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Traditional Communities as "Subjects of Rights" and the Commoditization of Knowledge in Brazil

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Abstract

The International Labor Organization (ILO) Convention 169 and the Convention of Biological Diversity (CBD) led signatory state-members to recognize traditional communities as subjects of rights, and no longer as objects of tutelage. However, their implementation may bring new challenges in states adopting market-based decision-making to rule social life. In pluri-ethnic societies in which power differentials are structurally embedded, traditional communities and companies exploring their resources and knowledge have been, historically, unequal and opposed parties. In processes of benefit sharing, these unequal social actors are wrongfully considered equally free subjects of rights in negotiating contracts in supposedly free markets. Erasing historical and structural differences, and assuming equality in an unequal world will only reproduce the inequality that CBD has aimed to address.

Keywords

traditional knowledge, Amazon, rights

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Traditional Communities as "Subjects of Rights" and the Commoditization of Knowledge in Brazil

In this article, we reflect on the current legal and ethical issues that have emerged in Brazil with respect to the relationship between traditional communities and researchers and entrepreneurs interested in their knowledge. Empirical case studies in the Amazon have shown that knowledge per se is not an object of ownership in the sense of individual proprietorship by members of traditional communities. In this context, knowledge is not an object of market transaction through contracts that can be established through private relations. Instead, in traditional communities, the verb "to own" can be understood as: "to recognize one's state of having full claim, authority, power, and dominion over a tangible or intangible object" (*Webster's Encyclopedic Unabridged Dictionary of the English Language*, 1994, p. 1032), and related to traditional knowledge this state implies a collective subject and culturally established rules that do not necessarily follow market criteria. In our field observations in the Amazon, we learned that owning traditional knowledge is a collective right of those who belong to a community, assuming a common social identity based on a shared and indivisible corpus of traditions.

Throughout Latin America the distinct notion of knowledge and respective rights have resulted in socio-environmental struggles against the mainstream tendency to scaling up exploration of extractive resources as commodities (Svampa, 2012). According to empirical evidence that we have gathered in the Brazilian Amazon since 2006, communities and companies may work with the same resource (e.g., a species), while having rather different purposes (i.e., while entrepreneurs aim at profit, traditional communities aim at social reproduction). In pursuing each stakeholder's goals, benefits may be shared, but often in disproportionate ways. Moreover, entrepreneurs' approaches to exploring natural resources are qualitatively different from those of traditional communities, especially resources under common use.¹ These differences were historically disregarded in the juridical domains.

As recently as the late twentieth century, the question of the Indigenous and tribal peoples was typically treated as a matter of tutelage or of protecting minorities in international and national forums. Today, at least formally, it is possible to identify a trend towards a greater recognition of traditional communities as subjects of rights and not objects of tutelage. Article 8j of the Convention on Biological Diversity (CBD, 2012) is a remarkable example as this provision recognizes rights to traditional knowledge on biodiversity and biological resources. However, our research has shown that article 8j will be effective only if signatory State-members ratify and implement it in conjunction with all other rights to traditional ways of life, especially regarding their territories, in coordination with International Labor Organization's Convention 169² (ILO, 2012).

However, by September 2012, 168 State-members had ratified the CBD (CBD, 2012), while only 22 had ratified ILO Convention 169 (ILO, 2012). As these Conventions must be harmonized with national

¹ For this fundamental concept to understand traditional knowledge in diverse situations, see Ostrom (1990) and

² ILO (2012) Convention 169 Article 14.1 stated:

The rights of ownership and possession of the peoples concerned over the lands which they traditionally occupy shall be recognised. In addition, measures shall be taken in appropriate cases to safeguard the right of the peoples concerned to use lands not exclusively occupied by them, but to which they have traditionally had access for their subsistence and traditional activities. Particular attention shall be paid to the situation of nomadic peoples and shifting cultivators in this respect.

laws, worldwide controversial issues such as rights to land and protection from encroachment caused by infra-structural investments of large companies continue to be dealt mostly within the realm of social and political struggles. In Brazil, for example, in June 2014, Congress representatives of agribusiness and industrial sectors tried to cancel Brazilian commitment to ILO 169 Convention (Câmara dos Deputados, 2014a). In August 2014, entrepreneurs interested in traditional knowledge associated with biodiversity resources proposed a law related to the CBD disregarding the traditional people's rights to prior, free, and informed consent (Câmara dos Deputados, 2014b).

Although both ILO Convention 169, ratified in 1989 (ILO, 2012), and the CBD (2012), implemented in 1992, signatory State-members at least formally recognize traditional communities as the subjects of rights, opening opportunities for public actions and social transformations, the implementation of the CBD may face new challenges in nations like Brazil that have adopted market-based decision-making mechanisms to rule their society's economic life. Promised structural changes towards social welfare policies were aborted in these states. Social well-being became a matter of public assistance or mere liberality by the private sector, maintaining structural social and economic differentials. In pluri-ethnic and multi-cultural societies with structurally embedded power imbalances, traditional communities on one side and companies exploring their genetic resources and knowledge on the other have been historically unequal and opposed parties in the relations of production and circulation (Almeida, 2011; Daniel, 2004). Regarding the interaction between these parties and among different cultures, Haverkort and Reijntjes (2010) stated: "There is much variety in the way different positions of power and differences in the effectiveness of available technologies are being used and differences, too, in the way people react to domination" (p.21).

In fact, diverse processes of benefit sharing are being implemented under the current national rules of CBD's signatory countries. In Brazil, article 8j of CDB was regulated through the controversial Provisional Act 2186-16/2002 (Brazil, 2001)³ and, in spite these differences, a commonality is that unequal social actors such as traditional communities and entrepreneurs are brought together to sign contracts. According to Roppo (1988), by definition, contracts can be signed only under the assumption that parties are equal and are considered free subjects of rights negotiating in a presumed free market of goods and services. This assumption erases historical and structural differences while the recognized subjects of rights do not have their decisions equally recognized. In fact, the term "rights" means only the right to sell knowledge in the market. Assuming equality in an unequal world will only reproduce the inequality that article 8j of the CBD is expected to address. Researchers and entrepreneurs who ignore these differences assume a fictional co-operation, in which unequal parties co-operate through relations in which the powerful reduce the benefits for the powerless. In addition, a disproportionate focus on financial issues of access and benefit sharing, without consideration of the traditional ways of living, tends to favor companies rather than communities. Benefit sharing contracts may become mere instruments to endorse the alleged "social and environmental responsibility" to support companies' profitable purposes, while strengthening processes of "commoditization" of knowledge (Shiraishi, 2008).

³ The history of the Provisional Act 2186-16/2001 reveals the strong interests of multinational and national, pharmaceutical and cosmetic companies (Santilli, 2005, p. 186).

In the following sections, we discuss our findings in case studies involving social movements⁴ represented by grassroots organizations that were engaged in benefit sharing processes in the Amazon. They have challenged current forms of CBD implementation by defining what is not negotiable, and by demanding effective conditions for enforcing previous informed consent and the manifestation of true choices.

Our research is based on a methodology that combines empirical data collection through long-term, in-depth ethnographic fieldwork among the *quebradeiras de coco babaçu* and conceptual discussions between academic researchers and social movement leaders, aiming at producing knowledge for public action. The ethnographic data and anthropological and juridical analysis are both academic research products within public universities and integral parts of concrete processes carried out by grassroots organizations representing traditional communities in the Eastern Amazon.

The reference case study comprises on the babaçu (babassu) breaker women, who live in Eastern Amazon's babaçu (*Attalea speciosa*⁵ Mart. ex. Spreng) palm forests. We contrast this social situation with two other cases to draw evidences from their specific perspective, by eliciting similarities and differences. The two other cases refer to the Ashaninka Indigenous group, who live in ombrophylous rainforests of the Western Amazon containing murumuru palms (*Astrocaryum ulei*⁶) in the State of Acre and the Association of Small Agroforestry Producers of the Projeto de Reflorestamento Econômico Consorciado e Adensado (RECA Project), who are family farmers practicing agroforestry with native species, including cupuaçu (*Theobroma grandiflorum*⁷), in the State of Rondônia. All three cases featured interactions with Natura S. A., currently the company with one of the largest market share in the Brazilian cosmetics, fragrances, and toiletry sector, reaching 60% of the Brazilian households through 1.3 million sales consultants (Natura, 2015), and one of the few companies attempting to comply with the implementation of the CBD in Brazil.

Case Studies: Peasants, Traditional Communities, Indigenous and Family Farmers

Case Study 1: The Peasant Traditional Communities of Babassu Breaker Women

In peasant traditional communities of babassu palm forests in Eastern Amazonia, men are in charge of organizing agricultural activities, and the entire family participates in cultivating mainly rice, beans,

⁴ For this article, we draw upon Scherer-Warren (2002) to define social movements as an analytical category that comprises a coherent set of symbolic references in a domain of values and social practices, which are based on collective actions and memory. While social movements are more fluid and less hierarchical, social or grassroots organizations are hierarchical and normalized structures created to represent the groups to other sectors of society. In our study, the Indigenous Ashaninka has created their own grassroots organization, Association Apiwtxa, to represent their interests formally.

⁵ *Attalea speciosa*, previously known as *Orbignya phalerata*, forms homogeneous and equilibrated secondary forests, with estimated area of 20 million hectares in Northern, Northeastern, and Central Brazil (MIC/STI, 1982), where approximately 400,000 families live on agricultural and extractive activities.

⁶ *Astrocaryum ulei*, regionally known as murumuru or murmuru, is a component of primary rainforests, either in highlands or seasonally flooded lands. Its kernels produce fat rich in lauric acids. These are used for margarines and cosmetics

⁷ *Theobroma grandiflorum* Willd. ex. Spreng. Schum. is a native species of highland rainforests, which has been also cultivated for the production of fruit pulps and seeds, either for direct consumption or industrialization.

maize, and cassava, through slash-and-burn shifting cultivation. Women are in charge of organizing extractive activities, in which mostly women and children gather and break open the fruits of babassu palms to extract kernels, which are processed into edible oil or soap. The fruits also have a starchy mesocarp from which women make edible flour, and an extremely dense endocarp, which provides high quality charcoal. These products are used for domestic consumption, but they are also sold in large volumes to industries. The sale of kernels is a primary source of cash income for these communities.⁸ Kernels extracted by women are usually sold through middlemen to industries processing them into oils for the production of soap, margarine, edible oils, and cosmetics (Amaral, 1983; Porro, 2002).

These women identify themselves and are recognized nationally as *quebradeiras de coco babaçu* or babassu breaker women. Their collective identity is neither defined by a common biological ancestry nor by a shared ethnicity *stricto sensus*. Rather, their social identity emerged from common struggles against ongoing injustices that are originated in the colonial processes of enslavement, detribalization, and forced migration. The first time they presented their collective identity as Quebradeiras de Coco Babaçu to the large society was in 1991, when 240 representatives of more than a hundred villages from four states met to vindicate their rights. They denounced attempts of illegal eviction by cattle ranchers and other entrepreneurs supported by governments from traditionally occupied lands and the destruction of forests. Throughout these processes, their relationship with babassu forests became essential for their cultural and physical reproduction.

Violent agrarian conflicts affected these traditional communities from the mid-1960s to the late 1980s (and up until today in some areas). Many of these struggles erupted when pretense landlords began to slash babassu palms to plant pastures or prohibit women to enter the palm forests, which are traditionally a common use resource. During these struggles the babassu palm was socially and politically conceived as the “mother of the people,” due to its symbolic and material significance in supporting resistance against antagonistic sectors and an unfavorable State. Traditional knowledge, which has helped sustain the current systems of production and conception of rights, is thus strongly rooted on ideals of autonomy and freedom.⁹ It controlled family labor and protected traditional territory.

Traditional knowledge regarding babassu palm as a common resource is the basis of a fundamental governance mechanism for the maintenance of the palm forests, through a traditional system of agro-extractive production. While knowledge enhanced specific uses of babassu products and management of this secondary forest, historical memory of survival as a free peasantry has laid the actual foundation for the people to articulate their diverse knowledge within this ecosystem. Moreover, their traditional knowledge has been critical in highlighting cattle ranchers’ unsustainable resource use (Porro, 2002).

In the early 1990s, babassu breaker women founded grassroots organizations to mobilize and represent themselves in the public domain. Agro-extractive cooperatives were also formed to assure better conditions for their participation in the market. Currently, babassu breaker women’s production sustains the livelihoods of about 400,000 extractivists (Almeida, 2011). However, despite their undeniable social, economic, and environmental achievements, these traditional communities had been excluded from

⁸ According to official data, in 2013 the total production of babaçu kernels in Brazil was 89.739 tons that had a value greater than R\$122 millions (Instituto Brasileiro de Geografia e Estatística [IBGE], 2014).

⁹ Authors such as Chayanov (1986) and Shanin (1971) have studied the peasantry’s autonomy and sense of freedom from landlords and employers.

major agrarian and economic policies, which historically favored logging, cattle ranching, and, lately, agribusiness and large infrastructural projects.

Since the mid-1990s, Inter-State Movement of the Babassu Breaker Women (MIQCB), Association in Settlement Areas in the State of Maranhão (ASSEMA), and the cooperatives have processed and commercialized babassu products as part of fair trade initiatives. Babassu, which through private companies has been in the international market since the early twentieth century, found a niche market for “green,” “ecological,” and “natural” products through the efforts of the babassu breaker women, with sales to European and American companies.¹⁰ Although proactive in promoting their products and defending the babassu palm,¹¹ only in 2005 did the grassroots organizations of the babassu breaker women become aware of Provisional Act 2186-16, which in 2001 regularized the implementation of Article 8j of CBD in Brazil.¹²

In the case of babassu, the first genetic resource and associated traditional knowledge accessed by a company under the Provisional Act was its starchy mesocarp, processed as flour. Oil from its kernels and charcoal from the fruits’ endocarp have long been used for industrial purposes. The sale and use of mesocarp flour had until recently limited distribution to local markets and domestic consumption as food, livestock feed, and bait for wild shrimps. In the early 1990s, ASSEMA had created cooperatives to organize the production and commercialization of babaçu products. One of these cooperatives, Cooperative of Agro-Extractive Producers of the Municipality of Esperantinópolis (COOPAESP), began to invest in alternative technological improvements for processing mesocarp flour in 2002.

In 2004, Natura Cosméticos S. A. (henceforth Natura), the largest Brazilian cosmetic company, purchased 100 kg of mesocarp flour from COOPAESP to bioprospect. Although they were familiar with Provisional Act 2186-16, Natura purchased the flour sample through a regular commercial transaction. In 2005, Natura’s professionals visited ASSEMA and COOPAESP and, according to the interviewed quebradeiras de coco, they accessed traditional knowledge associated with this flour. They then proposed to discuss the terms of consent and benefit sharing. Prior to answering the company, COOPAESP asked guidance from its institutional partners and the Council for Management of Genetic Resources (CGEN) of the Brazilian Ministry of Environment. Supported by ASSEMA, in 2006, COOPAESP began to discuss with Natura the regularization of access and benefit sharing, especially because the legally required prior informed consent had been already disobeyed. By the end of 2007,

¹⁰The Bodyshop, Aveda, Slow Food, among others.

¹¹The Movement of the Babassu Breaker Women managed to approve their “Free Babassu Law”— a set of rules prohibiting the destruction of babassu palm forests and ensuring their free access by peasant women. The Law was incorporated into the municipal laws in 17 municipalities (see also Shiraishi, 2006)

¹²Provisional Act No. 2186-16, dated August 23, 2001, regulates item II from Paragraphs 1 and 4 of Article 225 of the Constitution. It also regulates Articles 1, 8 (item j), 10 (item c), 15 and 16 (items 3 and 4) of the Convention on Biological Diversity. Provisional Act 2186-16 provides for the access to genetic heritage, protection, and access to associated traditional knowledge, benefit-sharing, and access to and transfer of technology for its conservation and use, and makes other provisions.

after a year of debates and intense negotiations, in which the Federal Public Ministry (MPF)¹³ participated, COOPAESP signed the terms of consent and a contract for benefit sharing. They received a percentage of the benefits earned from the products' sales and a lump sum payment, which for the enterprise was a donation and for the MPF and COOPAESP was a symbolic compensation for the violation of previous consent. The contract was signed under the COOPAESP's and ASSEMA's understanding that the Brazilian government would impose the penalties for the violation of prior informed consent. Also, they realized that, since power differentials were so great between company and communities, the government would assist the parties in determining the terms and values of the benefit sharing contract.

According to its social statute (Natura, 2012), Natura is a publicly held corporation and has as objectives the exploration of trade, export, and import of beauty, hygiene, toiletry products, and cosmetic products, among others. Currently, Natura's main commercialized products are cosmetics, fragrances, and toiletry items, which are sold through 1.2 million direct sales consultants to 100 million consumers. In Brazil, Natura's market share in this personal care production sector is greater than those of Unilever, Avon, and L'Oreal (Euromonitor, 2012). The company strongly advertises its use of Brazilian biodiversity resources and that, by purchasing their extractive products, consumers are supporting communities with whom the company shares benefits.

Political leaders and intellectuals representing diverse interests have praised the company's exemplary initiatives, including grassroots rubber tapper leader, former senator and minister, and unsuccessful candidate for 2014 presidential election Marina Silva (Sassine, 2010; Zanini, 2009). Prominent scholars, such as anthropologist Mary Allegretti (Allegretti, 2008, 2011), have also collaborated with Natura. Christopher Meyer, an entrepreneur and graduate of economics from Harvard University, also found in Natura a role model for the current capitalist world (Meyer, 2012). Statements about ethics and environmental sustainability are repeatedly reinforced in Natura's institutional discourses and in the rationale of its entrepreneurial operations (Natura, 2012).

In Brazil, Natura has been a leader in attempting to comply with the Provisional Act 2186-16. Most of the requests CGEN received to regularize access and benefit sharing came from Natura. However, Natura has continuously engaged in bioprospecting without meeting all legal requirements, claiming there were too many complex regulations with which to comply. In 2010, Natura was charged with a total fine of approximately R\$21 million by the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA) because of its inappropriate use of traditional knowledge associated with the genetic patrimony. Natura's Director of Corporative Affairs and Governmental Relations responded, "The problem has occurred because of the confusion of the current law. But it is a discouragement for the businesses and for the science in the country" (Mendes & Balazina, 2010, para. 10). According to him, the company complied with the CBD's principles. As of 2014, Natura's lawyers are contesting some of the charges.

¹³ In Brazil, the Federal Public Ministry is responsible to ensure the juridical order, the democratic regime, and individual and social unalienable rights, even against governments. It also supervises the implementation of the laws, the protection of the public patrimony, and how public powers assure the rights established in the Constitution. The Public Ministry has autonomy in the structure of the State: it cannot be extinct and its attributions are not transferable.

The grassroots organizations of babassu breaker women are very aware of power imbalances between them and Natura, in terms of access to information and their relative influence in the economic field. Throughout their experience of negotiating for access and benefit sharing with Natura under Provisional Act 2186-16, the women have learned that their only chance to deal with such power imbalance is through forming a collective understanding on the rights to traditional knowledge. This understanding has been developed through the implementation of small projects, controlled by the women themselves, and through internal debates reuniting leaders (from grassroots organizations linked to MIQCB in four states). Since 2008, the women have organized several workshops and seminars for their communities, including with youth. Since 2010, they have invited other grassroots organizations that had negotiations with Natura to discuss how they would improve the legal framework so that it would help enhance their own way of life. Over three years, these small projects and meetings were financed with the money received as a result of negotiations with Natura. This was a strategy to socialize the benefits and normalize the discussion about rights related to traditional knowledge. This understanding was preceded by cultural conceptions that the benefits from traditional knowledge were to be shared freely among all traditional people. There should be no legitimation of the association between the enrichment of those who benefited from traditional communities' knowledge in the market and the impoverishment of these communities. After a process of politicizing the debates, the notion that traditional communities have the rights and the mission to use these benefits for the advancement of their way of life prevailed. The result was free sharing among the traditional communities and collective action against usurpation of rights. In this process, the babassu breaker women have also learned from the experiences of other communities.

Case Study 2: Indigenous Ashaninka

The Ashaninka Indigenous people of the Apiwtxa group live in the easternmost Brazilian Amazon. Having migrated from the Peruvian Andean piedmont in the early 20th century, they established their territory by the Amõnea River, which nourishes rich and dense primary ombrophylous forests in the State of Acre.

In the late 1980s, after decades of struggles against loggers and rubber entrepreneurs, the Ashaninka began to search for new livelihood opportunities (Pimenta, 2007). Supported by non-governmental organizations, such as Indigenous Rights Nuclei and Pro-Indigenous Commission, they began to raise funds for their projects (Albert, 2000). The Ashaninka hired a researcher to carry out bioprospecting on their forest resources. Having organized field expeditions in the presence of Ashaninka adults, this researcher collected samples with the help of Ashaninka youths. He also obtained information from elders about resource management and use. In 1996, after three years of shared research activities, this researcher set up his own cosmetic company, Tawayá, which was named after a river in the Ashaninka territory. According to our interviewees, he then proposed to buy the fruits of the murumuru palm from the Ashaninka or whomever else wanted to sell them. The Ashaninka contested his proposals, affirming that they were the owners of the research project and resulting knowledge. The Ashaninka could not accept the mere role of providers of raw materials and felt betrayed because the hired researcher used the collectively gathered information for his private benefit.

In 2007, the Federal Public Ministry endorsed the Ashaninka's claim of rights to traditional knowledge. The Public Ministry then proceeded with a civil public lawsuit, which resulted in tribunal hearings

against the researcher and his company, Tawayá, along with two other companies, Natura Cosmetics S. A., and Chemyunion Química Ltd., which allegedly also accessed Ashaninka's traditional knowledge associated with the genetic patrimony of murumuru. The National Institute of Intellectual Property, which had granted a patent to the researcher, was also sued.

In 2009, in the midst of the trial, Ashaninka leader Moisés Ashaninka made the following statement:

Natura came to know the murumuru after a research [*sic*] that was carried out by us. This company saw its potential and entered in the market departing from our community project. The companies do not want to recognize our rights, because they are afraid to open a precedent for other cases. But we are going to continue to fight for our rights. (Machado, 2009, para. 10)

After referring to a detailed anthropological report on the relationship between the Ashaninka and the researcher, the Federal Public Ministry charged the researcher, Natura, Chemyunion, and Tawayá with inappropriately exploiting traditional knowledge. It asked the court to order the researcher to return all materials and information he obtained in his investigation to the Ashaninka and to disclose the names of all persons, companies, and laboratories to whom he gave access to the materials and information. The Ministry also asked the National Institute of Intellectual Property to cancel all applications for patents and registers related to the Ashaninkas' knowledge. According to its demand to comply with benefit sharing, the company had to pay 50% of its net profit from products with murumuru since the beginning of commercial operations and up to five years following the matter's settlement in court to the Ashaninka. In addition, as compensation for moral harm to the community and to Brazilian society at large, the Ministry asked the Federal Justice Court to set an amount to be equally shared by the Apiwtxa Association and the Federal Fund for the Defense of Diffuse Rights.¹⁴ In the meantime, the Federal Public Ministry requested that the Federal Justice Court force the National Institute for Industrial Property to disclose the origin of traditional knowledge in every patent or registration for a brand, invention, design, or model that was associated with traditional knowledge on murumuru.

Natura's Director of Corporative Issues complained about the confusing concept behind the intellectual property rights regime. He argued, if what the Federal Public Ministry ruled was correct, the legal framework meant to discourage innovation as well as applied and pure research activities (Mendes & Balazina, 2010). Other companies agreed with this argument. The Scientific Technical Manager of Aché Laboratories contended that the current intellectual property law is:

Of such a complexity that discourages the exploration of such resources, because it is so difficult to obtain an authorization to access and research genetic resources . . . The studies for the development of pharmaceuticals are of long duration, incur high costs and only a small fraction arrives to the market. Therefore, the eventual payment should incur only in the effectively developed and commercialized product. (Balanzina, 2010, para. 4)

¹⁴The Fund for the Defense of the Diffuse Rights was created by the Law of the Civil Public Action (Law n° 7.347/ 1985) and regularized by Decree n° 1.306/ 1994. The Law of the Civil Public Action is about responsibilities for moral and patrimonial losses against diffuse and collective interests. If the payments for the losses are monetary, such payment must be deposited in a fund that will be used to help to reconstitute the damaged goods (see Mattei de Oliveira Maciel, 2005).

What is a matter of specific rights for the Indigenous people is an issue of research and development profit for the companies. After almost six years of a convoluted process, in 2013, the Federal Justice Court in the State of Acre decided to order the researcher and his company Tawaya to share 15% of its profits with the Ashaninka and considered Natura and Chemunion innocent of the charges (Facundes, 2013).

Case Study 3: Immigrant Colonists and Rubber Tappers in the RECA project

In the late 1970s, landless immigrant family farmers, mostly from southern Brazil, arrived in Seringal, Santa Clara, an old rubber tapping area originally established in the 1950s in the Amazonian State of Rondônia. In 1982, the National Institute for Colonization and Agrarian Reform (INCRA) initiated an Agrarian Reform Settlement Project there to support the newly arrived farmers of European descent and the local rubber tappers. After dividing the land among the families, INCRA did not offer any support to the settlers. It simply pushed them to engage in slashing and burning the forest without planning. Many of the immigrants succumbed to malaria, and others began to return to their home states by the late 1980s, after realizing that Amazonian lands tended to lose fertility when plowed and cultivated in the manner they had used in the South. Besides, the area was under a boundary dispute between the states of Rondônia and Acre, and neither state government was assisting the settlers.

At the time, one of the settlers who was about to “sell my land even for the price of the tickets to go back” decided, instead, to join efforts with other remaining farmers to salvage their farms (T. Moreira, 2003, p. 30). He soon became one of the directors of the first farmers’ association, which was established in 1989. In despair, the remaining southern family farmers approached local rubber tappers and discussed possibilities to improve their lives without harming the environment. Priest Luiz Ceppi from the Land Pastoral Commission (CPT) of Acre recollected what he witnessed during this initial encounter among different interest groups:

The southerners considered themselves as smarter, stronger and hardworking. The common language was that all Acreanos [the locals, native of the now neighboring State of Acre, mainly rubber tappers] were lazy, who only knew to drink and go after women. The Acreanos thought the southerners were bossy. The “Paulistas” [people from the southern State of São Paulo] were those who deforested and moved away. Many rubber tappers hated the “Paulistas,” because they had to leave their own “colocações” [rubber tappers’ traditionally occupied lands] . . . For the Acreano, what is worthy is not the profit; what counts is time. Then, why to work hard? What is worthy is the life within time. The time is what dominates. The [local] people work in the harvest time, and after that, they just stop working . . . The Acreano does not like to work as an employee. The rubber tapper works five days. Saturday is the hunting day and Sunday is for leisure. This philosophy of life survival made the Amazon remaining almost untouched for thousand of years. The “Paulistas” domination arrived with the mentality of slashing [the forest]; they had to do, to touch. The Acreano in the forest has a strong sense of freedom and autonomy. There was this marriage [between the Paulistas and the Acreanos]. The RECA

system was born, in the extent that they united; it is not reforestation, but a way of respecting the environment and of taking from this culture what is enough to live. (Moreira, 2003, p. 22)¹⁵

Participants of the RECA project realized that southerners had better organization and cooperation skills in meeting the market demand, whereas local rubber tappers had better knowledge about the forest and native fruit trees. Combining these abilities, they conceived an agro-forestry project in early 1990, which the federal government initially refused to support. Some 80 families organized themselves and obtained support from the local bishop, who then contacted donor agencies and collaborators. An agronomist from Centrale voor Bemiddeling bij Medefinanciering van Ontwikkelingsprogramma (CEBEMO), a funding agency of the Dutch Catholic Church, provided technical assistance to establish 406 hectares of agro-forestry systems with native trees such as peach palm (*Bactrisgasipaes* Kunth), cupuaçu (*Theobroma grandiflorum*) (Wild. ex Spreng K. Schum), cocoa (*Theobroma cacao*), and Brazil-nuts (*Bertholetia excelsa* Bonpl).

In the following years, the farmers managed to access governmental and non-governmental funds to expand the area and number of families. In this process, they incorporated external aid to expand their business capacity. In 2001 and 2002, they were engaged in agro-forestry to recover degraded pastures; as Mrs. Leonir calculated: “32 hectares of pastures provide R\$16.000 from the sale of calves, that is, R\$500 per hectare/year. 5.5 hectares of average productivity agroforestry systems provide R\$ 10.000 per year, or R\$ 1.818 per hectare/year” (cited in T. Moreira, 2003, p.64). The immigrant farmers learned agro-forestry principles from the native traditional communities and applied them to the restoration of pasturelands and to create better access to market. The RECA leader, Selvino Sordi, explained the rationale for emphasizing agro-forestry:

... cupuaçu by itself provides up to R\$3,000 per hectare, while the rice we plant gives no more than R\$1,000. To get 100 bags, the rice must be very good. Cupuaçu as a single crop provides 7 tons [of fruits] per hectare. Once, we made an economic census amongst ourselves. Those who entered the project in 1989 had an income of R\$6,800. Those who entered in 1991, had between R\$4,000 and R\$4,500. Who had conventional cultivation [of rice, corn, beans] had no more than R\$800. (Moreira, 2003, p.64)

Commercialization of the agro-forestry began in 2001. As of 2008, this organization was divided into 11 sub-groups, each working on 2,700 hectares of agro-forestry systems. Altogether they produce and sell annually more than 1,000 tons of fruits, 450 tons of diverse fruit pulps, 100 tons of dry and fermented seeds, and 40 tons of cupuaçu butter, in addition to tons of Brazil nuts, their oil, processed peach palm hearts, seedlings, and seeds. In their agro-forestry systems, they intercrop more than 20 species in addition to medicinal plants.

In 2009, they inaugurated a Family Agricultural School,¹⁶ and progressively partnered with other organizations to commercialize and represent their products in several Brazilian capitals, including São

¹⁵ In the mid-1980s, when the government promoted settlement projects for agrarian reform purposes, the presence of rubber tappers and their traditional ways of life were completely ignored. The areas the rubber tappers used were divided into standard 100-hectare plots and allotted to each beneficiary. These plots were distributed among applicants from all over the country. This began to change in the late 1980s, due to social mobilization and conflicts. The 1988 National Constitution also stipulated to respect traditionally occupied lands.

Paulo and Rio de Janeiro. Educating their children and investing in fair trade, they hope to maintain their tradition as family farmers.

RECA signed a Benefit Sharing Contract with Natura in late 2007 and maintained a strong partnership with the company, which includes support for certification processes and a significant contribution to the Family School. According to one of RECA's advisors, who participated in a seminar promoted by babaçu breaker women on the topic, "we are good partners with Natura, because at RECA we knew exactly what we wanted from the very beginning" (personal communication). In a 2012 workshop promoted by the Ministry of Environment, a young RECA leader affirmed: "Benefit sharing is important, but more important to us is to survive, to produce without depending on external support" (personal communication). According to RECA farmers, they have "nosso jeito de caminhar," their own way to walk, which allows them to combine traditional and market forms to produce and commercialize, and to establish partnerships with researchers and entrepreneurs.

Commoditization of Traditional Knowledge

By contrasting the case study of traditional communities of babassu breaker women with those of the Indigenous Ashaninka people and the family farmers' RECA Association, one may notice diversity in the expression of their identities, knowledge, and relations with the market. The Ashaninka identify themselves as Indigenous people on the basis of their common origin and ancestral ethnicity expressed in language, immaterial, and material culture. Interviewing Ashaninka leaders one learns that, by their own definition, Ashaninka is the person who owns Ashaninka's knowledge of how to live on this earth, and this knowledge includes participation in the market under their own terms. According to the market logic, the Ashaninka would profit more from the partnership with the researcher who created Tawayá and installed a processing plant to extract murumuru, as compared to leaving the murumuru out of the market while the Ashaninka themselves did not have the capital for such investments. However, the Ashaninka were certain that they were the owners of the knowledge about murumuru, and demanded reparation from the researcher who took advantage of local cooperation against their will.

The Quebradeiras identify themselves as traditional communities while acknowledging that the invention of mesocarp flour has Indigenous origins. However, they assume the ownership of the knowledge about how to extract and sell mesocarp flour collectively, as a means to prevent oppression by merchants and landlords and fight for political transformation—tradition here is more related to the historical search for freedom from patron than the mesocarp flour recipe. Participation in the market is regulated by local rules on when and how to gather babaçu fruits, and not necessarily by profit making.

¹⁶Family Agricultural School is an alternative model of rural schooling based on the "Pedagogy of Alternating," in which the students spend 15 days each month at school in a boarding scheme and another 15 days in his or her rural community researching or applying what they learned at school. This method began to take shape in 1935 when family farmers in France struggled for a differentiated system of education to attend to their specific needs. This system was introduced to Brazil in the late 1960s. The promoters of this system believed that youths should not be forced to leave his or her community to receive education; learning about what they actually do is a privileged process; the community should be responsible for the education of their youths; and models of education are political in the sense that may aim at either maintenance or transformation of power distribution in society.

At RECA, only the rubber tappers recognize themselves as traditional communities, but they joined immigrant family farmers of European descent to form the RECA Association. Now, both are recognized as a local community, merging their commitments on a common project. Historically, the rubber tappers owned the traditional knowledge about the native species and their uses. However, to better participate in the market, this traditional community strategically shared this ownership with immigrants and now participate in negotiations with researchers and industries taking advantage of their knowledge.

Despite having varied knowledge shaped by diverse heritage and tradition, all three cases share a type of knowledge production that emerged from historic antagonistic relations and contestation against dominant sectors of society and state governments. Only after years and even generations of struggle, they were recognized as deserving of public support. However, despite this similarity, we can learn from the case studies that the greater a group's integration with and dependence on the market, the greater the possibilities to conciliate their views on knowledge ownership and benefit sharing with the perspectives of the researcher and industries. Distinct economic incentives and trajectories, as well as political understandings, influenced the way each group conducted these relationships regarding use of natural resources. Acselrad (2012) demonstrated that since mid-1990s, the Brazilian government, enterprises, and multilateral entities are engaged in efforts to neutralize the environmental struggles by local groups. Our study suggests that partnerships to transform extractive resources produced through traditional knowledge into commodities are a strategy of these efforts, sanctioned by new laws. Nonetheless, Acselrad (2012) affirmed that organizations rooted in their social contexts, practicing a "critical ecologism" have maintained their actions of resistance:

The struggles for environmental justice, such as those characterized in the Brazilian case, have combined: the defense of rights for culturally specific environments—of traditional communities located in the frontiers of capitalist and market expansion; the defense of rights to an environmental protection against socio-territorial segregation and the environmental inequalities promoted by the market and sanctioned by the State; the defense for rights to fair access to environmental resources, against the concentration of fertile land, waters and soils in the hands of the strongest economic interests in the market. (p. 47)

We ought to consider the plural composition of society and the specificities of those joining these struggles, highlighting the *sui generis* nature of traditional knowledge while emphasizing the risks brought about by a process of knowledge commoditization. Issues of knowledge ownership and the advantages of cooperation among entrepreneurs, researchers, and communities refer, above all, to questions about the rights of each party in a given state. Moreover, such rights are not conceived in an economic, political, and social vacuum. They are formulated in the realm of very tangible, historically constructed social and governance spaces. They are affected by the ways of governing adopted by authorities of the societies in respective states.

We face environmental problems because of processes in which nature has become a commodity in the market (Derani, 2002; Edelman, 1976; E. Moreira, 2007; Ost, 1995). Then we face the question as to whether we can solve these environmental problems by creating mechanisms and adopting strategies that introduce traditional knowledge and communities within these market processes.

According to a quote attributed to Einstein: “We can't solve problems by using the same kind of thinking we used when we created them” (Harris, 1995, para. 28). Reflecting on our research experiences, we learned that the implementation of the Provisional Act 2186-16/2001 and the introduction of traditional knowledge within market-based mechanisms have given little or no control to traditional and local communities in the Amazon region. This is because, in their way of life, nature or knowledge about nature are not something to be merchandized. This does not mean that traditional communities do not obtain or derive marketable products from nature. They do sell them as merchandise in the market, and they want and deserve good prices for them. Moreover, they deserve access to conditions and resources to develop new technologies to improve their production as they wish.

However, for some communities, nature and knowledge per se are not considered commodities, whose profits can be privately appropriated. Past studies have shown that access to traditional knowledge is protected against commoditization among peers by acts of “gift-giving” (Mauss, 1974), in culturally established collective systems. In relation to external researchers and entrepreneurs, it is necessary to consult with them to establish what kind of categories and instruments are to be protected as part of their collective rights. For this, there are traditional communities elaborating community protocols to establish their own terms of consultation.

It is important to remember that the juridical categories “subject of right” and “contract” are master pillars of the private order in the modern juridical systems (Carbonnier, 1983; Edelman, 1976; Roppo, 1988). These categories were created to secure free circulation of goods and capital in liberal capitalist economies. According to Derani (2002), while treating traditional communities as subjects of rights to sign contracts under the Provisional Act 2186-16/2001, the Brazilian government has incorporated traditional knowledge into the market.

Empirical evidence shows that, as new subjects of rights, traditional people and communities became entitled to potentially dispose of things such as knowledge and genetic resources as the rightful owners (in the private sense of proprietors). Therefore, they may lose the “full claim, authority, power, dominion” (Webster, 1994, p. 1032) as a collectivity over a common resource. Benefit-sharing contracts signed in market-based ways of governing may just assure secure access and circulation of knowledge as merchandise for those who already control the economic field—the companies.

To implement the CBD in the national juridical system, the State has employed the usual juridical categories of “subject of rights” and “contracts,” which are related to the private order. But the state has incorporated the newly recognized subjects—traditional people and communities, who do not always conceive what they own (lands and knowledge, for example) as private goods, but as commons. As a juridical category, the contract delineates the complex ordering of the private relations involving distinct subjects of rights, and its essence is to make an economic transaction possible in the market (Roppo, 1988).

Once a modality of contract—such as benefit sharing contracts—is considered legal in the national order, the complex historical context and the distinct traditions that gave origin to its juridical construction are disregarded; its connection to the contradictions of society is elapsed. In the hazy processes of benefit sharing between researchers, companies, and communities, the dominant focus on financial aspects in the private order prevails, and the assumption that all members of that nation have

equal “individual freedom” and “autonomy of will,” as recognized in the General Theory of Contract (Lobo, 1986), becomes questionable. Resources such as knowledge and biodiversity that were traditionally conceived as the commons are now treated as goods suitable for transactions between private subjects with “individual freedom,” regardless of the negative effects of these transactions on biodiversity and cultural and social cohesion (Araújo, 2002).

Experiments Carried Out By Traditional Communities

Since 2008, the Babassu Breaker Women’s Movement has shifted its focus from the domain of formal rules and norms regulating access to traditional knowledge to the domain of lived rights, which have been built through daily practices of their ways of life. This repositioning put more emphasis on an intersection between the law and the policy. The bottom line is that struggling for rights is a matter of changing how power is organized and distributed in a society. To do this, they have invited other traditional communities to discuss their experiences—both similarities and differences—regarding the CBD implementation. Aware of the contradictions in a state in which market-based ways of governing predominate, they are also dealing with the practical issues about on-going processes in accessing traditional knowledge and benefit sharing. Despite the social and economic diversity among the participants of their social movement, the babassu breaker women and invited representatives from other traditional communities made preliminary recommendations in September 2011. Some of them are listed below:

1. When negotiating with companies, a community needs a plan to maintain its own integrity: neither leaders nor collaborators should respond to the company individually, on behalf of the group, alleging greater efficiency. The dialogue must be kept in collective spaces.
2. During the process of formalizing prior free and informed consent, community representatives should not sign without demonstrating a collective consent: a document registering the meeting where the whole group has consented should be attached.
3. Traditional communities must demand their rights to access legitimate and qualified collaborators and advisors for deepening the discussions and supporting them in negotiations. These are new grounds of knowledge for all: communities, researchers, entrepreneurs, governmental, and non-governmental agents should engage in collective social learning.
4. Disrespect against the rhythms and timing of the community is not acceptable—no matter how long it takes to find the right information and collaborators, and to reach collective decisions. The community should not accept imposition by the company to expedite the process.
5. It is necessary to demand transparency and ethical conduct from all parties. Governmental and non-governmental agents may suggest favorable opinion towards the company, because they want to regularize their actions without prior informed consent.

6. The community needs to identify what kind of information or practice is non-negotiable. The transformation of ways of life happens every day, but communities must control it as much as they can.
7. Communities should not sign agreements of exclusivity with any given company.
8. Companies may seek to demand secrecy clauses in contracts or other instruments. It is their responsibility to keep their industrial secrets. Anything discussed with communities are up to the communities themselves to decide if and how to communicate. Communities should not accept restrictions on their freedom to share information about agreements and processes, including information about negotiated payments.
9. Communities must be careful when speaking to the media about accords, not to overestimate the companies' benefits and underestimate the community capacities.
10. Companies may offer payments to individual members of traditional communities for the use of images and for speeches, without previous discussions at the community level. Communities should discuss this provision and decide whether or not to accept such use.
11. Communities must be aware that sometimes the pressures exerted by companies are not perceptible or not perceived by all members. Companies' agendas should not define communities' agendas.
12. Although relationships between a company and a community, and even with advisors and consultants, may appear harmonious, it is important to assure the community's control in the selection of participants in decision-making meetings and other privacy rights.

Other communities are working on community protocols as well.¹⁷ Reflecting on these concerns, we learned that, in market-based ways of governing, researchers and entrepreneurs will engage in relationships with traditional communities to the extent they achieve good effects in the market. However, in alternative ways of governance as sought by some Indigenous people and traditional communities, researchers and entrepreneurs should not take advantage of local cooperation for their own projects. As the scientific and entrepreneurial actors already enjoy greater advantages in mainstream society, they should instead be the ones to support traditional communities' projects. In alternative ways of governance, such as those attempted in Ecuador and Bolivia, in which Nature itself is considered a subject of rights, Indigenous ways of life and cosmovision are recalled to drive society's relation to nature aimed at "buen vivir" (*Sumak Kawsay*, in kechwa) or good living (Gudynas, 2009, 2014).

Final Considerations

Having ratified both the CBD and ILO 169, Brazil has taken formal steps toward complying with its obligation to assure Indigenous and traditional people and communities' rights to their knowledge. However, a prevalent market-based way of governing its society has created an extreme power imbalance,

¹⁷ For an example of community protocols, see Gomes (2015).

which prevent effective implementation. The use of categories founded in the private order of the modern juridical theory has not assured collective rights for the people and communities. Instead, the adoption of instruments such as subjects of rights and contracts may result in transforming knowledge into merchandise.

As the three cases above have illustrated, Indigenous peoples and local communities may have diverse approaches toward the question of accessing traditional knowledge and benefit sharing, depending on how they want to be related to markets. Some local communities consider that having companies as partners can improve what they want from forests. Others wonder what forests want from them. Diocina Lopes, a babassu breaker woman, has taught to our research team:

What I like the most in my life is to get into the forest. I sit there for a good while. It refreshes our mind and so we learn. It is the best teacher for our people . . . it is this university, you know, the universe. You look at these forests and think: What do they want from us?" (personal communication, 2011, interviewed by Pro-cultura research team in Ludovico village)

Despite their differences, all three cases have shown that local people are commonly aware of their rights to free, prior, and informed consent, and to participating in subsequent decision-making processes. They all perceive and claim the ownership of knowledge as a collective right. Governments must, therefore, incorporate this right into policies. A primary step in doing so is by establishing adequate public spaces and enabling conditions for debates in which the communities themselves define rules for interactions with researchers and entrepreneurs interested in the scientific achievements and economic benefits derived from their knowledge.

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