Mahogany intertwined: Enviromateriality between Mexico, Fiji, and the Gibson Les Paul

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Abstract
This article builds a theory of enviromateriality through a global ethnography that engages both the material culture and materiality of a tree species, Honduran mahogany (*Swietenia macrophylla*), and the global political ecology of forest conservation. The author seeks to understand what Adorno calls the ‘constellation’ between people and mahogany by tracing human–nature relations through the global commodity chain focusing on one particular artefact, the Gibson Les Paul, an iconic solid wood electric guitar made primarily of mahogany grown in Mexico and Fiji. Enviromateriality considers three phases in which to examine the material and materiality in a variety of processes that are interconnected. These phases allow for an examination of local community relations with mahogany as trees and products, and whether certified mahogany helps create sustainability and social justice. The author also examines guitar players’ relations with their mahogany guitars, particularly focusing on the aesthetics that make the Les Paul desired, as well as the sonic and tonal agentic force that they consider mahogany to have.

Keywords
Fiji, guitars, mahogany, Mexico, political ecology

It is a question of surrendering to the wood, then following where it leads by connecting operations to a materiality. (Deleuze and Guattari, *A Thousand Plateaus*, 1980: 408)

Honduran mahogany and the Gibson Les Paul

There is little doubt that Honduran Mahogany (*Swietenia macrophylla*) is one of the most highly desired tropical woods in the past 200 years. It has been used to produce a
variety of artefacts from fancy furniture (Anderson, 2012) and wood floors, to musical instruments, particularly, guitars. Its extended use and exploitation, both legal and illegal, placed mahogany on the list of most endangered species by CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) in 2003. The Maya Forest of Quintana Roo in Mexico is well known for mahogany agro-forestry. While researching documents in the region, I came across a document that laid out plans for an association of forest ejidos (communal landholdings) from Quintana Roo, Mexico to supply mahogany to the Gibson Guitar Company for a new model called the ‘SmartWood’ Les Paul. Soon after, I noticed a model being promoted by Gibson called the Les Paul SmartWood that was made from mahogany certified by the Rainforest Alliance’s SmartWood, one of the earliest programs for wood certification (see Figure 1).

As Gibson worked the certified mahogany market in Central America, a new unexpected actor entered the world of mahogany and guitar production: the Fiji Islands, whose mahogany was transplanted when it was still a British colony. With access to mahogany supplies, Gibson is able to mass produce hundreds of electric guitars a day. Gibson Guitar Company makes profits of close to $500 million annually (Porterfield, 2007) and is one of the top guitar companies. The Les Paul is not only the guitar choice of ‘guitar heroes’ like Slash and Jimmy Page but also guitar hobbyists and collectors that rave about its tone and its aesthetic appeal. Vintage Les Pauls from the 1958–1960 era command between $30,000–$250,000 and their modern day reproductions between $1,500–$7,000 USD.

These events and the artefact’s place in popular culture and global conservation strategies present a snapshot scenario of the entanglements of globalization. The Gibson Les Paul is an American icon in the world of popular rock music that contains strong symbolic elements of youth culture, race, class, and gender (see Waksman, 1999). It is also a commodity that contains aesthetic and sonic qualities and at the same time depends on a specific tree species grown and harvested by people in tropical locations around the world. Gibson has set up a global commodity chain that supplies them with ‘sustainably certified’ mahogany by the Forest Stewardship Council (FSC) grown in Mexico, Honduras, Guatemala and Fiji. The Les Paul’s production and aesthetic desirability entangles local forest communities in global networks and creates the possibility of endangering its main raw material as well as playing a role in global deforestation. The entanglement of Gibson and one species, Honduran mahogany, is a jumping off point for my study of encounters of material culture and global political ecology.

To be sure, guitars are not the only end products of mahogany, but guitar production and consumption offer a window to understand why this material continues to be in demand and desired on a global scale while questions still remain regarding sustainability, social justice, and the role of the consumer. Using the linkage between the Gibson Les Paul and mahogany, and based on fieldwork in Quintana Roo, Mexico (where mahogany is a native species) and in Viti Levu, Fiji (where mahogany was introduced and now grown in plantations), I propose and illustrate a framework for analyzing materiality with global political ecology. I call this framework ‘enviromateriality’. I argue that this perspective will shed light on the complex chain of production and transformations of mahogany into guitars and how the perceived properties of the material are used to market them. It also sheds light on how forest communities, guitar builders, and players...
are entangled in a meshwork of power relations, mediated by the making and the playing of the electric guitar.

**From materials to materiality and back again**

Before explaining the details of what I mean by enviromateriality, it is important to trace the theoretical debate that influenced how I will tackle the links between woods and guitars from production to consumption. Although there is a wide and sophisticated literature on material culture studies, I was drawn into a debate between Ingold (2007) and Miller (2007) over the role of materials, their properties and their consumption. This debate was initiated by Ingold who challenged Material Culture Studies to pay more attention to the properties of ‘materials’. This re-focus on materials by Ingold was a
provocative response to materiality studies that according to him ‘have hardly anything to say about materials’ (Ingold, 2007: 1, original emphasis) because of their overwhelming focus on the consumption of objects that are finished products, for example food, clothing, electronic devices, etc. For Ingold, materials are not fixed, but relational, because of how they are caught up in lifeworlds. While Ingold importantly began the debate by suggesting a turn to the essence and properties of the ‘material’, I contend that this perspective offers too narrow an explanation and fails to account for larger, global processes (as Miller, 2007, suggests) and the material consequences for the use of a particular matter.

To break the impasse between material and materiality as it relates to the mahogany–guitar nexus, I use the concept enviromateriality to shed light on the constellation of social relations and meanings. Instead of being two extremes, both material and materiality form a ‘unifying moment’ (Adorno, 1990: 162). Adorno’s concept of constellation is very useful in helping to bridge the gap between Ingold’s and Miller’s perspectives on material culture. For the material aspect, each object or artifact is part of a constellation, which embodies both historical relations and relations with other things, and thus a materiality. As stated by Adorno (1990: 163), ‘the history locked in the object can only be delivered by a knowledge mindful of the historic positional value of the object in its relation to other objects’; therefore, ‘cognition of the object in its constellation is cognition of the process stored in the object.’ The idea of objects having histories in relation to others underscores that they are not static and ‘have come to be what they are under certain conditions’ through a ‘process of becoming’ (Adorno, 2008: 206). In this sense, constellation resembles the concept of assemblage (Deleuze and Guattari, 1980) or a meshwork (Ingold, 2007) as it highlights the importance of uncovering objects in relation to other as parts of the constellation. As social theorist Alison Stone puts it, ‘Adorno’s constellations capture the particular historical relations that have shaped an object’ (Stone, 2008: 59, original emphasis), therefore, in constructing ‘constellations, we assume that objects are historically produced, as we use concepts to assemble narratives about aspects of these histories. This approach applies both to understanding human-made cultural and social artifacts, and understanding natural things’ (Stone 2008: 59). Including ‘natural things’ in this equation is germane to understanding the dynamic relations between humans and non-human beings, such as trees, for example. In this case, the assemblage of the Les Paul and mahogany forests is a critical example of the production–consumption nexus between trees and guitars, between materials and materiality. Above all, I believe this case study fleshes out the complexities of the constellation of globalization, material culture and environmental conservation.

**Enviromateriality**

Not all artefacts share the same characteristics, or uses, and this plays a key role in how humans relate to them. For this reason, I propose a framework that is sensitive to not only the material in question but to the materiality of the end product and the political ecology that underlies this material–materiality spectrum. A central component of the enviromateriality model is the perspective of political ecology. Political ecology is an established framework that incorporates the concerns of political economy, exploitation, and
underdevelopment as a way to explain environmental degradation as a consequence of capitalism and conflicts over access to resources (e.g. Escobar, 1999; Martínez-Alier, 2002, Peet et al., 2011) and its cultural manifestations (Biersack, 2006) in diverse biological and cultural regions of the world. Political ecology ethnographies have shown that forests that are rich in biodiversity are highly contested areas (e.g. Dove, 2011; Tsing, 2005). As sustainable development and modern conservation strategies such as biosphere reserves began to impact forest-dependent communities, political ecology scholars problematized biodiversity conservation (Brockington et al., 2008), wood certification (Eden, 2011; Klooster, 2010) as well as the role of corporations in forest conservation (Hardin, 2011). In essence, political ecology provides a foundation to understanding global wood and forest politics.

My study integrates political ecology and the importance of materiality through the enviromateriality model. It focuses on three phases (see Figure 2). It goes from the materials and materiality and back again, in which materials turn into objects that produce a certain materiality. These phases are not mutually exclusive and are conceptual in nature. The larger project will result in a detailed ethnographic description of all the phases; however, in this article I limit myself to outlining the principles of enviromateriality and providing a few examples from the different phases, which are not intended to be exhaustive, but enough to give an idea of how they form a constellation.

The first phase (see Figure 2) considers the material in question. This prompts several questions that are not exhaustive but give an idea of the kind of power relations that are involved. What are its properties? What is its historical geography? In other words, in what ways has the material (mahogany) been entangled with people and how have they mutually influenced each other? What kind of division of labor is enacted? Who has access to the resources? Do the people own or have legal entitlements to the land, or are the people landless and engaging in illegal activities in order to maintain their livelihoods?

Figure 2. Enviromateriality model.
What is the system of land tenure and how does it impact access to resources? What roles do gender, race or ethnicity play? In addition to the political economy inquiry, materiality entanglements rise to the surface. A particular materiality develops between people and resources in this phase and this needs exploration.

The second phase is the building and making. This phase acts as a sort of liminality in which the raw material is transformed into something else. This process of transition is a process of becoming. In the case of instrument making, instruments relied heavily on the process of enskilment (Ingold, 2000). Today, it is an in-between transition that relies heavily on technologies and factories for mass production. However, this does not mean that luthier skills are not needed. In the case of guitars, machines can nowadays rough-cut the basic shapes of the guitar as well as other hardware, but nevertheless, there is still a large amount of human skill involved in the fine details from sanding and finishing to adjusting all the hardware to make it playable. The division of labor is also present in the case of wage earners. Another important aspect is to understand the market forces that are behind the production of the commodity. There is a wide range of production of guitars from small independent luthiers to employees of large factories such as Gibson. Here, too, there is an experience of materiality between the wood in transformation and the builders comparable to the relation of the work of art and the artist.

The third phase is the consumption of the finished commodity. This is one of the main areas of materiality studies, which has tackled issues of consumption in modern society, senses, commodity exchange, and identity (Tilley et al., 2006). The early work of Miller was influential in consumption studies because his work countered the anti-materialist assumption that all consumption is the expression of capitalism. His later work contributed to the materiality of everyday life (Miller, 2005, 2010). Therefore, the experience of the fetishism of commodities is important, but at the same time limiting, as materiality studies have shown. In the case of the guitar, the aesthetics and feel of the instrument are important but as a sounded instrument, it is the tonalities that emanate from the coupling of the player and the instrument that creates a particular aspect of materiality that I call ‘sonicality’. It refers to its experience and how it creates a particular meaning, which enhances the experience of materials, their properties and their visual and sonic attributes. In the following section, I will elaborate on the three phases of the enviromateriality model as it pertains to mahogany and the artefact, the Gibson Les Paul, drawn from my ongoing research.

**The material: Honduran mahogany**

In this section, I offer a brief overview of the social life of mahogany, the historical constellation of how it ended up being used in one of the most iconic musical instruments in the last 50 years and continues to be used today, regardless of its over exploitation and listing as a threatened species by CITES. I focus on its use in southern Mexico, where it is a native species and where it has coevolved alongside humans since before European colonization and its transplantation to a different region of the world, Fiji, a sign of its successful adaptation and an example of the entanglements of species exchanges in the global era. Of course, these are not the only places that grow and export mahogany, but are examined here because of their role in supplying wood to the Gibson Guitar corporation.
As a stringed instrument maker, Gibson has relied on what is commonly known in the guitar world as ‘tonewoods’. These woods are selected to be used in instruments based on their characteristics of being a wood that is easy to work with using hand tools, has good resonance in the finished products, and in some cases, has a desired aesthetic appeal (color consistency and grain patterns). Based on these elements, mahogany became an important source for the construction of mandolins and early acoustic guitars at the turn of the 20th century. In the 1950s, when companies like Fender and Gibson, both pioneers of the electric guitar, came up with their designs, one of the defining features was that it had to have a solid body construction to prevent feedback when amplified. Mahogany became the main wood for the body and neck of Gibson Les Pauls in 1952.

Prior to its use in guitars, the global and material life of mahogany begins in the Americas. Honduran mahogany (*Swietenia macrophylla*), is considered to be the wood from trees of the botanical genus *Swietenia*, which is native to the Americas. Honduran mahogany grows naturally from the lowlands of the Yucatan peninsula, across Central America, to the north-eastern Amazon rainforest in South America. As a tree native to Mesoamerica, mahogany has had an important use for its native inhabitants. The Maya helped reproduce the species in the forest because mahogany benefits from the ‘disturbance’ caused by swidden agriculture (Steinberg, 2005) as well as natural ones such as hurricanes (Snook, 2003).

Trade and exploitation of Honduran mahogany began in Honduras and Belize by the British in the 1800s when Cuban mahogany (*Swietenia mahogani*), grown in the West Indies in the 1700s, declined (Bowett, 1996). The main reason for its decline was its massive use for furniture and cabinetmaking in early colonial America (Anderson, 2012). This exploitation extended south to the north coast of Honduras and to the north of British Honduras to the Mayan territory of the eastern Yucatan where the Maya were rebelling against Mexican elites in the Caste War of the Yucatan from 1847 to 1901. Giving concessions to exploit mahogany gave the Maya the opportunity to exchange weapons and gunpowder and other supplies from the British in order to fight the Mexicans in the Caste War of Yucatan between 1847–1901 (Sullivan, 2000).

Mahogany’s history is also one of transplantation, as happened to many other species, by the process of colonial exchange. Honduran mahogany was brought to Fiji from British Honduras (Belize) via the Kew Royal Botanical Gardens in England after Fiji established its own botanical garden in 1881 and by 1892 they had 150 trees planted (Kew Botanical Gardens, 1892). At the time, the British Empire experimented with the distribution of seeds of several tree species and crops throughout the world to test them for opening future markets (Brockway, 2002; Horne, 1881). It grew successfully and after several years it began to produce seedlings, opening the possibility of expanding its use beyond the initial tests and early ornamental use alongside roads (Kew Botanical Gardens, 1892) into a marketable timber product. It was around this time that a forestry unit was created within Fiji’s department of agriculture. Soon, the colonial government decided to develop mahogany plantations as a development strategy. They developed a scheme in which they would lease land to native Fijians for a period of 99 years without any provisions for ‘stumpage’, or payments for the amount of wood extracted. It was not until 1952 that the first mahogany plantations were planted in the southern and north-western region of Viti Levu.
As plantations grew, mahogany became a sort of ‘green gold’ leading to tensions over who would benefit that led to a military coup in 2000 that lasted until July 2000 (Kahn, 2000; Narayan, 2011). After the coup, the government introduced into Parliament a bill called the ‘Fiji Mahogany Act’ in July 2003. It had a provision to allow the government to inject public funds into the Fiji Hardwood Corporation. Soon, another military overthrow took place in 2006 bringing Commodore Voreque Bainimarama to power. A concession was given to a timber export group called Sustainable Mahogany Industries (SMI). This caught the attention of the Gibson Corporation who then began their association with SMI. Because of the vast reserve that Fiji has, Gibson sought to get the best of what they produce. To that effect, echoing Mauss’s *The Gift* (1990[1950]), Gibson’s CEO sent a gift to Fiji Prime Minister Commodore Bainimarama, a $7,000 Gibson Custom Shop Les Paul made with Fijian mahogany in 2011 (see Figure 3). Later that year, Banairama travelled to Tennessee in September 2011 but the agreement was not ratified (*Nashville Business Journal*, 2011) until May 2012. In the agreement, Gibson received an exclusive deal to purchase the best quality grade mahogany that Fiji produces.

As this section shows, there is a profound historical link to the ‘process of becoming’ of Honduran mahogany with guitar production. It is tied to a colonial past that has been very present in the lives of its subjects and in the kind of exchange and uneven relations in which they find themselves. In the next section, I briefly cover some of the dynamics of mahogany harvest in southern Mexico in the Maya Forest and Fiji as well as Gibson’s entry into the ‘sustainable’ mahogany trade.

**Harvesting/building/making**

One important facet of mahogany production is the labor and knowledge that goes into growing and harvesting in order to supply the timber to the market. The amount of physical
labor and the risk of serious injuries became evident while doing fieldwork. The community where I conducted research has been supplying mahogany to corporate concessions since its founding in the early 1900s. One elder of the community whose father worked harvesting mahogany told me ‘Imagine when my father worked in the ka’ax (forest in Maya), there were no electric saws like today … all work by hand and with donkeys to pull the kanak che’ (mahogany).’ And he continued, ‘You had to stay several days in there [the forest] sawing, sleeping in hammocks, then bring it little by little to the main road. No trucks like today!’ Although it does seem that it was intense labor in those days, that doesn’t mean it doesn’t continue to be. Working in the dense tropical, bug-filled forest is still no easy feat.

One morning, in the Mayan community of X-Hazil, in Quintana Roo, Mexico, I accompanied a work crew on a mahogany cutting expedition. The crew of 10 jumped in a beat-up, rusty GMC flatbed truck, with worn-out tires. We drove on a dirt road that had been rutted out by the previous night’s rains to enter the forest. The road was not a passable traveling road for most vehicles. An incredibly bumpy and uneven terrain made for an uncomfortable ride for those of us sitting on the back bed. The bouncing made the ride precarious as there was nothing to hold onto since the back had no rails and it was even more challenging when we drove through low-hanging tree branches. One of the branches had a wasp’s nest, and I got five stings on the back of my neck and two in my forearm as I attempted to cover my head. The crew laughed as some of the curse words I’ve learned in Maya slipped out. They felt sorry for me at the same time. ‘Ootsilech! (poor you!) Your first time in this forest and you get stung. That is how the forest welcomes you’, one of the crew members said to me once we arrived at the base camp after a 20 km drive that seemed like an eternity (2 hours).

Once in the base camp there were mahogany logs that had to be prepared to be loaded in the truck the following day. They cut them into sections to make sure there were no hollow spaces inside the tree trunk. Next, they measured the length and the size of the logs. One of the crew members wrote down all the numbers in a notebook to keep track of the quantities as they have to provide the numbers to the SEMARNAT, the government agency in charge of granting annual permits. Once finished with the pile of mahogany, we jumped in the truck and went to another gathering area. The crew followed the same process. There were people with visible scars on their bodies, others with missing fingers from their exposure to dangerous tools and big trees. These body marks in many ways are reminders of what the human–mahogany entanglement means for the Maya.

All the labor they were carrying out was to fulfil an order by the main mahogany supplier in Chetumal, the capital city of Quintana Roo. This supplier exports mahogany to North American Wood Products (NAWP) in Oregon, to enter into the US market chain. NAWP, in turn, distributes the mahogany to Gibson. Before making the journey, a representative from Gibson inspects the wood in the sawmill in Mexico as they specifically request that the wood should be pre cut into neck and body blanks (see Figure 4).

Since the launch of the SmartWood series, Gibson has been employing ‘green’ rhetoric by arguing that countries should have a certification system so that the market can pay premium prices for the wood and thus combat the causes of deforestation. According to my source, mahogany growers get paid between $7 per neck blank and $5 for a body blank by Gibson. These will end up in guitars that will retail between $1,000 on the lower
end to $7,500 for Custom Shop on the higher end, with some limited production artist replicas getting over $10,000. That is a vast amount of profit. In Mexico, mahogany can be harvested at a minimum of 25 years, although experts agree that proper quality mahogany should be over 50 years old to reach the optimum size.

In Fiji, mahogany is grown on plantation lands that are owned by native Fijians under a complex land tenure system known as mataqali (Tanner, 2007), leased by the government and managed by Fiji Mahogany Industries. They award via exclusive concessions to the corporations that run the processing operation and exporting. One company called Sustainable Mahogany Industries (SMI) has been the main exporter of mahogany since 2004. They supply Gibson via a company from Washington state. SMI produces and prepares 4,500 bodies and necks for export to Gibson every month. ‘Concessionary politics’ (Hardin, 2011) play an important role in the timber trade and the arrangements of how these concessions operate raise many suspicions. There have been accusations of corruption in handing out who gets the concessions for processing and exporting wood. This is a very sensitive topic because it was one of the reasons for the 2000 coup.

The experience in Fiji differs somewhat from southeastern Mexico. In Fiji, I was able to witness the mahogany forestry dynamics in Savu Village, Vugalei District. The colonial government leased land that belonged to the mataqali with promises of development. Villagers expected to benefit from the mahogany rush, but complain that the government hires a company from the outside to harvest and that foreign saw millers get the best mahogany, leaving locals with the lowest quality to sell. Interviewing people from Savu who were present at the time of the initial plantings in the 1960s, they complain of the effects that planting mahogany had on their health and the health of the forest. Back then they used chemicals to poison native forest to pave way for the
plantation without any protection. It also affected native wildlife, which has never quite recovered.

Once the wood is exported out of Mexico and Fiji, it reaches the factory to continue its process of becoming and transforming. Unlike traditional luthiery, in which the instrument maker works on every aspect of the production of the instrument from beginning to end, the Gibson Les Paul is mass produced in a factory facilitated by special machinery and a division of labor between the different stages of production in an assembly line. The cutting of the bodies and necks, gluing, applying binding and inlays, installing and levelling frets, sanding, applying color and finish, installing electronics, stringing the instrument, and setting up for optimum playability by adjusting neck and intonation are all done by different work groups.

What is the materiality of mahogany–guitar for people that work in the factories? For builders it is a livelihood but working with the materials that end up in the guitar has its own materiality. If we go back to Ingold (above), we remember his project is to assign primacy to the process of formation over final products. That means that in this case he would have given primacy to each individual worker as they engage with their specific tasks with the material. He argues that when the carpenter works, there is more than meets the eye in terms of the dynamic between the wood and him or her: ‘no two strokes of the saw are quite alike’ (Ingold, 2011: 216). While I agree this is true, there is more to the story, but Ingold doesn’t continue. Factory employees who spend all day sanding necks, which is a task that needs a particular skill and feel for the wood and shape, are there as wage earners. Giving primacy of production to an independent luthier is different than for a wage earner who produces one or two tasks in a factory.

The Artefact: The Gibson Les Paul

The form of wood, for instance, is altered if a table is made out of it. Nevertheless, the table continues to be wood, an ordinary sensuous thing. But as soon as it emerges as a commodity, it changes into something that transcends sensuousness. (Karl Marx, Capital)

The electric guitar has been truly revolutionary in Western popular music since its ‘emergence as a commodity that transcends sensuousness’. It took the guitar from the background of musical groups into the forefront not only as a symbol but as the new amplified sounds took over emerging sounds and ‘noise’ (Attali, 1985), particularly for rock’n’roll. In effect, the electric guitar created a new, distinct element in the music world. An element that turned this object into an instrument of desire that influenced several domains of society: youth, gender, race, and class (Waksman, 1999).

Of the solid body guitars, the Gibson Les Paul is one of the two most iconic along with the Fender Stratocaster. There were two models: the Standard and the Custom. The Custom was an all mahogany guitar finished in black, and the standard was a mahogany body and neck with a thinner maple cap on the top of the body that was finished in gold, earning its nickname the Goldtop. Between 1958–1960, the Les Paul Standard ceased to have a goldtop finish and instead debuted a cherry sunburst finish on the maple top that resembled old archtop acoustic guitars from another era but also showed the distinct curly maple figure that made each instrument unique. Paradoxically, Gibson phased out
the Les Paul in 1960 owing to low sales. All until a new wave of British and American musicians, influenced by African-American blues (Eric Clapton, Jeff Beck, among others) rediscovered the Les Paul, influencing with their music a new generation of guitar players (Bacon, 2008). It sparked interest in the discontinued guitar and, little by little, they became one of the most sought-after instruments. There were approximately 1,700 made between 1958–1960. In many ways, they have become the Stradivarius of guitars valued between $100,000 to $250,000 depending on the condition and history.

Apart from the availability, what is it about these mass-produced guitars that makes them so popular? Dan Erlewine, a renowned luthier, argues that one of the keys to the sound is the material foundation:

> Tonewood selection is part of Gibson’s heritage, and they have always offered guitars built, at least in part, from select Honduras mahogany. Honduras [sic] is stable, good-looking, great sounding, and reasonably lightweight. It produces the warm, sweet, midrangy tone for which many Gibson guitars – both electric and acoustic – are famous. (Erlewine, 1998)

The guitar is the result of the combination of several materials. Each contributes to the artefact’s totality and with the help of a talented player can produce a wide range of sounds and songs for everyone’s taste and enjoyment. But not all materials are the same or project the same sound. This is why Ingold’s argument about going back to the material is well taken.

Additionally, the commoditization and fetishism associated with it matters. Gibson restarted mass production of the Les Paul in the early 1970s. After a brief decline in the 1980s (because of the emergence of guitar ‘shredder’ virtuosos like Eddie Van Halen who preferred Stratocaster style guitars), Gibson had an economic revival among younger players and also with ‘amateur boomer guitarists’ (Ryan and Peterson, 2001) who grew up listening to the guitar heroes of their youth and who had more money to spend on guitars. Some became performers, others gave up, others were content with being ‘bedroom’ players. Other players collect vintage Les Pauls that, again, sell for over $100,000, or the reproductions that Gibson began to produce in the early 1990s. One trend that began to develop is the practice of ‘relic-ing’, that is, of building and selling new guitars with signs of use and wear as if they were relics or vintage instruments. This is somewhat similar to what Miller (2012: 94) observes in his denim project about jeans being stonewashed to make them feel already aged and worn.

Another trend is the making of artist ‘signature’ guitars, replicas of the famous owners of 50s Les Pauls (i.e. Jimmy Page). Gibson’s Custom Shop, a unit in the factory that builds the high-end models, requisitioned original owners’ guitars to inspect every detail including scratches, discoloration, etc. and then matched the wear as closely as possible in these replicas (see Figure 5). Most importantly, for these models, the wood, the materials, have to be exactly the same as the original and, hence, the importance of a continued flow of mahogany to meet that demand.

**Wood certification and ethical consumption**

One of the ways in which the enviromateriality becomes a useful tool for analysis is when the constellations of the assemblage from material to materiality crystalize into events that
show the political ecology of materials. One such event occurred twice, in November 2009 and as recently as August 2011, when the US federal government raided the Gibson Guitar Company, under suspicion that they had violated the Lacey Act and imported endangered illegal wood for use in their instruments (Martinez-Reyes, 2012). This event was particularly embarrassing since Gibson’s CEO Henry Juszkiewicz had for many years been a board member of the Rainforest Alliance (nd), an organization that certifies sustainable forest products. It was later revealed that the confiscated wood was not certified and the company settled with the US government agreeing to pay a $300,000 penalty.

Forest product certification is an emerging trend in the timber industry. Certification by entities like the FSC is an attempt ‘at global green governance by harnessing consumer power to address dysfunctional elements in the economy’ (Eden, 2011: 169). Although the intentions of such efforts can be seen as a legitimate attempt to reform the troubles of depletion by making sure that the sources comply with the rules of certification, there is still a long way to go. Many critics argue that certification is not enough and stronger restrictions have to be made. Part of the problem is that in the guitar market, people are not urged to buy instruments made with sustainably harvested wood products unlike some products, particularly food crops such as coffee, in which the fair trade label is promoted by some circles, even though there are still lingering questions about how ‘fair’ fair trade is.

Figure 5. Advertisement for Gibson Custom Shop replicas. Source: Gibson.
Why did Gibson anticipate consumer awareness and begin offering SmartWood models in the late 1990s? My understanding is that two events resulted in the rise of certification: the rise of green rhetoric and the realization that the main source of wood was dwindling. Mahogany is not as easy to grow as tea or coffee. Unless Gibson can find a similar replacement, their supply chain will be greatly impacted if Honduran mahogany continues to decline. Once the market in Fiji opened to the world, Gibson began to import their mahogany. According to CITES, mahogany from Fiji is not restricted under them, only Honduran mahogany in the original countries from the neo-tropics. Therefore, mahogany from the Americas needs to be certified in order to comply with CITES, making it more difficult for its export. Even though Gibson has information on their site about how they support certified wood, and how they have a high percentage of mahogany that is certified, it is not advertised nor is the information made available when someone buys an instrument made of mahogany. The level of environmental awareness is not high among the guitar fan base. Case in point, the one model that was discontinued was the SmartWood but not others that still use certified wood and are not advertised as such.

Another problem with fair trade and certification is that it is still not something that you can truly guarantee. There are profound flaws in the system. It not only affects big manufacturers like Gibson, but also creates uncertainties among artisanal luthiers who cannot access some ‘certified’ wood but who have accumulated stockpiles of tonewoods and materials prior to their banning by CITES. These luthiers are afraid to use these woods because they fear confiscations or fines (Dudley, 2011). During fieldwork in Quintana Roo, I was at the mill when a wood inspector representing Gibson stopped by to observe the milling based on Gibson specifications. He was looking for aesthetic deficiencies in neck blanks and bodies for the presence or absence of wood knots and if they were quartersawn (a method of sawing) instead of flatsawn. The ones that were approved for export had a check mark and the ones discarded had an ‘X’ marking. There was a big pile of Xs on one side of the mill. Perfectly good pieces of mahogany with minor deficiencies that probably could have disappeared in the sanding process were discarded. The wood seller could not do anything with the discarded wood because it had been cut to the particular size that Gibson requested. And so there they were, piles of precious certified mahogany neck blanks and bodies rejected and at least half most likely going to waste.

**Conclusion**

The primary purpose of this article was to put forward the perspective of enviromateriality as a framework of analysis that links material culture studies with political ecology. The material–materiality debate sparked by Ingold and Miller has provided a good platform to rethink the strengths and limitations of each perspective. In this case, their debate has allowed me to illustrate enviromateriality and provide an overview of the material–materiality nexus using the Gibson Les Paul and its main material, mahogany, historically as well as in different stages of production and consumption. This article is not meant to be exhaustive as I am just scratching the surface. There are more detailed examples and ramifications in the research.

In this article, I argued that enviromateriality enables us to break the impasse between material and materiality. I showed how examining the enviromateriality of the mahogany–guitar
nexus sheds light on what Adorno calls the constellation of social relations and meanings. Instead of being two extremes, both material and materiality form a ‘unifying moment’ (Adorno, 1990: 162). The idea of objects having their histories in relation to others underscores that they are not static and ‘have come to be what they are under certain conditions’ (Adorno, 2008: 206). Such conditions reinforce the fact that guitar playing, and music in general, are important in shaping identities and imagined communities (Born, 2012) of guitar players and consumers of music. Dawe (2010) refers to it as a guitarscape. This guitarscape constitutes a world of meanings as people play their guitars, make their music, chase their tones, create their social networks, etc. However, we must not forget what lies within global commodities. Marx initiated the critique with the discussion of commodity fetishism and capitalism’s power to transform materials into commodities while hiding their real value but as Carrier (2010) reminds us, it goes beyond that. It is also about abstracting people, processes, places, whether material or not (p. 674). Commodities take on a life of their own, and are imbued with different symbolic meanings throughout their social life.

The outcome of the federal case against Gibson raises several other questions. Is sustainability possible within a neoliberal framework of conservation? How can the social inequalities from mahogany exploitation be improved in Mexico and Fiji? Is it possible to regulate the regulators and certifiers? Is corporate responsibility insufficient with respect to environmental regulation? How much do musicians bear responsibility? Perhaps a more important, or at least equally important question, is how much profit and how much growth is enough (20% annual growth, according to Gibson) to enable the long-term security of the tonewoods that guitar players greatly appreciate and the wellbeing of communities that depend on it? These are all difficult to answer, but Gibson, using a business model that strives to produce more and more, and makes consumers desire more and more, is contributing to environmental degradation without really realizing the consequences. If mahogany trade continues as it is, it will suffer the same fate as other banned tonewoods. I realize it is not solely Gibson’s responsibility, nor that of the guitar industry but the responsibility of the consumers as well.

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