluate whether their work is enhancing or possibly disrupting these existing development processes.

This paper seeks to explore and affirm development as a process in order to better understand what development is and how it can be built and enhanced. Such a notion of development begs practitioners to view development as something initiated, shaped, and directed by the capabilities and aspirations of the people whose wellbeing it is intended to affect. By focusing on enhancing central capabilities and aspirations, development practitioners can work synergistically with and build upon existing capabilities and processes of development.
# Table of Contents

1. **INTRODUCTION**  
   A. **AMARTYA SEN’S CAPABILITY APPROACH**  
      Development as the Expansion of Capabilities  
      Local Concepts of Wellbeing  
   B. **JANE JACOBS AND THE NATURE OF DEVELOPMENT**  
      Qualitative Development: Differentiation  
      Quantitative Development: Expansion  
      Creative Development: Human Labor  
   C. **DEVELOPMENT AS A PROCESS, NOT A PROGRAM**  
   D. **RESEARCH METHODS**  
      Studying in Peru  
      Locations of Data Collection  
      Data Collection Methods

2. **OBSERVING DEVELOPMENT AS A PROCESS IN PERU**  
   A. **LOCAL CONCEPTIONS OF WELLBEING**  
      Pachamama and the Peruvian Cosmovision  
      Maintaining Wellbeing: the Importance of Rituals  
   B. **FUNCTIONINGS AND ABILITIES OF AN ANDEAN AGRICULTURAL COMMUNITY**  
      Yanachaka, Community of Vicos  
      Shelter and Clothing  
      Family and Community  
      Health and Nutrition  
      Education  
      Agriculture  
   C. **THE “WHAT” AND “HOW” OF DEVELOPMENT**  
      Creative Labor and Natural Endowments  
      Qualitative Development: Cultivating Biodiversity  
      Quantitative Development: The Challenge in Andean Peru  
   D. **HUMAN ASPIRATION, THE SPIRIT OF DEVELOPMENT**  
      Pachamama  
      Community and Social Relationships

3. **PRACTICING “DEVELOPMENT AS A PROCESS”**  
   A. **DEVELOPMENT CHALLENGES IN PERU**  
   B. **DEVELOPMENT EFFORTS THAT SUPPORT EXISTING PROCESSES OF DEVELOPMENT**  
      The Capability Approach to Development  
      Witnessing Development Efforts in Peru  
      Aspiration: The Generator of Development  
   C. **COACHING AS A DEVELOPMENT METHOD**  
      Coaching Development  
      Research Extension Agents  
      Participatory Action Research and Capacity Building

4. **CONCLUSION**
Understanding Development as a Process:
A display of capabilities and aspiration in agricultural communities of Peru

Amartya Sen’s Capability Approach challenges development scholars and practitioners to define development as the expansion of the ability of individuals and communities to determine their own futures. The Capability Approach argues that development is the freedom and ability to choose a life deemed valuable, to aspire and imagine, and to be confident and capable to act outside of the known in order to achieve something for themselves (Sen 1973; Sen 1985b; Sen 1985c; Sen 1985d; Sen 1993a; Sen 1999a; Alkire 2005). One of the central aspects of the capability approach is human agency, which recognizes the process by which people and communities develop themselves.

To better understand how people develop, I embarked on an exploratory research trip throughout Peru, particularly in the Andean agricultural communities. The Andean agricultural communities of Peru offered important insight into what development is and how it is brought about. My observational data revealed culturally-defined concepts of wellbeing, existing capabilities and complex processes of development, and local concepts and norms that worked to enhance and bolster these processes of development. These communities demonstrated that development is an ongoing natural and organic process of individuals and communities expanding and securing their ability to achieve a life they deem valuable. This paper will illustrate how development occurs in these communities, demonstrate how individuals and communities are the agents of their own development, and show how their capabilities contribute to their concept of wellbeing. I will challenge the Western concept of development that is often seen as a program or intervention and attempt to treat development as a process that already exists and has existed.

1 This research trip was partly directed by the Center for Social Wellbeing and conducted as an independent study through the University of Minnesota Humphrey Institute for Public Policy and a field study for the University of Minnesota Sustainable Agricultural Systems program. The University of Minnesota Learning Abroad Center also granted the project a small scholarship to help with research-related expenses.
throughout the history of the communities I visited. If development is a process that people cultivate and own for their selves, rather than something given to them, development efforts could focus on enhancing these existing development processes.

This paper will illustrate and affirm development as a process in order to better understand what development is and how it can be built and enhanced. Section 1 introduces concepts from Amartya Sen and Jane Jacobs that help conceptualize what development is, where it comes from, and what it looks like. I will also discuss the nature of my research in Peru, describing my research methods including where and how I collected my data. Section 2 presents the data I collected throughout Peru, particularly in the Ancash Department, to illustrate development as a process and expansion of capabilities. Examples from throughout Peru show how and from where development arises. Finally, Section 3 will describe challenges or threats to these existing processes of development and the importance of development methods that recognize development as a process. I will propose a type of development method, and ways in which it is already being applied, as a possible way to enhance existing processes of development.
1. Introduction

A. Amartya Sen’s Capability Approach

Development as the Expansion of Capabilities

Sen defines development as the freedom of individuals to live a life they deem valuable (Sen 1973; Sen 1985b; Sen 1985c; Sen 1985d; Sen 1993a; Sen 1999a; Sen 1999b; Alkire 2002; Sen 2003; Alkire 2005; Robeyns 2005). This focus on capabilities re-conceptualizes narrower views of development (such as economic growth, increased GDP, or increased income) as means to expand the substantive freedoms people have. For example, the Capability Approach distinguishes between a commodity and how that commodity enhances one’s capability to achieve a standard of living. To further explain this capability approach to development, Sen uses two terms: capabilities and functionings. He distinguishes capabilities from functionings:

A functioning is an achievement, whereas a capability is the ability to achieve. Functionings are, in a sense, more directly related to living conditions, since they are different aspects of living conditions. Capabilities, in contrast, are notions of freedom, in the positive sense: what real opportunities you have regarding the life you may lead. (Sen 1985c, 48)

What we do and who we are (functionings), and what we are capable or free to do (capabilities) determines our ability to access a life that we deem valuable. Our functionings and capabilities make up our life and determine our ability to live well by our own standards (Sen 1973; 1985c).
Therefore, the achievement of development is defined by the freedom and ability for individuals and communities to determine a future they deem valuable (Sen 1985c; Sen 1985d; Sen 1993a; Gasper 1997; Alkire 2002; Fukada-Parr 2003; Sen 2003; Alkire 2005; Robeyns 2005; Braithwaite 2008).

Local Concepts of Wellbeing

Sen’s Capability Approach relies on the question of what “a life deemed valuable” might be. Sen has spent an enormous amount of time exploring the concept of wellbeing (Sen 1985c; Sen 1985d; Sen 1999a; Sen 2003). Understanding wellbeing is imperative to understanding what development is and to what end it ought to serve.

Wellbeing “is the assessment of the quality of the life the person himself leads that forms the exercise of evaluation of the living standard” (Sen 1985c). The significance of Sen’s concept of wellbeing is that it is self-defined by the individual and community. 3 “Success” in achieving development is therefore based on the concept of wellbeing of the individual and community involved. Wellbeing encompasses several aspects, such as agency achievement (the ability to act on one’s volition), personal wellbeing which often includes health and political empowerment, and the standard of living (the narrowest aspect of wellbeing) which is the ability for an individual to be free to pursue and achieve a life they deem valuable (Sen 1985c). 4

---

3 Appadurai, A. (2004). The Capacity to Aspire: Culture and the Terms of Recognition. Culture and Public Action. V. R. a. M. Walton. Palo Alto, CA, Stanford University Press. Even though wellbeing is defined by the individual, it must be understood within the context of an individual’s environment or community, as social norms, expectations, and opportunities on the community level influence what individuals conceive as possible and valuable.

4 Farrell, J. (2010). Operative Environmental Values of a College Culture. Northfield, MN, Saint Olaf College. Actually interpreting another’s idea of wellbeing is an entirely different challenge. Some attention must be paid as to whether the individual or community’s functionings actually do match their values. Jim Farrell, a professor of American History and Culture, discusses the difference between operative and expressed values. “Expressed values are the ones we say; operative values are the ones we do. As it happens, the operative values of our lives are not always the same as our expressed values”. For example, someone might express verbally that they value having a healthy environment in which to raise their family. Yet, due to a lack of information and options, they may purchase goods for their house made with toxic materials. If someone did not know their expressed values and attempted to identify that person’s values through their behavior (or operations), they might suspect that they really did not care that much about the health of their family's environment. Likewise, what a person expresses as valuable and important to them in terms of wellbeing may not match what they demonstrate is important to them. For example, while many farming techniques value the health of the land...
B. Jane Jacobs and the Nature of Development

The question then remains as to how people and communities develop. Jane Jacobs, a writer and researcher on the importance of people and place in economic development, has taken a special look at how development occurs. Her study of development in *The Nature of Economies* provides a framework for understanding and identifying the most basic concepts and processes of development. She draws from examples in nature to understand how human economies began and develop. She explores several aspects of ecological and economic growth, and cites three processes that are part of development: (1) qualitative development, or differentiation emerging from generalities, (2) quantitative development, or expansion, and (3) the combining of human effort and creativity with natural resources.

Jane Jacobs proposes that development is something natural, instinctive, and ongoing. Such a concept of development can also be understood in the context of ecology, geography, agriculture, socio-political movements, human development, and almost every other field where some form of progression occurs. Each community, human, ecological, or other, has certain processes of development. The ways in which individuals and communities develop are continually in a process of repairing and adapting. These processes can also be fragile and vulnerable to disruptions; they may be outdated or stagnant and therefore become inefficient or ineffective ways to develop and live. Yet, these processes are the foundation of the local (and global) economies today. Each community at some point in time demonstrated the most basic characteristics of Jacobs’s development: combining human talent with existing natural resources; altering, changing, and expanding their natural endowments towards their self-determined ends.
Qualitative Development: Differentiation

At the most basic level, Jacobs describes development as “differentiation emerging from generality” (Jacobs 2000). This definition focuses on what someone or something *is* versus what someone or something *has* and making it different. Development is working to make something different. A common example is in how people develop new capacities and identities; they change and become something different. In other words, development is qualitative.5

Accompanying this definition, Jacobs asserts that development depends on co-development. She argues against a linear concept of development; “development can’t be usefully thought of as a ‘line,’ or even a collection of open-ended lines. It operates as a web of interdependent co-developments” (Jacobs 2000). For example, the economist William Easterly describes an example where education cannot occur unless there are teachers and a school available, the family can afford to excuse children from work to attend, and the children are well fed and attentive to learn (Easterly 2006). These three parts must co-develop together, in order to achieve education in a community or a child’s life.

Quantitative Development: Expansion

Quantitative development refers to being able to make more of something out of a given amount of resources than before. Jacobs calls this process ‘expansion’, and she describes it as:

...capturing and using transient energy. The more different means a system processes for recapturing, using, and passing around energy before its discharge from the system, the larger are the cumulative consequences of the energy it receives. (Jacobs 2000, 47)

A clear ecological example of this is comparing a desert to a rainforest. The sun is the main energy source for ecological processes. In a desert, the sun hits the earth, but almost all of its light

5 Fromm, E. (1976). To Have or To Be? New York, Continuum. Qualitative development is vital especially in the realm of human development and has other philosophical ties to wellbeing.
is immediately reflected back. The desert remains arid; holding very few life forms that rely on the small places and ways the desert does capture light (warmth, water oases that capture the sun through plants, etc.). In contrast, a rainforest captures the sunlight on its trees’ tallest branches and leaves. The energy and nutrients from the tree are part of a greater system that passes that energy on in various forms, resulting in the lush undergrowth and foliage of a rainforest.

An economic example in the United States is in the difference between the corporate and local economy. A local company exports wood from its forests. The profits from that sale are spent at the local grocery store, farmer’s market, school fundraiser, a local accountant, the local plumber, and local taxes. In a corporate-dominated economy, a local company exports wood from its forests. The profits are sent to a national corporate chain, that hires an accountant in a city far away, who buys its inputs from overseas, and pays national taxes. In the first scenario, those dollars generate jobs and income for a community, which allows them to expand with new profits, population, and opportunities. In the second scenario, any benefits from that first transaction are sent away, like the sun bouncing off the desert.

Any way the community is able to reuse its own resources contributes to its ability to multiply its own local resources and wealth and expand its economic opportunities.

**Creative Development: Human Labor**

Each of these types of development that Jacobs identifies hints at the origin of development; where it begins for an individual and community. In terms of what goes on when resources enter a community, Jacobs describes a basic and ever-occurring process:

...Human effort is combined with imports. Also combined with imports is equipment—some imported and some not. And the most important ingredient qualitatively—although not always qualitatively—is human capital. That means skills, information, and experience—*cultivated human potentialities*—resulting from investments made by the public, by parents,
by employers, and by individuals themselves. (Jacobs 2000, 56, my emphasis)

Jacobs identifies human capital and human potentiality as the process by which imports (or inputs) are “stretched” and expanded, altered and differentiated. In other words, development is the ability of humans to mix their creativity, ideas, and imagination with a locally supplied or imported resource, to create something that further supports this process.

C. Development as a Process, not a Program

A common Western concept of development is that development is something people should have or get. Often this results in seeing development as a program or intervention to be bestowed upon those less fortunate. Development, however, is not something that you can “flip on” with a button or switch. As countries continue to receive aid and program after program, but remain in their cycle of poverty, it becomes clear that something needs to change.

Amartya Sen’s emphasis on capabilities and Jane Jacobs’ description of development show that development is not a program. Rather, development is a process. It is naturally found, ever occurring, and constantly changing. William Easterly, a prominent development economist, has more recently described these kinds of development processes as “homegrown” (Easterly 2006). Easterly contends that “the bulk of development success in [underdeveloped countries] comes from self-reliant, exploratory efforts, and the borrowing of ideas, institutions, and technologies from the West when it suits [these countries] to do so” (Easterly 2006). This statement describes the

---

6 Development as a program was first introduced as President Truman’s Marshall Plan: the aid to reconstruct European countries after World War II. The focus of this program and its variations has been economic growth, as indicated by Gross Domestic Product (GDP). The Marshall Plan did successfully reconstruct major portions of European physical and economic infrastructure, and the success of this program led policymakers to believe development was something mechanical. The belief has thus been that development can be achieved by formulating a plan and then implementing the program. Structural adjustment, conditional loans, rapid market reform, and other sweeping system changes all fall into this category of development. One of the main difficulties with this programmatic view of development is that GDP is often not equally distributed, and it does not account for the way increased economic growth actually affects the standard of living. This disconnect is the starting point of Amartya Sen’s work on capabilities, which reveal the true value (or lack of value) of a particular development metric based on the true increased ability for a person to achieve a life deemed valuable.
development processes in other countries and communities that exist relatively independently of Western intervention, the free market system, and other paradigms that are considered requisite of any development. Some of the communities I visited in Peru demonstrated this.

Amartya Sen’s Capability Approach offers a lens that brings light as to why interviewees and others I interacted with expressed a certain level of wellbeing and happiness with their lives. Individuals and communities had established and secured certain capabilities that were vital to their survival and stability, and that contributed toward their wellbeing. They were clearly the agents of their own change, many having no interaction with outside interventionist development programs. Jane Jacobs provides valuable insight to the origins and sources of the development I witnessed in Peru. By exploring the origins of development and processes of growth, expansion, and diversification, Jacobs brings light as to how these individuals and communities in Peru have achieved their standard of living.

In the following survey of my data, it becomes clearer that development is a process of expanding capabilities towards an individual concept of wellbeing, and that these processes have existed for centuries. How does one reconcile this concept of development as a process with that of development programs? How might programs enhance these processes, if at all? Furthermore, what can these communities tell us about what development is, where it comes from, and how it sustains itself?

D. Research Methods

Studying in Peru

To better understand development, as conceptualized by Sen’s Capability Approach and informed by the work of Jane Jacobs, I conducted research in traditional agricultural communities throughout Peru.
Peru offers a rich environment to explore the concept of development. Peru ranks 43rd highest GDP (PPP) in the world\(^7\) and 78th in the Human Development Index (World Bank 2008, Central Intelligence Agency, 2009 #51; United Nations Development Programme 2009). It is a predominately indigenous country, 45% Amerindian (indigenous) and 37% mestizo (half Amerindian and half white), white 15%, black, Japanese, Chinese, and other 3% (Central Intelligence Agency 2009). Outside urban centers, the native language, Quechua (in its regional dialects), is spoken as or more frequently than Spanish (both are official languages) (Central Intelligence Agency 2009).

The indigenous population that remains in the rural areas, such as in the villages of Carhuaz, Vicos, Pisac, and Ollantaytambo, displayed a mix of contemporary culture with traditional Peruvian culture, but offered a rich environment for exploring agricultural communities. While modern chemical fertilizers had been introduced and were used in several communities I visited, traditional agricultural methods were still heavily practiced. I was especially interested in exploring these traditional organic methods passed down through several generations, and understanding the nature of development up to this point in time, including the landscapes of terracing and intricate irrigation systems, biodiversity of crops (potatoes in particular), and longevity of these practices. I hoped to learn about unique struggles of traditional agricultural communities, and about how these people had honed out different solutions, and what this says about development.

**Locations of Data Collection**

The majority of my data collection took place in the Ancash Department\(^8\), just north of Huaraz in the high Andean town of Vicos and outlying village of Yanachaka. While based in Carhuaz on a small hostel farm for three weeks, I visited a family farm in Yanachaka. The families living in Yanachaka primarily practiced subsistence farming and used traditional methods and tools for

---

\(^7\) Based on GDP with purchasing power parity.

\(^8\) Departments in Peru are administrative districts, similar to provinces.
farming. Several visits to this farm community, and to one farm in particular, the Colonia family farm, along with interviews from other community members who are familiar with and know about farming practices in the locality, resulted in a series of qualitative data.

Other observational data was collected throughout Peru, such as on the small hostel farm in Carhuaz run by a single Peruvian woman, Martha9, who came from Lima to commit herself to a low-ecological-impact lifestyle. I also travelled south to Uros, the floating islands, and Isla Taquile on Lake Titicaca, where I witnessed the effect and opportunity of ecotourism projects. I also spent a month living in Ollantaytambo, a small village in the Sacred Valley, the area lying northwest of Cusco. In Ollantaytambo I observed the affects of tourism, the transient life of artisan groups, and the importance of their cosmovision (a term I will explain in further detail later in this paper). In this particular region, there were several development projects and programs in progress. Visiting with community members about these efforts provided a perspective on development strategies, including their positive and negative consequences. Each of these locations offered rich and crucial lessons in what development is to the Peruvians I met, and to me as a student and potential practitioner.

Data Collection Methods

My perspective as I entered into conversations with local community members was shaped by my interest in Sen’s Capability Approach and Jane Jacobs’s concept of development. I sought both quantitative and qualitative data through my interviews and research. First, I collected data on the prices and types of crops being sold at market. I also gathered information on biodiversity (number and types of potatoes), farming methods, number of fields, how much land, number of crops, important dates and times of the year, through basic questions.10

---

9 All names of interviewees have been changed.
10 Vigen, M. (2010). Personal Ethnography - Qualitative Data from Peru, University of Minnesota - Humphrey Institute of Public Policy. Detailed data is included in my Personal Ethnography, an unpublished paper documenting my observations and experiences.
The second type of questions I asked focused on the how’s and why’s of the lives of community members. From these questions, I gleaned responses on what retains a young population in rural areas, why the son of the farm family might not choose to study agriculture in school, and how these communities maintain an incredibly rich biodiversity of crops, particularly tubers and potatoes.

The majority of my data was collected through my own informal interactions with people. I visited with individuals on farms and agricultural communities, such as Carhuaz and Vicos. To have a more participatory observation perspective, I immersed myself in the communities I was in, by living or camping in the yards of family-owned hostels, eating at residential restaurants, and shopping in the local markets. Depending on where I was, these interactions contributed to my understanding of traditional agricultural communities (Carhuaz, Pisac, and Ollantaytambo) or the effects of urbanism on growing towns and cities (Urumbamba, Lima, Arequipa, Puno, and Cusco). One unique opportunity I had was spending a day harvesting oca, a small tuber, with a family from Yanachaka, a small agricultural village. Through conversations with community members, participation in rituals and holiday celebrations, and immersion in the daily life of the community, I discovered that development, as defined by Sen and Jacobs, incorporated and relied on various cultural, social, economic, and ecological systems.

I witnessed and recorded several testimonials that described a variety of freedoms and capabilities that directly affected their concept of a “good life” or wellbeing. I was able to draw out what were the dynamic processes of development that result in robust local markets, biodiversity, and a life closely connected to those things deemed valuable. There were a few people whose stories and testimonials especially contributed to my understanding of development. Their stories, summarized below, provide some context for concepts usually understood as abstract or theoretical.
Throughout my research, I organized my data in terms of (1) indications of local conceptions of wellbeing, (2) what capabilities they had developed and secured in order to achieve their concept of wellbeing, and finally (3) how and from where these capabilities arose. Throughout the next sections, I will draw upon my observations to help illustrate why a local concept of wellbeing is important in a discussion of development; how certain functionings and capabilities work to help achieve that concept of wellbeing; and explore the origins of these capabilities.

2. Observing Development as a Process in Peru

A. Local Conceptions of Wellbeing

Pachamama and the Peruvian Cosmovision

Being on the ground and relying on the offerings of each community through which I travelled, I had the opportunity to investigate what wellbeing meant to the people around me. I encountered several individuals, who acknowledged that they were thought of as poor, but they did not feel poor; they were really able to lead a life that they valued in many respects. Apart from the consistently cited list of good health, fitness, education, and social dignity, several of the members of rural communities also mentioned their relationship with Pachamama, which literally translates as “earth mother.”

Pachamama is a central component of their cosmovision. Cosmovision encompasses the communities’ culture and religion, together. A young man from Pisac, Carlos, with whom I met and visited during their annual festival, spoke proudly about the beauty of his home and ventured that he was probably luckier than I living in the United States. He explained how the mountains and the Riobamba River that flowed through his town gave him peace and inspired him to be good to the land and his community. He words showed his deep conviction that living in a beautiful land was part his ‘life deemed valuable.’
Likewise, Martha expressed that the more she relied on Pachamama the better her life was, and the better she treated Pachamama. Having lived in Lima until her early twenties, she said that the main reason she wanted to move was to have this kind of relationship with “her provider”. She wanted to treat the earth better and she found that Pachamama has provided for all of her building structures, forests, water systems, garden, and now, her business. Yet, the richness she described as she showed me around her land had not come cheaply. For nearly a decade, she lived as a single mother, harassed for being a mestizo in an indigenous town and for being a single woman. She and her son lived essentially without any income, surviving from harvest to harvest and loan to loan. In retrospect, Martha saw it as completely worth it.

Pedro, a young man traveling through Ollantaytambo selling instruments and jewelry, told me his story of working in the financial industry in Lima. He had started a family, and one day when the markets went very badly, he lost a great portion of his wealth, and his wife took his only daughter and left him. He told me:

Money can’t make you happy. The only thing that can make you happy is your freedom. It is much better to have less but be free to be yourself and live a real life than to have lots of money. That’s why I sold everything and decided to do what I am doing today.

As I spent the next few weeks with him, I began to understand that his quest for his concept of wellbeing, like Martha’s, was not without sacrifice. I witnessed his poor living conditions and declining health. He had developed a cough and was seeing a doctor periodically. He had difficult resting because he was living in a single room in a larger complex, which was very cold at night. Despite these difficulties, this man shared his meals with me and other artisans who were passing through the town. At one point, when he made a large sale in jewelry, he went to a restaurant and had over a dozen eggs scrambled together with meat, which he brought out to the group of artisans to share. I had helped him sell that piece of jewelry and he thanked me so profusely. Apparently, if he had gone a few more days without a sale he would not have been able to pay the small rent on
his room. He continued to emphasize that his freedom to live a life without the distraction of money and false wealth. He wanted to live a life where his friends were genuine, where his work was wrought by his own hands, and where he could live surrounded by the beauty of Pachamama. He and Martha were both willing to make some sacrifices in their quest to achieve this concept of wellbeing.

These life stories illustrate Sen’s concept of the Standard of Living. Sen emphasizes that a person’s wellbeing or standard of living is related to their ability to achieve a life they deem valuable; and a life deemed valuable is often complex and nuanced with case-specific trade-offs and time- or location-sensitive opportunities (Sen 1973; Sen 1985c; Sen 1985d; Sen 1993a; Sen 1999a). In the cases of Martha and Pedro, the ability to be in relationship with Pachamama is a need that is just as legitimate as the ability to eat. Their stories illustrate the complexity of a person's concept of wellbeing and what development may mean to them. It is important to acknowledge these nuanced views of wellbeing when trying to understand development and what others deem as valuable in their lives. Individuals and communities define and seek their own concept of wellbeing, and their happiness is related to this ability to determine and seek this concept by whatever means and sacrifices are reasonable to them.

Maintaining Wellbeing: the Importance of Rituals

In Peru, wellbeing is defined in a variety of ways. In the urban areas of Lima and Arequipa, wellbeing might include having certain modes of mobility or appearance that relates to the culture of modern urban life. In the rural areas, wellbeing is more noticeably tied to an individual’s relationship to the land and includes some conception of an earth mother and provider.

The importance of one’s relationship with the land has strong significance for these subsistence communities. Their entire livelihoods are dependent on the health of their local environment and their ability to derive from it their nutrients, income, and satisfaction. Maintaining this connection is psychologically, physically, and economically vital to individuals. A
commonly held tradition to maintain this connection is that a portion of everything is given back to the earth. Similar to the ritual of Native Americans releasing some tobacco to the ground before sharing a Peace Pipe, the Peruvians throughout both urban and rural areas share a bottle of beer or chicha (a corn-based alcohol drink) and pour a small portion out onto the ground either before the first glass is served or as the last glass is poured.

Other rituals, such as dances and celebrations before and after planting and harvesting communicate the joyful and grateful attitudes of the farmers and community members. Dances show the important interplay between husband and wife in the fields, how each contributes to the planting and harvesting and how their work supports one another. For example, the dance shows the planting process. The man leads with motions showing how he breaks open the land with a hoe, and the woman follows planting seeds behind him. This division of labor reflects the role of the women to examine and determine what seeds are planted. In many respects, the women are the seed keepers of the family and community. Additionally, some dances show the women leaving the fields and gathering, cooking together, and then providing a meal and chicha for the men after harvesting is over.

Participating in these rituals and traditions, both in dance and in reality in the fields, makes up a large part of the cultural richness, activity, and value in community life. Pachamama provides the canvas on which they are able to paint and live out this life, in their fields, in their homes, and in their communities.

Several of the basic functionings and capabilities of rural life in Peru reveal the centrality of Pachamama and their cosmovision in the lives and wellbeing of individuals and communities. While basic needs such as food, clothing, shelter, health, and education are standard needs, it is important to keep in mind the other functionings that are crucial to individuals and communities in achieving a standard of living.
B. Functionings and Capabilities of an Andean Agricultural Community

Yanachaka, Community of Vicos

High up in the Cordillera Blanca (the highest range of the Andes in Peru), Vicos is a village of nearly 4,000 people, including over 650 families. Vicos, despite being small and remote, has garnered special attention due to Cornell University’s development programs in the 1950’s where anthropologists and development scholars sought to change the perception of inequality between *hacienda* or estate masters and the indigenous serfs, and to introduce modern mechanical and chemical agricultural techniques to move Vicos farmers into the 20th century.11 This interaction in the 1950’s has left its mark on Vicos in the form of their independence from their hacienda, a democratic form of local government, and depleted soil fertility from the chemical fertilizer experiments.12

Further up the mountains is a small community called Yanachaka, which means “black bridge” in Quechua. This community is composed of a single road that services a small cluster of homes making up the village. Behind the village rise several hills which become mountains further up the road, all covered in a quilt-like pattern of small fields. The community of Yanachaka provides a unique place to explore development. Despite their proximity to Vicos, the Cornell program seemed to have little if any impact on the community. Community members, young and old, did not seem to know anything about it when asked if they remembered it. Apart from the Cornell project further down the mountain, the only other outside development effort or

---

11 van Dyke, W. (1963). So That Men Are Free. CBS. United States, McGraw-Hill Films. The development program was primarily concerned with the perception of inequality, purporting that each man deserved to feel equal to every other man. However, the irony is that the news report portrays the anthropologists and scholars as heroes to these communities.

12 Cornell University. (2005). "Vicos: A Virtual Tour." Retrieved 2010 January 23, from http://instruct1.cit.cornell.edu/courses/vicosperu/vicos-site/index.htm. Cornell was able to help Vicosíños increase their potato yields and achieve independence from their *hacienda* on September 1, 1962. While the agricultural methods they introduced have backfired in the form of sub-optimal fertility of the land, the attitude of self-worth and affirmation from their independence from the *hacienda* system have lived on strongly in a democratic and consensus-building form of local government.
interaction in Yanachaka has been the recently installed “cultural tourism” program that hopes to bring some hikers off the beaten path and into their homes for a small fee.\textsuperscript{13}

The Yanachaka community is primarily comprised of farmers practicing subsistence farming, employing farming techniques that are variations of ancient practices. This community would be considered very poor by any Western standard, but they demonstrate a wide range of functionings and capabilities that directly contribute to their sense of wellbeing.

**Shelter and Clothing**

In Yanachaka, most families live in homes constructed with a mix of dirt, wood, and maybe some cement, with a tin roof. Homes provide shelter for a sleeping area and for storing harvested crops or other plants. They have indoor ovens with small chimneys for transferring smoke outdoors. This village also has electricity. One of the families, the Colonia family, also has small pens for guinea pigs and rabbits. They also have some small piglets, ducks, and a cement fish pen.

The men wear worn but durable work pants and white cotton shirts. The women have a wide array of dresses, primarily wool and cotton. Several layers shield them from the harsh sun and the cold of the high altitude. Both the men and women wear hats almost constantly to shade their faces from the harsh sun and wind.

I observed that having proper dress and a well-constructed home are necessary for interacting in public and for inviting people to your home, both integral parts of living in an agricultural community. Attending markets is crucial for selling and trading goods, maintaining social networks and relationships with others in and outside of the community. Trade relationships are built on trust, which are built through rituals in trade. For example, when you first buy from someone, they will often throw in “a little extra,” akin to the “baker’s dozen” in the United States. The “little extra” shows that the seller wants to be more than fair and appreciates the business. If

\textsuperscript{13}Vigen, M. (2010). Personal Ethnography - Qualitative Data from Peru, University of Minnesota - Humphrey Institute of Public Policy. It is such a new program and its impact on agriculture is unknown.
this "little extra" is reciprocated, it shows a mutual appreciation and acceptance of each other's concept of fairness. Mingling in markets is crucial in a lifestyle that relies so heavily on community connections.

**Family and Community**

In these communities, having family and community support has a very real social and economic value. The labor-intensity of subsistence farming requires having extra help available during harvest time. In Vicos, the community governance helps organize the *minka* or collective labor help for the town and surrounding villages. Traditionally, *minka* describes a collective group of farmers (the men) and their families (wives and children) that work on each of the others' farm in turn for help on their farm.¹⁴

*Minka* brings all members of the family to the field for harvesting. While women and children may take less physically strenuous tasks, they tend to work alongside the men through the entire process. In harvesting tubers, for example, the men will generally break the ground with a hoe tool while the women collect tubers and even haul the bags off the fields. This division of gender roles is also expressed in the dances that imitate the harvest. Women have additional responsibilities with *minka*, as they will prepare a meal for everyone working. Thus, for agreeing to work another family's field, a farmer and his family will receive compensation in the form of food and, most likely, beer or some form of alcoholic drink, and reciprocal labor on their farm.¹⁵

While ownership of the land and family assets is generally under the husband's control, the women have a very specific knowledge of the produce itself. Men may negotiate prices with larger buyers and traders, but the women generally manage the stands in the local market. This role places women in the center of the community's social infrastructure, where they can discuss amongst other women the different characteristics of the potatoes. In the market, women also

---

¹⁴ Intrinsic in this is the value of a young man marrying and raising a family to support his work on his farm, if he or his family has land for him to work.

¹⁵ While I refer to farms as "the family's", ownership tends to be passed down through male members of the family.
have some control over the price and goods for which they trade, basing their decisions on price norms, but also on reciprocal relationships and other social factors.

Having a healthy, skilled, and capable family is important not only for the labor requirements of the farm and for providing the expected labor support (such as the meals served during minka), but also for collecting the necessary information on one's produce and making the important produce and information trades in the community.

**Health and Nutrition**

While I observed that some communities had lost agricultural productivity due to erosion, climate change, water shortages, or soil infertility; the communities surrounding Vicos and Yanachaka still supported a strong (though more recently, declining) diversity and nutritional base from their fields. Peruvians are known for their wide variety of potatoes and tubers. Amongst the hundreds of potatoes a single family cultivates are potatoes that provide important vitamins and minerals, including iodine in the dark purple “meat” of certain potatoes. Meals traditionally consist of a variety of baked potatoes and some form of corn.

Meat is consumed infrequently and usually in small amounts. Livestock (mostly chicken and beef) consume a natural grazing diet of grass or grain. While meat is much more rarely consumed, it is likely healthier, better tasting, and more nutritional than the industrially-raised livestock of the United States and other Western countries (Pollan 2007).16

Those in agricultural livelihoods also exhibit incredible fitness. Working in fields with the most basic tools is incredibly exhausting as I experienced harvesting oca. Several of the Colonia fields were located miles up the mountain, which is no small hike at high altitudes. Often, I would meet women and children walking up steep roads with easily over sixty pounds of wood or grass or

---

16 Pollan, M. (2007). *Omnivore's Dilemma*. New York, Penguin Books. This type of meat diet is both a capability and a deprivation. Meat is less frequently available than in countries with large industrial-meat producers, but it is prepared to taste well with other abundant staples (rice, potatoes, and other vegetables), and it is healthier. Beef grown in industrial countries is often corn-fed, which leads to the use of heavy drugs to maintain the digestive systems of the cattle. The quality of corn-fed beef also has human health implications, making meat a contributing factor to heart problems.
other goods on their backs. For some, a simple trip into town is a few miles hike down a thousand feet and back up again. It was very clear that their bodies had become accustomed to the altitude and physical labor of their livelihoods, as they suffered hardly at all compared to my own exhaustion. The outdoor labor, however, meant constant exposure to the sun (which is particularly harsh in high altitudes) and wind. Very young children developed small calluses on their cheeks from the wind and heat. Finally, farm labor, which requires covering large distances by foot and long periods of repetitive motion, can lead to an increased risk for orthopedic and other physical injuries.

Another capability that plays a strong role in achieving wellbeing is the ability to use medicinal plants to supplement their health. Each plant I encountered in Peru had several names, its scientific name, its local name (usually a Quechan descriptor) and a name that describes its use. These plants, in a few cases, would offer nutritional value, but more often, they were natural remedies for illness and disease.\textsuperscript{17}

With such a labor-intensive livelihood, health is particularly important. A broken leg or debilitating pain would be devastating, in terms of maintaining fields scattered miles around and at various altitudes. Just the hike to and from fields requires a certain level of fitness. The ability of individuals and communities to secure health and wellness in multiple ways allows them to rely greatly on their agricultural livelihoods. As will be described further below, the ability to do such labor-intensive farming is precisely what produces the biodiversity that bolsters their nutrition in the first place. Health is one of the primary capabilities necessary for the labor- and creativity-intensive farming that is possibly the central capability and source of development for the community.

\textsuperscript{17} Medical care in these small towns and villages is often by a local healer, someone well-versed in natural remedies. Those of the younger generation are seeking care increasingly in urban medical centers. Shifting to this type of health care will require greater income and increased access to medical supplies that often must be provided for by patients.
Education

In terms of education, Yanachaka has an elementary school comprised of only five students, in grades kindergarten through 6th grade. There is also a secondary school in Yanachaka, where students can begin to specialize in something that interests them. Students in Yanachaka can also attend school in Vicos, which has a larger elementary and secondary school. Leo Colonia, a young man in his mid-twenties, was enrolled in this school for computers. It seemed strange that he was not attending school for agriculture, considering that he wanted to stay in Vicos and his family had a fairly successful and expansive farming operation. However, Leo was already well versed in the agricultural practices of his family, and he would continue to learn as he continued to work with his family. In fact, at the time, he was, in addition to attending school, developing his own backyard fishing operation and working to finish clearing a new field in four-weeks time for his family. He knew in great detail about the specific conditions and nuances of his family’s land, fields, seeds, produce, and other factors. Rather than going to school to learn much of what he had learned in the fields, he was working to learn about how to use computers to help log and categorize the diversity of potato varieties and farming practices of his family lands.

Much of the education in these communities is through family interaction and learning-by-doing. Children are seen herding animals and helping in the fields. They learn at a young age how to interpret and understand different things in their environment purely by engaging in farming practices at a young age. The people of rural Peru have a system of education through experience that effectively teaches its rising generation the “tricks of the trade.” Even more intense than an apprenticeship, children are raised with their lives scheduled around the agricultural responsibilities. They are brought up in constant awareness of the different ways the earth affects their lives and the risk in and careful cultivation required for an agricultural lifestyle.

This “passing down” of knowledge, both individual and communal, is crucial to the sustainability and survival of these communities. Similarly, other modes of knowledge transfer are
important. Some of the ways in which farmers improve their crops and increase biodiversity is by sharing seeds and planting advice with other farmers. Women at the markets can share their own information about certain potatoes, such as which was are good for cooking certain ways, which ones taste good, and which ones have a coloring that might indicate certain nutritional contents. Leo explained that his family would normally take a couple trips across some of the larger mountains to communities further away in order to obtain new varieties of potatoes. He indicated that the last couple years have been more difficult financially, limiting their ability to trade information and produce across regions.

Specialized local knowledge has particular value in these communities. Each farmer knows that his fields are unique and he knows them better than any other farmer. Such knowledge specialization is also noted in Incan historical accounts. When the Incans saw the successful biodiversity of the crops in certain regions, they would take seeds to new lands to try to transplant and spread the rich crops. When moving seeds, however, they also transplanted farmers who carried the knowledge of the seeds and the techniques to cultivate it (Ad Hoc Panel of the Advisory Committee on Technology Innovation and Board on Science and Technology for International Development of the National Research Council 1989).

That said, while these communities can attest to an incredible record of sustainable living and using traditional methods to farm, they are being asked to derive more and more from the

---

18 Ad Hoc Panel of the Advisory Committee on Technology Innovation and Board on Science and Technology for International Development of the National Research Council (1989). Lost Crops of the Incas: Little-Known Plants of the Andes with Promise for Worldwide Cultivation. Washington, DC, National Academy Press. In the rural areas, communities have built, sustained, and developed themselves and their community members for centuries. Anthropological evidence shows highly developed and abundant communities in the first centuries A.D., such as the highly developed Moche culture, which had highly developed irrigation systems and cultural arts and religion. The National Research Council Report dates Andean terracing and irrigation to possibly 1,000 B.C. Needless to say, agriculture and the associated ancient technologies have been in place and employed for possibly centuries. Vigen, M. (2010). Personal Ethnography - Qualitative Data from Peru, University of Minnesota - Humphrey Institute of Public Policy. When I asked a woman on Isla Taquile of Lake Titicaca how many generations her family had lived on the island, she shrugged her shoulders and said, “Cinco mil? Si.” Which translates into “Five thousand [years]? Yes.” In the community of Vicos, Leo, said that his family has always lived on and farmed the land in their community. There is little or no recollection as to how long they have been living, surviving, and growing. Their ability to continue to derive livelihoods from their ancestral lands today is a testament to how sustainable their way of living and farming truly are.
land. Communities continue to reshape the land to fit their needs, like the land Leo was clearing for his family. Chemical fertilizer bags hang along fences and windows, and each town has its own store with both hybrid seeds and fertilizers. Even in Carhuaz, some of the larger plots of land are planted in rows to fit a small tractor. As different sources of knowledge continually enter these communities, some are trying these more contemporary methods of farming.

Knowledge is an important and powerful aspect of these agricultural communities. Knowing what is worth trying and testing is also important, as experimentation involves the risk of failure. The Vicosiños who participated in the Cornell Project in the 1950’s experienced increased yields the first few years after they adopted the new seed varieties and chemical fertilizers, but today they are struggling to rebuild the fertility of their land. Some of the knowledge and ideas from the farms in Yanachaka, who were not affected by the Cornell Project, no longer apply because their soil and land has changed. Yet, Vicos is building entirely new sets of knowledge about how to rehabilitate and restore health to soil and crops. Building a strong community pool of knowledge will remain increasingly important in order to continually improve their farming and the lives of individuals in the community.

Agriculture

Agriculture is possibly the most complex and important capability in these high Andean communities. Subsistence farming is often defined by what it is not, such as profit producing or time efficient. However, within the context of Sen’s concept of wellbeing, subsistence farming also means the ability to maintain one’s autonomy to choose what one grows, to grow one’s food, and to determine one’s nutritional intake. Depending on the community, it means the ability to barter and sell a product knowledgeably and therefore build trust and relationships with community members. Farming is a meaningful livelihood for those who believe it brings them closer to Pachamama. More importantly, it provides for basic functionings, food and income. However, as simple as it sounds, the agricultural life of the high Andes is its own development challenge.
Agriculture in the Vicos area is deeply affected by high altitude (8,000-13,000+ feet above sea level) and a cool and dry climate. The region in which Vicos lies is primarily made up of steep mountains and hillsides. Because of this terrain, fields are divided into small plots resting on gently sloping terraces. Farming is done on a plot-by-plot basis because each plot has its own climate, or microclimate (microclima). On the sides of mountains, the climate of each small plot (typically much smaller than even half an acre) is determined by a mixture of its altitude, the side of the mountain or hill it rests on, what is grown around it, and its proximity to glacial streams or irrigation channels, and various other factors. No modern tilling or harvesting machinery could operate efficiently in such terrain.

In such an environment, certain strategies are imperative. In order to achieve a certain level of production, farmers are required to farm several - as many as a dozen - different plots of land. The equatorial location and dual-seasons of the region (a rainy season and a dry season) allows farming throughout the year, if and only if farmers work several different crops. In order to do this, the multiple plots of fields must be distributed over a wide range of terrain. The Colonia family has over a dozen plots of land on a variety of altitudes, including one far above 13,000 feet (where they cultivate some of the oldest native potatoes ever known).

No plot of land is the same. The microclimate of each small plot of land plays a crucial role in planning and designing new and increasing biodiversity. When discussing their different fields, farmers demonstrated incredibly detailed knowledge about their lands, indicating which direction they face, whether they are on the side of a valley that receives more or less precipitation, the quality of soil, the surrounding vegetation, etc.

Having access to a variety of environments to grow crops is both a challenge and an opportunity. Farmers must be able to adapt their methods to fit their different plots of land. Each plot will develop its own set of problems and have its own set of advantages. If farmers are able to micromanage each of their plots of land, however, they can improve their biodiversity, which is the
foundation of their income, nutrition, and other opportunities and capabilities. The agricultural system of Andean Peru is the central capability, providing education, livelihood, nutrition, social interaction, and political agency. Not only do these communities demonstrate how certain capabilities directly affect their standard of living, but also the way in which they derive and secure these capabilities from their environment provides insight as to the origins of their development.

C. The “What” and “How” of Development

To identify such complex and intricate systems of development, differentiation, and expansion in a community that has commonly been labeled underdeveloped and poor by material standards, begs the question of how they have achieved their standard of living. Where does development come from? From what did they create such a highly capable and rich lifestyle? And what inspired them?

Jane Jacob’s descriptions of development in *The Nature of Economies*, provides a helpful framework for understanding and recognizing the basic aspects of development: (1) differentiation emerging from generalities, (2) expansion, and (3) the combining of human effort and creativity with natural resources.

Observing the community members of Yanachaka revealed clear examples of the combination of human effort with local natural resources, which Jacobs pointed out as the initial source of differentiation and the process of expansion, the basic components of development. The human aspect of this equation was especially poignant considering how these communities have altered the difficult terrain and complex environments in which they cultivate their crops. Agriculture, at its core, is an activity of experimentation and creative labor. A closer look at these functionings show that they are, in fact, the foundations of development in the high Andes of Peru.
Creative Labor and Natural Endowments

Each and every day, humans in the high Andes have applied their physical effort, intellect, and imagination to their land. Through tilling and sowing, harvesting, hybridizing, and experimenting, they have reshaped and molded the land to make agriculture possible. They have combined attributes of potato varieties that withstood insects, disease, conditions, and the discerning palate of the human mouth. At its most basic level, the history of agriculture in the high Andes demonstrates that development arises from the application of human effort and initiative to naturally provided resources. Jacobs identifies human capital and human potentiality as the process by which imports (or inputs) are “stretched” and expanded, altered and differentiated. In other words, development is the ability of humans to mix their creativity, ideas, and imagination with a locally supplied or imported resource, to create something that further supports this process.

In Yanachaka, I witnessed what I began to call “creative labor.” Creative labor is more than assembly line work; it is the kind of labor that also applies human intelligence, discernment, emotion, and perseverance. These are the human potentialities that Jacobs speaks of from which development is derived.

Creative labor is displayed in the infrastructure and agriculture management. Throughout the centuries, these communities have altered and molded their environments to suit their purposes. Terracing covers the sides of mountains where no Western farmer would imagine he or she could grow anything. Terraces, even as narrow as two feet, line the sides of the most arid regions of Peru, including in Colca Canyon, the second deepest canyon in the world. In central Peru, terracing and using small plots of land help preserve precious mountainsides from erosion. Without these mountainside plots of land, the arable land would be reduced considerably.

Irrigation channels that date back to the early hundreds wind in a seemingly careless way through fields and town centers. The origins of these channels reside high up in the mountains at
glacial lakes that rely on the high snowcapped peaks of the Andes. These channels supply water during the dry season, making them one of the most valuable systems in their agriculture. One unique aspect of the irrigation channels throughout Peru is that they run in seemingly random directions to the uninformed viewer. They wind around homes and plots of land, veering left and right or splitting into several sections in what appears to be a random junction.

Martha, a woman who runs a hostel at her home in Carhuaz explained that water is not merely a “natural resource” in the Quechua cosmovision. Water is a living element that has a spirit and will of its own. It cannot be restricted to perfectly straight channels or into paths perfectly efficient for human use. In these communities, and within this cosmovision, efficiency is not when it meets human needs as best as possible, efficiency is where nature functions as best as possible and the community receives what it needs. Irrigation channels are governed by local community political bodies, which determine a schedule of when farmers can access the water. Farmers are responsible for turning on their water and turning it off, usually by setting a lever open or close up above their fields.

People in Peru do not “lose track” of where the water goes, as is apparent in Martha’s system that uses dark water (primarily from toilets) to fertilize calla lilies, which purifies the water before it returns to the river; and recycles gray water (from showers, baths, and sinks) through her garden and native tree plantation. They have a keen sense of where rivers flow, who lives along those rivers, who uses the water and in what manner, and how irrigation use should be regulated to ensure that each gets his or her share.

In these innovative ways, the Peruvians (primarily those from centuries ago) have worked intensively to shape their land so they might derive a livelihood from it. In its initial form, they were incapable of growing any crops on the steep mountainsides. By altering their land, they have expanded their capabilities. They not only have applied labor and physical mastery over the land, but also imagination and foresight over great periods of time to create something that allowed them
to cultivate previously un-arable land. By experimenting with ideas of how the land could work to provide for them, the Peruvians (pre-Incan and Incan) found a way to take and change the land, developing it and diversifying it for their purposes. In the same way, these same communities took a set of native tubers and domesticated it, learning how to control certain traits through hybridization, eventually giving rise to several thousands of varieties of the potato and several other tubers.

Jacobs argues that application of human effort to natural resources results in two types of development, one qualitative and is the other quantitative. The communities I visited displayed examples of both types of development, and how they created new freedoms and expanded their capabilities.

**Qualitative Development: Cultivating Biodiversity**

Jane Jacobs’s first description of development, above, was differentiation, or making something into something else. Such development is qualitative, affecting the nature of something, though not necessarily producing more of it. For example, over the last hundreds (possibly thousands) of years, the Peruvians have made inedible potatoes edible, bitter potatoes sweet, and disease vulnerable potatoes immune. Careful and intentional hybridization has resulted in as many as 5,000 types of potatoes originating throughout Peru. The cultivation of biodiversity is a qualitative form of development and provides a story both about agricultural innovation and human development.

In addition to development being qualitative, Jacobs points out a characteristic of this type of development, *co-development*. As described above, *co-development* occurs when one or several instances of development contribute to another aspect’s development. For example, cultivating biodiversity requires the simultaneous development of irrigation and channels, tools and social systems for meeting labor needs at harvest time, cooperative relationships to trade seeds and other information, and political organization to regulate irrigation and other resource uses, among others.
It requires learning how to manage microclimates and applying that knowledge to utilize them to the community’s greatest advantage. Experimentation is key to this learning process and increasing the available stock of seeds or potatoes.

This is precisely what the Peruvians have done to achieve such a high level of biodiversity. An illustration of intentional experimentation is the agricultural experimental circles of Moray. In the middle of the Sacred Valley, outside of Cusco, lie a series of circular irrigation fields. While no documentation has ever revealed their true purpose, there is strong evidence that they were built by the Incans to experiment with microclimates. Each terrace is supported by stone reinforcements, and at one or two points in the multi-tiered circle, stones were carved to channel water to each level of the terraces. With such wide circles, farmers could create controlled microclimates and test how different crops grew at a series of levels or facing a series of directions.

The cultivation of biodiversity is an example of development as differentiation, supported by co-development. (The cultivation of biodiversity also has quantitative development implications, to be discussed later in this paper.19) This biodiversity has in turn expanded other capabilities, such as providing market and income opportunities, and providing a nutritional diet to the community. Qualitative development, through the expansion of biodiversity has become the primary generator of capabilities.

The other type of development Jacobs points out is quantitative development, or the expansion of production from a given set of resources (Jacobs 2000).

---

19 This section emphasizes the qualitative development of cultivating biodiversity of a crop rather than increasing the yield. Yet, there is a strong quantitative component to biodiversity. In one aspect, the greater number of different types of potatoes creates a quantitatively increased opportunity for more varieties. Second, some varieties were bred for the purpose of increasing yields. While this section focuses on the qualitative aspect of biodiversity development, changing the overall composition of potatoes grown rather than the overall quantity, biodiversity development also has a quantitative aspect, which will be further discussed in the following section.
Quantitative Development: The Challenge in Andean Peru

Quantitative development refers to being able to make more of something out of a given amount of resources. In Peru, this would be producing greater and greater yields per year from the same field, or being able to use earnings from produce to invest in ways to make greater earnings from produce. This concept can also be understood in terms of capabilities. The most effective capabilities are those that provide a way to develop more capabilities, be it income or education or a certain type of social or political access.

The difficulty with subsistence farming communities is that resource cycles hardly produce surpluses, which are a key component to quantitative development. The Colonia family confessed that while it does sell some of its produce to larger markets, most of it is used by the family or bartered in local markets. Without the surplus production, there is little to utilize to generate or enhance other capabilities. The Colonia family has been able to save enough in order to invest in a fish pool that Leo manages. He built the cement tub into the ground himself, purchased the necessary nets, and captured the fish from a nearby river.

In terms of recapturing the resource, investing in a small family fish operation is one way to keep the resources of the family close to the family. This is especially important as community markets are changing. As global markets pave new inroads into these remote and rural areas, it becomes increasingly important that the benefits of these new economic opportunities stay within the local community. If surpluses leave the local community, as Jacobs illustrates, there is little opportunity for economic expansion.

One important way to benefit the local community is to reinvest new resources in restoring and enhancing education and nutritional opportunities for the community (especially women and children), or pooling together resources to make capital available for new income-generating opportunities.
As long as communities are successful in their efforts to reinvest new resources into their own community, they can hope to experience some form of expansion, either in individual or community income, or in consumption of a beneficial good.

Jane Jacobs provides some valuable insight as to how development begins and occurs. Her concepts bring clarity to and reveal the dynamic processes of development in the few examples above. By recognizing the ways in which individuals and communities develop, development practitioners are better able to understand how people develop and how practitioners might promote this develop by augmenting these pre-existing processes of development.

D. Human Aspiration, the Spirit of Development

In the previous examples and in any development endeavor, there is overwhelming room to fail. Development is moving into the unknown and working with confidence to make it known. The agricultural systems of the high Andes required a great deal of experimentation and risk, but to what end? If communities had already produced several thousands of potatoes, why would they continue to risk their livelihoods by experimenting with more varieties? From where do these people derive their aspiration and inspiration?

If development is the product of one’s own agency, then there must be some element of desire or aspiration in order to develop the necessary courage and imagination to pursue one’s ideas. Sen describes the importance of this element by describing the deprivation that accompanies a lack of aspiration:

The defeated and the downtrodden come to lack the courage to desire things that others more favourably treated by society desire with easy confidence. The absence of desire for things beyond one’s means may not reflect any deficiency of valuing, but only an absence of hope, and a fear of inevitable
disappointment. The underdog comes to terms with social inequalities by bringing desires in line with feasibilities. (Sen 1985c, 15)

Without the desire or drive for something different, and without the courage or wherewithal to act in one’s own interest, human creativity and experimentation would stay locked within the confines of the mind. Yet, with each instance of development, this barrier is overcome.

Arjun Appadurai, a socio-cultural anthropologist, points out the important role culture plays in development. He describes the ability to believe in one’s own agency as the “capacity to aspire.” The capacity to aspire is deeply embedded in the cultural ideas of possibility, the ability to navigate “the complex steps between...norms and specific wants and wishes” (Appadurai 2004). It is the ability of an individual to see the path they can and should take. According to Appadurai, this capacity “thrives and survives on practice, repetition, exploration, conjecture, and refutation” (Appadurai 2004).

As described above, for centuries, the agricultural communities of Peru have been engaging in repeated experiments and exploration. Knowledge has been pooled together, challenged, refined, and retested over centuries. It is up and down these worn-paths that they have expanded their capacity to aspire. I would argue, additionally, that their greatest source of aspiration and inspiration has been through their relationship with their physical and spiritual environment, Pachamama.

**Pachamama**

After exploring more literature about indigenous farming methods, I noticed that several groups were mimicking what they already saw in nature. First, they observed how the ecosystem developed itself, using sun, the soil, biodiversity, etc. They noticed how water flowed and how restricting it too much would disrupt other parts of the ecological system. They noticed how their crops were strengthened by the interplay between disease and pests clearing out weaker varieties and by the creation of new varieties from those that survived.
Second, the communities were in dialogue with nature. They were constantly taking hints from the land around themselves. In fact, their entire cultures and religion, their cosmovision is based upon being in constant connection with and in increasingly perfect dialogue with their environment. Their environment is more than just a resource; it is a living and breathing being, as real as their own mother, and highly capable of communicating with them. It has nurtured them and provided for them, and therefore, they have endowed it with a value and identity on an entirely different plain than the human, but highly capable of communicating with the human. Many of their practices to connect with Pachamama include music and meditative-like moments. The young man, Carlos, in Pisac told me that over and over that I need to participate to understand why Pachamama is important. He suggested two things: First, I was to go dancing during their annual fiesta, to interact with the community and celebrate. Participation in these rituals is crucial to understanding one’s relationship with Pachamama. Second, he told me to go to the edge of town and just sit and look out for as long as I could.

Martha, from the hostel, also spoke about Pachamama as a guide. She told me that her garden is like a miniature ecosystem, and that in order to understand it, she had to let everything grow that wanted to grow. She said that the weeds would make her garden stronger, but more importantly, when she had an overabundance of a particular “weed” or plant, it often indicated she needed that plant for some ailment or health supplement. She believed that Pachamama truly supplied what she needed.

Throughout the region, Pachamama and the connection to the land is a central part of culture and life. It contributes greatly to emotional and spiritual wellbeing, but it also is the source of intellectual wellbeing. Pachamama shows them how some things grow in some places but not others. She gives them clarity in defining success - some successes are in the form of strong yields, other successes are in the form of failure and learning that something did not work. She gives them the opportunity to try new things with a changing climate, by revealing new varieties, and offering
diverse landscape. She provides space and diversity for her people to experiment. She gives them a water and nutrient supply, under the condition that the people do not waste these resources, but put them to good use. (Their long tenure on the land is a testament to their sustainable practices.) Pachamama operates on “slow time”\textsuperscript{20} which gives them the time necessary to see what is coming, and they have built their lives and rituals around this timetable. In this way, they learn from and latch on to existing natural processes of their ecological systems to expand their own capabilities and functionings, and in doing so they have been able to harness a highly complex mode of development and sustainable living.

**Community and Social Relationships**

The other, more apparent, source of aspiration and support of development for the community I visited comes through community and social relationships.

One of the more important institutions in a community is the local market. In the local markets, individuals can share where they are in their farming process, how their crops are faring, if anything unexpected is happening and what challenges they are facing. These conversations can prompt individuals to expand beyond their own ideas about their crops and explore new possibilities for growing along with solutions for overcoming barriers.

Seed exchanges offer the same benefit. Each new seed holds an infinite number of possibilities in terms of where it can be grown, how it may improve other plants, whether it will be good for eating or for the soil, etc. Seed exchanges also bring together farmers who can share information as they do in the markets or other gatherings, but who are from outside of the local region. When Leo Colonia’s family has sufficient funds they like to travel to neighboring villages at least once a year to collect new seeds to add to their own array of seeds. The opportunity to visit farms outside of their community and pick up new seeds provides them with new knowledge and

\textsuperscript{20} Hawken, P. (2007). *Blessed Unrest*. New York, Penguin Books. Slow time refers to concepts of time that rely on natural processes. This is the same concept as found in the Slow Food movement, as further explained by Hawken.
biological opportunity (from the seeds). Seeing new varieties grow successfully expands their idea of what is possible on their own farm. By hearing stories and experiences from others, farmers gain new knowledge about ways to overcome barriers, traps or failures to avoid, and can therefore improve their own operations and seek new, otherwise unknown, agricultural developments.

Aspiration is a key factor in development; it is the confidence and belief in one’s agency and ability to achieve their goals. While terracing and irrigation, crossbreeding, and other methods make a lot sense to an observer in the 21st century, it is aspiration and imagination from thousands of years ago that initiated the construction of innovative terracing along the steepest mountainsides and the miles and miles of irrigation channels that are the foundation of agriculture in the communities I visited. The individuals and communities I visited in Peru derived their aspiration from their cosmовision and their commitment to and awareness of Pachamama, as well from the shared experiences of their community members.

3. Practicing “Development as a Process”

So far, this paper has illustrated that development is an ongoing process that involves the re-shaping of natural resources, the capability to apply creativity, experimentation, the reuse of resources in a local economy, and the aspiration to pursue one’s goals confidently. By recognizing and building upon these existing processes of development, development efforts can work to augment these processes, harnessing traditional sources of aspiration, sustainable ecological systems, and cultural norms of reciprocity.

A. Development Challenges in Peru

While the village of Yanachaka and other communities I visited seemed to show some healthy development processes and capability expansion, they face a multitude of threats. The
capabilities that sustain their life and wellbeing are wrapped up in a complex web of other capabilities and developments. When any one capability is altered, other processes of development can experience major disruptions, become inefficient or ineffective, or become lost. In many cases, overcoming disruptions and challenges to the dynamic stability of a system are a normal part of development. Jacobs reminds that disruptions can result in vital new ways of development (bifurcations). As individuals and communities hit roadblocks, they are forced to adapt and develop new processes. In many other cases, however, it is impossible to react quickly and effectively enough, and wider systems risk breaking down. In the worst cases, these disruptions rob individuals and communities of their foundational capabilities and functionings, sending them into feedback loops that trap them in deprivation.21

The community of Vicos faces incredible challenges and threats to their way of life, as it is based on a complex web of inter-related capabilities and development processes. One apparent change is in their market system. The local markets, as outlined above, serve as an important forum for idea generation, discussion, and information sharing related to farming practices and biodiversity. Local markets also allow farmers to determine what varieties are valuable and desired by the community, local and abroad. Today, there is growing pressure to cater to larger markets in urban areas. These urban markets are generally made up of communities with different norms and desires. What modern markets deem valuable may conflict with smaller local markets that are more integrated with the agricultural communities. For example, larger urban markets value consistency in their produce, and they may prefer to buy in bulk from one grower rather than from several growers. These two values directly conflict with several of the characteristics that are integral to the functionings and stability of the Andean agricultural system. Biodiversity is determined as much by demand for the product as it is necessary for crop security. Small fields and diverse microclimates and produce do not accommodate the large-scale monoculture produce often

demanded by larger markets. Farmers have been pressured to adopt chemical fertilizers and abandon certain crop rotating and microclimate crop cultivation to cater to these markets. Adopting these monoculture techniques in a piecemeal fashion can disrupt the systems that maintain biodiversity, nutrition, and crop security in these communities. Crop failure, no matter the case, would be devastating for any community.

Another major threat is climate change. Martha, in Carhuaz, has noticed that rivers and irrigation ditches are fuller than ever. There is more water available than has been available historically; yet, the community members have also noticed that their largest glaciers have been receding. In fact, in April 2010, a major glacier broke off into a major glacial lake, causing major flooding. The town of Carhuaz and surrounding villages had to be evacuated (Henao 2010). The glaciers are a critical source of water in Peru. During the wet season, agriculture benefits from the seasonal rains. In the dry season, agriculture relies solely on the irrigation channels, which derive their water from the glacial lakes. Without this supply of water, the agricultural communities will be unable to sustain themselves on a single growing season. Such a loss would result in a tragic breakdown of the other major systems that determine their lifestyle, livelihoods, and basic needs.

Finally, with so many changes in market forces and climate happening so rapidly, communities are being challenged to respond and adapt at a rate faster than they ever have. These communities have been building complex systems that support their lives over the last hundreds, if not thousands, of years. In just the last decade, international trade and the recession of glaciers have drastically changed the economic and ecological environment of their livelihoods. Scientists estimate that the recession of glaciers is non-reversible and that their water supply will be depleted within two or three decades (Josephs 2007; Portillo 2008). As discussed above, the processes of development, differentiation, co-development, all require a lot of time to establish, develop, and evolve to changes. These challenges will threaten the ability of farmers to imagine that they can handle these problems. Martha, however, seemed reluctant to accept such a scenario. When asked
about what the farmers will do during the dry season without the water, she simply said, “We’ve been here for a long time, a very long time. And we’ll figure it out. Do you think we’d actually leave and disappear?” Her confidence might be biased, as she has several opportunities outside of her hostel and garden, in the form of income and capital. The farmers in the fields, however, will have few options.

To address these challenges and deprivations, development efforts should work to bolster and stabilize existing processes of development and work to nurture further development that would address these changes. Development efforts ought to encourage and utilize the creative capacity of these communities that have brought them to where they are today, to face some of the upcoming challenges.

In order to counter these challenges, individuals and communities will need to adapt at a very rapid rate. They will confront difficult questions as individuals and community members as systems begin to change and others breakdown. In some situations, outside assistance and development efforts may benefit these communities. These development efforts, however, first need to ask: How do communities deal with these difficult changes? How have they overcome them in the past? What can external development efforts offer them?

**B. Development Efforts that Support Existing Processes of Development**

The previous sections of this paper illustrate *development as a process*. To address the challenges these communities face, I contend that development efforts ought to *build upon* these processes of development. Development efforts that do this would inherently focus on the existing capabilities of communities; work to nurture sources of aspiration, creativity, and confidence; and work within the local concept of wellbeing.
The Capability Approach to Development

The Capability Approach places capabilities as the central generator and indicator of development. Development is the expansion of the freedoms and the capability to achieve a life deemed valuable (Sen 1985c; Sen 1993a; Sen 1999a; Alkire 2002; Fukada-Parr 2003; Sen 2003; Alkire 2005). The Capability Approach offers a helpful framework to conceptualize a development method that (1) recognizes the existing capabilities and human agency of rural communities in Peru, (2) works towards a local concept of wellbeing/standard of living, and (3) focuses on the source of and the capacity of individuals and communities to aspire. By incorporating these three components into a development effort, development occurs based on existing capabilities and works synergistically with the established systems of the community, rather than interrupting them. This also means that development occurs within the realm of local culture, values, and socio-political systems, among other local factors.

Recognizing existing capabilities highlights the local resources available for development. For example, for the individuals and community of Vicos, maintaining and building biodiversity is a primary capability and capability-expanding component of their lives. Any development efforts that work to further increase biodiversity will enhance other capabilities related to biodiversity, such as nutrition and crop security. Understanding the existing ways in which the community develops also reinforces human agency as a central component of development as it asks individuals and communities to engage in their own processes of development. They maintain a sense of ownership over their progress and build confidence in their ability to face challenges. This is crucial, in terms of validating existing process of development and building upon them.

Second, individuals and community members will be most invested in activities that they feel enhance their lives, based on their own conception of wellbeing. For example, several Peruvians have cited their relationship with Pachamama, contributing to her health, and demonstrating their appreciation as an important part of how they live their lives. Consideration of
these larger values is important in any development effort, as they are both a major factor in what people will or will not do, but also a motivating force for acting. This is not to say that an “endorsement by Pachamama” is necessary for motivating certain actions, but that the ability of an individual to navigate his or her relationship with Pachamama will play a role in determining whether something is within the realm of appropriate action.

Finally, existing processes of development rely on an ample supply of aspiration, courage, and a notion of possibility. Without aspiration, the rivers of imagination dry up and individuals and communities are unable to determine how to act. This may be the foundational aspect of any process of development, because it makes human agency possible and it shapes one’s concept of wellbeing. This may also be the most challenging part of a development effort. How does one from outside the community, enter into a process that builds aspiration within individuals and communities? How does one help a community recognize and face their challenges in a way that motivates rather than depresses? How does one draw out the reserves of imagination, creativity, courage, and inspiration in such a way that they feel capable of taking their future into their own hands?

Development efforts ought to work to enhance the existing capabilities of individuals and communities, such as achieving a balance with ecological systems, engaging in meaningful livelihoods, and connecting and nurturing their relationship with Pachamama, among other valued functionings.

**Witnessing Development Efforts in Peru**

A survey of some of the development efforts I saw in the communities I visited provide illustrations of how these criteria can build upon and enhance existing capabilities. These responses to cultural, economic, socio-political, and economic challenges incorporate at least one of the three criteria: (1) recognizing the existing capabilities and human agency of rural communities in Peru, (2) working towards a local concept of wellbeing/standard of living, and (3) focusing on
the source of and the capacity of individuals and communities to aspire. [be explicit how these examples demonstrate these]

**Urpichallay Seed Exchanges**

Organized seed changes create additional opportunities for community interaction and knowledge sharing. Urpichallay, a Peruvian non-profit organization that focuses on agricultural development, organizes seed exchanges in different communities. They work to provide transportation to and from urban centers, and work to provide meals so the women can spend their time interacting with each other and teaching one another about different potatoes. Urpichallay actively advertises and promotes the program in the villages of a given region to gather individuals from a variety of villages. Different villages host the seed exchanges each year, including Vicos.

This program directly builds off of their existing processes of development by enhancing an existing what in which these communities build aspiration and maintain their biodiversity. Seed exchanges are a traditional way to exchange ideas, seeds, and agricultural methods. Yet, they require resources to organize, and families are required to travel and find lodging. Urpichallay recognizes the importance of these seed exchanges and built their program to overcome some of the labor and resource barriers that currently prevent many seed exchanges from occurring.

**HoPe Foundation Greenhouses: Experimentation**

Experimentation is another crucial component to agricultural development. Yet, experimentation inherently is risky. A great part of the cost of experimentation is being able to afford failure and the lessons it teaches. The HoPe Foundation, a non-government organization out of the Netherlands, approached a small village in the Sacred Valley, Patacancha, around the year 2000. While HoPe tends to focus on education programs, they identify and work off of priorities of
the villages in which they work. Patacancha already had a fairly robust school program and so they asked HoPe Foundation for materials to build greenhouses.

Akin to the agricultural experiments in Moray, this community is experimenting with growing different vegetables in a greenhouse environment. Young students from the secondary school are charged with the maintenance and upkeep, which helps give them ownership over a community initiative. Additionally, the community is free to use the greenhouses as they desire, planting herbs, vegetable plants, and even flowers. The produce is sold at their local market, and HoPe Foundation continues to provide the resources to keep the greenhouses operating.

HoPe Foundation also supports staff and operating costs of clinics throughout the Sacred Valley, but they see the value in supporting local agricultural experimentation, resource, and knowledge exchanges. By supporting a community-led effort of agricultural experimentation, HoPe Foundation is enhancing an existing process of aspiration.

**Cultural Education: Knowledge Sharing**

Lastly, I visited a non-profit farm school in Tapay, a small community outside of Pisac. A Dutch man, Alfred Eldrio, and his wife have partnered with Wañaypak, a local non-profit, to offer extension programs and an elementary school. The primary focus on the farm is to gather and preserve traditional methods and farming philosophies and knowledge so farmers who want to return to traditional methods now or in the future have a central resource from which to draw. Toward this end, they host an annual seed exchange among the local communities and have gathered farmers for conferences about farming methods. The elementary school, however, is a major focus and part of the farm.

During my visit, they had 33 children enrolled in their elementary school. The curriculum had an environmental focus that included gardening with the children, participating in a farm-wide compost project, and learning about nutrition. The school serves *kiwicha* and *quinoa* (native
grains) to the children and teaches them about the rich nutrients of the grains. They also teach them ancestral agricultural methods, including the *cosmovision*. All of these lessons are geared toward bringing awareness to ecological processes and the cultural importance of agriculture and biodiversity.

Additionally, because chemical fertilizer companies are promoting their products and methods to several farmers, the farm is working to offer information on modern sustainable agricultural strategies, as an effort to help maintain those base resources that have fed the agricultural biodiversity of the region. This farm seeks not only to preserve traditional methods, but also to guarantee that they are part of the dialogue as farmers begin to explore different modernization strategies for their operations.

The education program, in addition to the knowledge storage and application on the farm, helps preserve different processes of development that are constantly changing. By keeping a record of farming methods that have worked in the past, they are recognizing local processes of development, while helping communities change their methods so they can achieve an ever-changing concept of wellbeing.

**Aspiration: The Generator of Development**

While labor and resources can often be supplied by outside sources, each of these examples show that it is aspiration that propels individuals and communities through and beyond their challenges. Sen’s work on capabilities urges the field of anthropology to “widen its concept of how human beings engage their own futures” and to examine the role that aspiration can play in development (Appadurai 2004). With aspiration, natural processes of development are enhanced.

It is worth noting that in each of the examples cited above, development processes were neither imposed nor “dropped” on a community, rather they worked to support and enhance sources of aspiration and capability. Such an approach, focusing on aspiration building, inherently retains the individual and community as the agent in their own development. Each of these
programs sought to produce new thinking and idea generation in a way that was deeply integrated within the existing practices of each community. These examples support the concept that the individual and community’s capacity to aspire, imagine, and act, drives capability expansion and development.

Furthermore, in each of these examples, new ideas and possibilities arose out of the local traditions, knowledge, and practices of the communities themselves. Utilizing local knowledge and working within the contexts of individuals and communities preserve the human agency aspect of development. Such development efforts work to enhance the benefits and advantages an individual and community already derive from these processes, such as achieving a balance with ecological systems, engaging in meaningful livelihoods, connecting and nurturing their relationship with Pachamama, among other valued functionings.22

A common theme emerges from the development examples above: The programs not only recognized and supported existing processes of development, but they worked alongside these communities, akin to a coach, to draw out and expand the aspirations of the people involved. In fact, the concept of coaching provides a way to understand how development can truly embrace the human agency aspect of development, and include the various contexts that the individual and community experience and live within.

C. Coaching as a Development Method

Coaching Development

The concept of coaching summons visions of athletic coaches, but more recently business coaches and coach psychology have become popular strategies for business and personal development. Coaching refers to helping a client “articulate self-congruent goals and aspirations

22 It should be noted that when enhancing certain processes and their benefits and advantages, the negative consequences, including unequal access to these benefits and advantages, ought to be communicated so a knowledgeable decision can be made by those who will be impacted, for better or worse.
and to systematically work toward their achievement. These goals may be developmental in nature or at the level of performance or particular skills acquisition” (Grant 2007). As long as the coaching remains open-ended and creative, rather than tied tightly to various objectives, Grant’s study found evidence that coaching can result in what coach psychologists refer to as “flourishing.” Flourishing is characterized by “exploration, creativity, use of intuition, building social connections, enhanced coping strategies, resilience and the building of a connected environmental knowledge base” (Grant 2007). Such a concept of coaching helps provide a framework for how development efforts can work to support, encourage, and enhance existing processes of development and capabilities. Coaching also has a strong human agency aspect, leaving the initiative to act and change to the client, or in the case of development, the individual or community.

The concept of coaching has been incorporated into development methods, both in the field of international development, but also in anthropology. By reviewing these methods in light of the discussion of this paper, it becomes more apparent how these approaches work to address aspiration and explicitly work to enhance existing capabilities.

**Research Extension Agents**

The concept or approach of coaching as applied to traditional agricultural communities is a focus in Theodore Schultz’s work, *Transforming Traditional Agriculture*. Schultz surveys the various theories about developing traditional agriculture, and debunks the theories that slow growth is due to inefficiencies in the allocation of factors of production, or that farming communities have a sub-optimal rate of saving and investment. Rather, Schultz seeks to uncover the portion of growth that economists tend to classify as “technological change.” This technological change is actually embodied in the application of creative thought and labor to the land and agricultural practices. He found that the interaction between farmers, communities, and research extension agents generate new ideas and the inspiration to experiment; and lead to new development. Development from this process does not arise from researchers imposing ideas on
farms, but rather allowing farmers to explore new ideas and possibilities and choose from them depending on how the farmers perceive them to be effective.

The economic basis for rapid growth under [traditional agriculture] does not lie in exhortations pertaining to work and thrift. The key to growth is in acquiring and using effectively some modern (nontraditional from the point of view of the experience of people in a penny economy) factors of production. As has been seen, these modern factors are often concealed by economists under an expository contrivance called “technological change.” The suppliers of modern agricultural factors are, among others, research people who work in agricultural experiment stations. Their contributions in this connection are of critical importance. Farmers in their role as demanders of the new factors accept them when they are truly profitable. (Schultz 1964, 176-177)

Central to Schultz’s assertion is the idea that extension agents can provide the dynamic dialogue between farmers that drives the exchange of ideas, the expansion of the perception of what is possible, and the opportunity to experiment with these new ideas. It is from this process that development emerges. These are the same types of processes illustrated above: sharing of ideas and experiences, observing success and failure to determine what is possible, and experimentation. The extension agents engage in a type of coaching that helps farmers recognize the role of their skills and knowledge in their own development (Schultz 1964).

**Participatory Action Research and Capacity Building**

Social work and applied anthropology practitioners have also recently adopted a similar process. By altering the power dynamics of a research project, and including the communities in the research, or even making them their own researchers, social workers and anthropologists engage in dialogue that raises aspiration and human agency in everyone involved.
Applied anthropologists have developed a research method that engages community members in doing their own research on their own lives and community. Participatory Action Research (PAR) seeks to place human agency at the center of a research or development effort, and to empower the otherwise marginalized views and knowledge of poor, oppressed, and exploited groups (Fals-Borda 1991; Reason 2001; Barbera 2008). PAR asks its facilitators to set aside their preconceptions of what a problem is and rather open themselves up to the words and experiences of the community members (Hammer 2009).

Capacity building, as employed and described by Ku et al. also values this reversal research and knowledge authority. In a study of educating social workers for community development in China, the educators were asked to shift their attitude and change the approach of their teaching by adopting a “non-expert” role. This shifts the participatory power structures of research and places the “research subjects” or community members as the agents of their own learning and development. This attitude then translated into how the social workers would work in rural communities throughout China. The idea was triple capacity building, where

...once the [social work student] has realized his/her subjectivity in the course of learning, he/she is able to determine [his/her] own values and ways of knowledge building processes, the resulting understanding will be applied to cultivating relationships with the local people and to facilitating them to discover their own capacity and search for their own way of rural development. The teaching/learning process itself is also a critical way for refreshing and rebuilding the capacity of educators. (Ku 2005, my emphasis)

Such a method seeks to capture the learning opportunities in both teaching and being taught.

PAR and capacity building methods work to strengthen the existing local processes of development and “homegrown” capabilities, as well as recognize the cultural context central to the individual and community. As an equals, the researcher or development practitioner learns
alongside the individual or community (Ku 2005; Hammer 2009). Caldwell, et al, conducted a study of using PAR with American Indians and Alaska Natives. They summarized the benefits:

Community-based, collaborative, and participatory research makes [communities] full partners, benefits the communities studied, and empowers people to define and address the issues that affect their lives; in this process, community members set the agenda of research that affects them. (Caldwell 2005)

The distinction between the subject and object of the development effort dissolves, as both work to develop the knowledge and aspiration of the other.

PAR and capacity building, as described above, have great potential to maintain and engage individuals and communities as the agents of their own development. These methods give recognition to local cultures and to the unique challenges and trade-offs of particular locations, situations, and circumstances. These methods also empower individuals and communities as they experience and witness their own abilities and as they cultivate new aspiration to break into the unknown and overcome challenges.

One of the key components to such a type of development effort is that the practitioner enters into the effort with this suggested attitude of non-expert. By seeking to omit preconceptions, goals, and objectives from the effort, the practitioner works to eliminate limitations on the discussion, questions, learning, and development or capacity building opportunities.

The second important aspect of this approach is that the practitioner plays a supportive role, both by offering positive reinforcement and by engaging in dialogues about the individual and community's ideas. Even the questions asked play an important role in aspiration building and encouragement. Research questions challenge people to think about things of which they otherwise might not have thought. Questions, whether by a researcher or a coach, can become the building blocks of discovery.
These three examples, research extension agents in agricultural communities, PAR, and capacity building include some characteristics of “coaching” by recognizing and encouraging the further development of existing capabilities and human agency. They all attempt to utilize culturally-anchored methods of research that begin with the individual and community and their own processes of development, bases of knowledge, and concerns of wellbeing rather than with a pre-determined, external agenda.

As such, any development or capability expansion is pointed towards a local concept of wellbeing. Any changes on the individual or community level begin within the context of local values and culture, and contribute to the achievement of a life deemed valuable.

Most importantly, each example focuses on increasing the capacity of individuals and communities to aspire. Aspiration comes from the self-discovery that happens as a coach helps an individual see his or her own solutions. Aspiration comes from being asked to think about things in one’s life or community in an entirely new way. Aspiration comes from working on equal levels with someone to learn something new.

None of these particular methods give development, per se. Rather, they engage individuals and communities in a learning process, where they are encouraged to go beyond what they thought was possible, to learn from their mistakes, and to imagine something different. Expanding capabilities and the capacity to aspire are qualitative types of development. They work to change an individual and community: how they think, how they perceive themselves and their possibilities. As the example of Chinese social workers reveals, the “learners” become their own teachers. They gain new vision to see themselves and others differently, the ability to formulate their own questions, and the courage to move forward.

These methods rely extensively on knowledge transfer and generation that happen when development “experts” and practitioners start with the simple step of recognizing the development
processes already in place, respecting the people for who they are and their own concept of wellbeing. This process of human development builds the competency to develop one's own approach to learning and to build upon and sustain existing capabilities and development processes. Both the practitioner and the individuals and communities involved benefit from such an approach, as all parties involved engage in their own program of learning. Building the competency and capacity to act allows individuals to be free to determine their own dreams and become empowered emotionally and intellectually to achieve those dreams.

4. Conclusion

Amartya Sen’s Capability Approach and Jane Jacobs’s work on development reveal that development is not a program, as Western development practitioners often treat it, but it is a process. As a process, it becomes clear that even in the “undeveloped” countries, development has and continues to occur. Development is best understood as an ongoing application of human creativity, imagination, and aspiration with natural resources. In this basic process, individuals and communities alter their environment and create different and new products (such as agricultural produce) and processes (such as terracing) that contribute to their concept of wellbeing.

Wellbeing, as a self-defined concept of the individuals and communities, helps uncover nuanced values, trade-offs, and opportunities individuals and communities navigate each day. In Peru, one of the notable factors in wellbeing is the connection that individuals and communities have with the land, or Pachamama. Understanding the important role of their cosmovision is crucial to understanding their concept of a life deemed valuable.

Research throughout Andean agricultural communities of Peru offered important insight into what development is and how it is brought about. The communities I visited have secured a diverse set of capabilities, which provided basic needs and recognized cultural values and beliefs. A central capability is their agricultural livelihoods and their ability to maintain rich biodiversity,
which contributes to their nutrition, physical fitness, and a spiritual connection to the land, economic security, and ecological sustainability. Their complex agricultural capabilities have been built through a long history of creative labor, experimentation, and reuse of resources in their local communities. By altering landscapes into irrigation systems and terracing, by sharing knowledge of seeds and farming practices, and by engaging in experimentation, these communities have developed a masterful system for expanding and maintaining biodiversity.

A key component to development is the capacity of individuals and communities to aspire. Their agricultural creativity and innovation emerges from their community interactions and their personal concern for Pachamama and their cosmovision. Collaborating with fellow farmers and working synergistically with the ecological processes of their environment is a vital aspect of their development. Building this capacity to aspire, to imagine, and to face the future courageously is a key capability that allows these communities to forge a future that conforms to their changing culture and local concepts of wellbeing.

Based on this importance of aspiration, and its ability to incorporate self-defined concepts of wellbeing, enhance existing capabilities, and work within local contexts, I propose that development methods that incorporate coaching by development practitioners or extension agents, or in a form of PAR or capacity building, can benefit communities that have robust capabilities and established processes of development. These methods work to (1) recognize existing capabilities and human agency of rural communities in Peru, (2) work towards a local concept of wellbeing/standard of living, and (3) focus on the source of and the capacity of individuals and communities to aspire.

---

23 At the risk of simplifying my observations, I have sought to highlight several of the more positive observations I collected. The family in Yanachaka and Martha from Carhuaz both seemed well-positioned in terms of ecological resources, health and labor capacity, as well as social and community standing. Other villages, such as Patacancha in the Sacred Valley had experienced major biodiversity loss and appeared to have lost several of their foundational capabilities. In these cases, the community needs far more than coaching and aspiration building (though these are crucial). They need to rehabilitate capabilities that serve their altered concepts of wellbeing. They may also need some material and economic resources to help rebuild development processes and capabilities.
Outside material and economic resources can be and are an important part of development efforts. However, this paper argues that development emerges from a process, not a donation or program. Aspiration plays a key role in this process, nurturing the creativity of individuals and communities and their courage to act towards a concept of wellbeing. Viewing development as a process reveals the existing ways in which individuals and communities are already developing. Furthermore, by recognizing the existing capabilities of individuals and communities, practitioners are challenged to evaluate whether their work is enhancing or possibly disrupting these existing development processes. By building upon existing capabilities and development processes, practitioners can work alongside individuals and communities as they work to define and achieve their concept of wellbeing.
References


Vigen, M. (2010). Personal Ethnography - Qualitative Data from Peru, University of Minnesota - Humphrey Institute of Public Policy. Unpublished