

INDIGENOUS KNOWLEDGE AND THE SCIENTIFIC MIND: ACTIVISM OR COLONIALISM?

Introduction

Working as an ICT tutor of a course named "Principles and methods of environmental management"¹, I had to review the concepts involved behind "principles of environmental management". After a decade of fieldwork in NWA² my mind was always focused on political interfaces –governments, NGOs (non-governmental organisations), churches, indigenous organisations, conservationists and the armed groups that struggle for control of the territory. I never bothered to produce a checklist of the principles that should be reflected in "fieldwork". Fieldwork meant helping indigenous organisations to secure their territories and, working with governments, NGOs and indigenous organisations in the territorial ordering process.

Many of the researchers that have worked in NWA have referred to indigenous transformation of the environment. I was aware that indigenous "management of the world" had much to do with "environmental management" or "sustainability"³. It seemed obvious to me that indigenous people had the most to say about the management of their territories. They were trying to secure their ways of living and their right to manage the environment. Thus, it should come as no surprise that principles such as empowerment, social learning, intergenerational and gender equity, never caused me a second thought; my fieldwork activities reflected them in an automatic manner. I never stopped to think about the source of these values. Later, while maintaining a discussion forum on the Internet, I had to make explicit to the students that these principles came into being through historical processes.

To engage in the process of territorial ordering required me to understand the values of indigenous peoples and the foundations of such values. I was less interested in understanding the foundation of my own, which were very close to those studied during the course⁴. ICT tutoring for environmental managers forced me to re-think the "nature" of the operations through which ethics come into being.

Through which processes do we naturalise our values? Our values become evident to us when contrasted or reflected. By constructing the 'other' we define our values, and by interacting with that 'other' we slowly change them. This is what anthropological methodology has been designed to do: deconstruction of the self.

In the ICT discussion forum of the course I put into question the conceptual distinction of IK (Indigenous Knowledge) and WS (Western Sciences). I related this discussion to a colleague⁵. She was interested in the role that ICT could play in local scenarios of the developing world. My own interest was on how the distinction IK – WS served as a foundation for environmental management practises and the establishment of principles.

The discussion in the current paper has two parts. In the first part I consider the values that allowed the emergence of ethnosciences. I will refer to some of the political implications of ethnoscientific practice.

¹ICT stands for Information and Communication Technology. The course mentioned is offered by The External Program - Imperial College at Wye (1999/01).

² NWA stands for Northwest Amazonia. See Annex 1, Northwest Amazonian Boundaries.

³ See Forero 2001.

⁴ The principles stated in the course are: duty of care, precautionary, social learning, subsidiarity, sustainability, intergenerational equity, empowerment, transparency/procedural equity, aerial equity, polluter pays (Smith 2000).

⁵ Aragonés wrote "Indigenous Knowledge" - "Western Knowledge". Is this conceptual division still relevant to sustainable development? Aragonés 2001

Producing a summary of this historical process gives us clues to the formation of the distinction IK - WS. In the second part I attempt a de-construction of my own fieldwork (1994-1998) in Northwest Amazonia. My justification is that any transformation of the values of natives and foreigners in Amazonia has implications that should be examined if we want to construct a political ecology of NWA.

It has been the tendency to think of ethnosciences as the invention of anthropology, a way of localising the others' discourses while retaining the scientific status for the discipline; "Anthropology is part of a long tradition in which science was an intrinsic part of what we did. We produced ethnoscience, in which the others had the 'ethno' and we had the 'science' (Martin 1996: 98). This paper suggests that the boundaries between IK and WS are apparent and that the extent to which indigenous knowledge has been inserted into the sciences is broader than commonly been recognised.

The reports, descriptions, affections and theoretical developments of ethnoscientists contain large chunks of indigenous peoples' explanations of the self and the world. These materials provide valuable portraits of the constructions of the self and the other. For their part, indigenous people of NWA took every opportunity to make alliances with foreigners once they were seduced or forced into contact. The researchers that made the alliances with indigenous people contributed most to the formation of ethnosciences

I am not certain that ethnosciences have accomplished epistemological translations, but they have at least provided valuable translations of orders of classification of the environment. Ethnoscientists, consciously or not, have been involved in this project of deconstruction of the self, identifying basic ontological problems. They have difficulties with indigenous inclusion of the "supernatural" into the orders of the "natural", indigenous humanisation of the forest and gardens through the treatment of plants and animals as persons and, the absence of a distinction between self and the environment⁶. Whatever ethnosciences have accomplished they have already had a political impact by providing a space for discussions where techno-scientific projects encounter willingness and resistance from Amazonian inhabitants.

Today, armed groups, (paid by criminal international organisations) slow or prevent accommodations between techno-scientific and local projects. The main international aid received by governments is not used to support the territorial ordering process where this discussion could prosper⁷. Ironically, the funds provided under the USA's security policy strategy, are used for "the war against drugs", in which prohibition for consumers and penalisation of producers makes the criminal industry more profitable. In this way much of the international contribution constitutes a stimulus for the deterioration of the environment and the distribution of misery⁸.

⁶ For human ecology among the NWA groups see Arhem 1990; Correa 1990; Forero 1999; Pineda 1990; Reichel-Dolmatoff 1976, 1979, 1985, 1990; Rodriguez and Van der Hammen 1996a, 1996b; Van der Hammen 1992. For discussions on the dualism nature/society see Descola and Pálsson 1996.

⁷ For the case of Colombia it has been said that international aid is required for the development of a peace process without which Amazonian peoples and environments are at great risk. "From different perspectives, international intervention is demanded in such areas as the creation of conditions of mutual trust for peace negotiations, the construction for a common agenda for such negotiations, and the verification of compliance with the agree-upon compromises" (Sánchez 2001: 2)

⁸ See Forero and Woodgate 2002

6.1 Part 1: The path to ethnosciences

6.2 The others and me

The relationships between indigenous and non-indigenous people in NWA, whatever their character, always involve economic activities; but economic activities alone do not allow us to qualify these relationships. The distinctions (of kinds of relationships) are visible to us by studying portraits of the reasoning and treatment given to indigenous people (and the environment) and their responses. The operation through which we construct the “*other*” (savage, aborigine, indian, indigenous, local, traditional, black, coloured, etc.) and the “*otherness*” (the wild, the jungle, the rain-forest, the forest, nature) ‘naturalises’ the treatment of the *other/ness*. The history of anthropology involves conscious and unconscious projects of construction and deconstruction of the self and the other.

In Amazonia, many institutions whose primary character have been explicitly economic evolved from extractive activities: extraction of wood, quinine, cacao, rubber; extraction of minerals; large scale fishing, capturing and export of ornamental fish; the live animal and skin trade for the international market. The functioning of extractive economies, their suddenness, their international character and the relative isolation, facilitated the formation of networks that frequently operated unregulated or outside the law⁹. Thus, violence and injustice have not been uncommon in the control of these businesses¹⁰.

Although, some of these institutions dedicate themselves almost entirely to the development of economic activities, there are others whose character is explicitly non-economic: religious, governmental, and more recently NGOs. Nowadays, research institutions, with an eye on property rights, whether explicitly or not, are involved in economic activities. Also, there are those institutions whose explicit object is scientific but whose main work is political¹¹. All these institutions operate in different manners; their attitudes reflecting contradictory values that indigenous peoples observe with interest, although sometimes such contradictions leave them perplexed.

Ethnosciences attempt to conciliate our perspectives and the other’s perspectives of the environment represents an attempt to make sense and understanding between the white man and indigenous peoples (or between foreigners and locals). Not dissimilar are those attempts that seek to conciliate modern and traditional, development and conservation. All of these attempts reflect the interest of locating and accommodating the *other/ness* and ourselves.

Behind economic motives

In the 19th century, the *mestizos* or *criollos* – natives of the Americas which either denied or had not direct affiliation with indigenous peoples – were involved in political struggles to gain independence from Portugal, Spain, and the other Colonial powers. The project of the independent *mestizos* after independence contemplated the assimilation of indigenous people by eliminating differences of identity (Correa 1992).

The political approach of the European explorers was different. Some of them were broad by imperial will and all of them engaged with the ecclesiastical and political authorities that could help or hinder their explorations. The relationships between the explorers and indigenous peoples were not completely

⁹ On the roll of extractive economy as dominant way of resources exploitation in the Colombian Amazon see Gómez 1999.

¹⁰ For the role of terror for the creation of colonial reality: the unconsciousness cultural formation of meaning through imputing the other with savagery. A crude example being the early 20th century rubber extraction enterprise see Taussig 1991. For a historic review of the region see Llanos and Pineda 1982.

¹¹ The film “War of gods” which contains a record of the Summer Linguistic Institute ideological campaign in Northwest Amazon in the middle 20th century is an excellent illustration of this case (Moser 1970).

determined by the former but depart from a different cultural context than that of the locals (Brazilians or Colombians).

In the Northwest Amazonia of the 19th and 20th centuries, the relationships between managers of extractive economies, “*colonos /cablocos*”¹² workers and indigenous peoples were difficult, although not always of a violent character. The system of patronage that developed around the extraction of rubber was subsequently adopted in most other extractive enterprises. However, the most notable machinery of terror that accompanied extractivism was that of the Putumayo. But, with the exception of three Europeans whose public reports were somehow controlled by this terror machine¹³, explorers were not directly involved in the violence of extractive economic regimes. And, although explorers were following missionary paths, their ‘mission’ was not evangelisation. These differential manners were recognised and responded to by the Indians.

Explorers of the 19th century as well as ethnoscientists of the 20th century and researchers nowadays, (and I count myself as no exception) have been amazed by indigenous peoples. Reciprocally, explorers (visitors and scientists) have reported that indigenous peoples are often amazed by us and the world we bring. To the individuals, selective apprehension of the world and the establishment of orders of classification are influenced by amazement.

It amazed me that the Tukano¹⁴, Arawack and Yujup-Makú ethnic groups, which have been at war and are often rivals, especially in shamanism and politics, have managed to maintain a hold of their territories until the present. It amazed me that their “management of the world” has resisted colonisation. Indigenous peoples in turn were amazed by the objects I carried with me. They wanted to know how to make those objects and who had made them. When explaining that much of this process came from an industry and that it involved many different people located in different nations, they always became suspicious. Tensions subsided only after more precise answers were provided.

I grew up in Colombia, a country where “violence has become the reference point for Colombian politics, society and economy during the second half of the 20th century” (Sánchez 2001). I have an interest in territoriality, environment and development. The things that amazed me were related to these interests. Indigenous people’s interest in “*el fabrico del blanco*”, the products of white men, is legendary. They often referred to the encounter with white people’s things as a seductive moment: “*despues de probar la sal el indio no se quiere volver al monte a vivir como los tradicionales*”; “after tasting salt, the Indian does not want to go back to the forest and live like the ancestors”¹⁵. A way of

¹² Called like that in Colombia and Brazil respectively.

¹³ During the transition of the 19th to the 20th century, The Peruvian Amazon Company (PAC), managed to control reports of three explorers. First, Robuchon, a French explorer hired by Arana (head of PAC) in 1904 who would “disappear” and his posthumous book was to be edited by Rey de Castro, Peruvian consul of Manaus and associate of PAC. Second, the English captain Tomas Whiffen, personal friend of Arana who turned a blind eye to the machinery of terror. Third, The German ethnographer Konrad Preuss that wrote on the cannibalism festival of the Witoto without stating if he was a witness or not of such rituals (Taussig 1991).

¹⁴ Originally named by Koch-Grünberg as Betoya these ethnic groups are known today as all the groups speakers of the Eastern Tukano linguistic family and we will refer to them as Tukano. Among Tukano are the Tukano proper, just one of the ethnic groups of the region that speak one of the 15 languages of Eastern Tukano family.

¹⁵ Gustavo Cabiyari, the current authority of Union Jirijirimo (Apaporis) made a relation to me on how in his childhood salt (KCI) was produced by processing an algae that grows between Jirijirimo and Iañakopea waterfalls in the lower Apaporis river. The process involved the entire group (of about 200 people) which worked for four or five days. The product, he said, was a rock-like that was divided among families, each one obtaining a portion that fit in the hand. Schultes collected the plant when he was among the Makuna on the Apaporis (Davis 1998:327). The impact of some objects within indigenous organisation, like metal axes, fishhooks and salt is known and recognised; the metaphor of salt has been recorded by other researchers e.g. Van der Hammen 1992: 27.

expressing the tensions and social changes they had made in order to secure merchandise and to accommodate trade and alliances when outsiders get involved.

It would be an easy assumption that indigenous people are overwhelmed by foreign objects, but there is more to it than that. We must study the way objects are acquired (through barter and trade) and the relationships created through this acquisition in order to understand the interest of the Tukano in foreign objects.

The making of artefacts and their acquisition is highly ritualised among the Tukano. All basketry is generally men's work, while the production of ceramics is women's work, just like in most parts of Amazonia. But to obtain prime matter for the making of the objects, permission should be granted from the spiritual owner of the resource to be used and this is generally undertaken by shamans, who are men. In addition, less knowledgeable men are prompted to seek mediation from shamans or are forbidden to make valuable objects, like blowpipes, arrow poisons, and ritual paraphernalia. Therefore the acquisition of objects is related to one scope of power within society.

Artefacts and objects in general, are by themselves perceived as sources of power or, in indian terminology as "defences". When the object is received its protective character is transmitted to the owner. When the Tukano say that women's defences are the objects with which they make cassava, they are acknowledging that spiritual protection had been granted to them. Therefore, the exchange of objects is never just a material countable operation but a symbolic act in which religious values are confirmed or displaced.

The exchange of objects creates and re-creates relationships towards which intra-group and inter-group alliances are confirmed or repealed.¹⁶ But, more importantly for our discussion, localising the objects is an operation through which the Tukano situate the other.

6.3 Reminiscences

Patches of Northwest Amazonia were colonised just two centuries before the arrival of the enlightened explorers. The Portuguese established Barra (Manaos) in 1694 as a centre for slave trading. The Caquetá-Japurá¹⁷ region was explored and exploited with this purpose. In 1663 Franciscan missionaries had entered Putumayo (Colombia-Perú) and facilitated slavery under the justification of attacks on Christianised indians (Taussig 1991). By the 18th century the Portuguese Crown had prohibited the slave trade. But the exceptions to the rule were in the "just war" and "rescue of prisoners", under which slavery continued to operate (Llanos and Pineda 1982; Pineda 1986). The Franciscans were expelled and Putumayo indians were left alone until the quinine extraction boom in the second half of the 19th century.

La Condamine, who was the first to suggest that the Orinoco and Amazon were linked by a waterway, made the first accurate map of Amazonia in 1743. But it was not until 1800 that von Humboldt and Bonpland would confirm La Condamine's suggestion, mapping the Casiquiare canal that links the Rio Negro with the Orinoco. La Condamine travelled to America to measure the diameter of earth at the Equator. He was curious and resourceful: he noticed and used rubber to protect his instruments, was aware of a long history of human occupation in Amazonia and suggested that studying indigenous languages could reveal the population processes.

¹⁶ For further discussion see Hugh-Jones and Humphrey 1992 and Hugh-Jones 1992.

¹⁷ Caquetá in Colombia, Japurá in Brazil.

The next approximation to Northwest Amazonia happened in 1817, when a group of scientists was brought to Brazil by the Austrian Grand Duchess and Empress of Brazil Leopoldina of Hapsburg. The group included Natterer, von Spix and von Martius. Von Spix and von Martius reached the Solimões and went into the Caquetá-Japurá River. They were the first to provide a description of the Tikunas, Tukano and some other ethnic groups.

Von Martius and von Spix, while sharing an interest in plants and animals that von Humboldt had, were far more interested in indigenous peoples. Humboldt wanted to explain nature by nature in contrast to the explanation of nature by the divine. He wanted to produce a holistic view: “In short, I must find out about the harmony of nature” (Humboldt 1799, in Worster 1990:133). Humboldt focused on the bio-geographical occurrences through longitudinal and latitudinal variations, he noticed the effects of human intervention in the land, but his interest remained in the distribution of plants and animals as response to climate variation.

Von Martius could be considered the earliest ethnographer of the Amazon. He was much in tune with evolutionary theory and his interest was to map the evolution of native Brazilians. For this purpose he collected artefacts and made some comparative studies. In the belief that historical evolution is reflected in languages, he made advances in their classification. It was evident to him that nature had been transformed my millennia and it was also obvious that the evolution and dispersion of languages also required very long time. However, he adhered to Humboldt’s belief that all indians came from a single source, thus he concluded that cultural diversity was a result of long-term devolution (Barreto and Salles Machado 2001).

From the group brought by Leopoldina, J. Natterer stayed the longest among indians and even married a Brazilian in the Ríó Negro and apparently he was enchanted by cultural diversity. He went up the river to the Vaupés, the Içana and also entered the Casiquiare canal. He was attracted by the indigenous peoples of these territories. Some of his manuscripts were read by Koch-Grünberg, and they made such an impression on the German that he decided to visit these ethnic groups. Unfortunately much of Natterer’s writings were lost.

6.4 From exploration to economic botany

The Darwinian enunciation of competitive struggle for survival naturalised Victorian values. Civilisation –European – was the fittest; its need was to dominate nature and to establish order. Chaos and the savage were to be replaced by civilisation and the scientific mind. There was no space for “divergence” or “tolerance” in Darwinian theory and the imperial rationality would have no reason to exercise it.

Humboldt, Lyell and Malthus had an immense influence on Darwin, but evolutionary theory did not take shape until he fitted such influences with his own observations. And he did so by placing violence at the centre of his theory. It has been suggested that Darwin’s perspective came from his personal makeup (Worster 1990). Whatever the reason, from then on evolutionary thinking was at the core of Victorian morality. Enlightenment had shaken the world, nature could no longer be explained by the divine, and imperial campaigns required moral justification. Darwinian evolution provided competitive replacement in which inferior beings should be beaten and supplanted by superior beings.

The imperialist campaign had established new grounds. None of the early explorers would consider indigenous peoples as equals. There was no question about whether the domination of the wild ought to be undertaken. It was nothing but “natural” that the savage and the jungles were dominated by superior

minds. However, the responses of indigenous populations were far from homogeneous and some of these scientists, once in the field would have their doubts.

There was hesitation about the civilising campaign among the explorers from the beginning. Some of that divergence could be noticed between Charles Darwin and his friend Alfred R. Wallace. The latter visited the Tukano at the core of Northwest Amazonia, providing a description of them in his book "Travels on the Amazon and Rio Negro", published in October 1853. When living among the indians of the Colombian NWA, Wallace was at times in "A stage of exited indignation against civilised life" (cited by Reichel-Dolmatoff 1996: 241).

From the Malay Archipelago, Wallace wrote to Darwin sharing his ideas on the origin of species in a letter dated June 18 1858. The moment was dramatic for Darwin: "If Wallace had my M.S. sketch...he could not have made a better short abstract!"(Correspondence of Charles Darwin, in Desmond 1994: 245). A joint paper was presented at the Linnean Society of London on July 1 of that same year. Wallace used a mechanical metaphor to explain how natural feedback systems automatically checked and corrected breeding, Darwin added replacement competition to explain the mechanism.

Darwin went public as he feared Wallace might beat him to it. Wallace had a different perspective and competition was not its theme. Wallace was, in Desmond words, "another 1840s activist, outraged by wealth and organized religion...For him the environment expunged the unfit, not competition..." (Desmond 1994: 245). Thus it should come as no surprise that Wallace did not share the same conviction about the civilising campaign and the treatment of indigenous people of some of his contemporaries. What amazed Darwin and Wallace with respect to the indians was different and this reflects their different personalities and the difference of the indigenous peoples they encountered.

Darwin was convinced that to be civilised humankind had to dominate nature, this was so even when he himself had demonstrated nature to be an inner part of humanity. The indigenous peoples he encountered in Tierra del Fuego were "miserable lords of this miserable land". He described them thus:

"these poor wretches were stunted in their growth, their faces bedaubed with white paint, their skins filthy and greasy, their hair entangled, their voices discordant, and their gestures violent"... "it was without exception the most curious and interesting spectacle I ever beheld: I could not have believed how wide was the difference between savage and civilised man: it is greater than between a wild and a domesticated animal..." (in Worster 1990:171)

On the contrary, the impression that the indigenous people of Northwest Amazonia caused on Wallace made him doubt the superiority of civilisation and colonisation projects that sought the domination of both nature and indians. He encountered interesting adaptations of indigenous people to their environment, noticed that the conflicts between *criollos* and *indians* were increasing, and he was of the opinion that the indians ought to be protected. Referring to the state of "servant indians" he noticed that they were "brought up to some degree of civilisation, though I much doubt if they are better or happier than in their native forest" (Wallace 1889).

These two groups of people to whom Darwin and Wallace refer lived in very different environments and had equally different political systems. Among the Tukano of Northwest Amazonia there were chiefdoms and although there was no concentration of property among chiefs, there was a recognised authority. These indians had sedentary patterns, long-houses, rituals that lasted days, they also had elaborate paraphernalia that impressed all explorers that visited the area. Europeans situated them closer to civilisation. In contrast the Fuegians lived in a much more egalitarian society. This was pretty much like the new 'sin', Darwin wrote: "The perfect equality of all the [Fuegian] inhabitants will for many years prevent their civilisation..." (Darwin 1934:136).

The indigenous peoples that Darwin met are already extinct – which is not surprising taking into account the coloniser’s view that Darwin portrayed. Just a few years after Darwin visited the campaign of extermination began¹⁸. In contrast, Tukanoans, survive. But their survival came at a cost. Tukano as well as other Northwest Amazonian groups, when possible, had made arrangements with whites, whatever their character. This approximation had proved to be very important for the defence of their territories but nevertheless population diminished and sometimes surviving had to be paid for by negating identity.

The more nomadic groups of Northwest Amazonia and those who were in a servile position within indigenous populations organised into chiefdoms were more the focus of European slavery. They were, of course, further from civilisation in the explorers’ eyes. The differentiated characterisation of the two groups is present in all explorers. We can illustrate this with examples from Bates, another Englishman that travelled with Wallace to the Amazon. Bates and Wallace made travelled together before taking separate paths, although they always tried to remain aware of each-other’s whereabouts.

Bates portrays the Múra of the lower Amazon as “the most degraded tribe inhabiting the banks of the Amazons” (Bates 1863: Vol.1, 304). All his descriptions correspond to people with high mobility, only equipped with hammocks and tools for fishing and hunting, living in temporary camps. In contrast, he agrees with the Brazilians in classifying the ‘Passés’ of the Japurá, as the most advanced of all the Indian nations of Amazons. He situates the ‘Jurí’ and ‘Miránha’ [Miraña] as somewhat less advanced, while the ‘Caishánas’ a group without chiefdoms living in the Japurá at that time, were “almost as debased physically and mentally as the Múras”(Bates 1863: Vol.2, 242). The main defect of Passés and other chiefdom groups, he wrote, was that their chiefs exercise authority in a mild manner, and “none of them, even those of the most advanced tribes, appear to make use of this authority for the accumulation of property” (Bates 1863: Vol.2, 243). The lack of ambition was, in Bates words, what prevented the formation of civilised nations.

Another friend of Wallace that him in Amazon was Richard Spruce. Wallace travelled the Río Negro in 1851 where he contracted Malaria. Spruce visited him. After surviving malaria, Wallace headed to the Vaupés, encountered the Tukano and saw the Yuruparí ritual. He admired the paraphernalia and the mythological recitation but it was a shocking experience. The sounds of the Yuruparí¹⁹ amazed him, he recalled it as devil music. In November 1852 Spruce was in the Vaupés among the Tukano watching the same ritual.

It had been suggested that Spruce was less of an evolutionist with respect to indigenous peoples: “Unlike Wallace, who appreciated indian life but viewed indians as animals, Spruce passed no judgement” (Davis 1998: 394). With respect to the Yuruparí, Davis quotes Spruce: “The old Portuguese missionaries called these trumpets juruparís, or devils, merely a bit of jealousy on their part” (Davis 1998: 394). It is possible the two friends have different opinions with respect to indigenous peoples, after all their friendship did not prevent them from being rivals²⁰.

¹⁸ Taussig refers to the mimetic reflection of imputed violence as an instrument of colonialism in Tierra del Fuego (Taussig 1993: 86-7).

¹⁹ The main characters of the ritual are personified by the playing of two flutes. Yuruparí is the main ritual of many of Northwest Amazonian groups. See Reichel-Dolmatoff 1989.

²⁰ Spruce proposed to Wallace making a book on palms together, which Wallace refused. When Spruce was requested by Hooker (Royal Botanic Gardens) for a comment on Wallace’s *Palm Trees of the Amazon and their uses*, he heavily criticised Wallace descriptions (Balick 1980).

This is not to say that Spruce in any way did not agree with the imperial campaign. On the contrary, he was determined to collaborate with it. In 1857 he began an exhausting, two-year expedition, putting his life at risk in order to secure cinchona (quinine) for the British Empire (Drew 1996; Schultes 1996).

What is certain of Spruce is that he had a botanic eye that transformed the field. His interests were in the uses and utilisation of plants, what later became Economic Botany. In fact, after observing the Yuruparí ritual he did not comment on any religious or sociological aspects but on the plant used: *Banisteriopsis Caapi*. His achievements in the field were to be very well recognised by one of the future founders of ethnobotany R.E. Schultes.

In “Richard Spruce and the ethnobotany of Northwest Amazon” Schultes noticed that the English did not record many of the medicinal or some of the hallucinogenic plants that the indians of Northwest Amazonia use. Schultes argued that he could mistakenly have assumed that all knowledge of plants was in the hand of shamans. It seems likely that Spruce was not prejudiced against indian knowledge, on the contrary he seemed eager to encounter the shamans. As Schultes suggested, it was rather that he concentrated on his own way of studying the plants. Schultes, who regarded the English explorer as his personal hero, recognised that Spruce had difficulties spending long periods of time among indigenous peoples (Schultes 1976:68)²¹.

6.5 Ethnobotany: the other as equal?

Northwest Amazonia continued intriguing and seducing explorers: The Italian Stradelli went to Vaupés, and the French Coudreau followed, while Chaffanjon went to the Orinoco. By the end of the 19th century and the beginning of the 20th came the German Koch-Grünberg. He travelled through Northwest Amazonia over a period of two years. He described in refined detail the rituals of the Tukano and Arawack in which masks were used. He paid special attention to the meaning derived from cultural material. He gathered together what are probably the largest ethnographic collections ever made for Northwest Amazon and his field-mark has been recognised since. His articles on Tukano art called attention to the need to study the Tukano aesthetic, an occupation of modern anthropology.

Koch-Grünberg made the first clear classification of languages of Northwest Amazonia. He distinguished six major families of languages, including the Betoya²². Among the Tukano he made comparative studies of 15 languages and noticed the importance of multilingualism for inter and intra-ethnic relations among Northwest Amazonian groups. Koch-Grünberg also recorded seasonal variations, took examples of rocks and attempted the construction of geological maps.

Most important of all, Koch-Grünberg got involved with the indigenous groups, in a completely novel way: the other was not an inferior. And although he did not express it as such, he attempted epistemological translation. He was not a collector of items, but a detailed observer, making translation of Tukanoan meanings. The Indians were fascinated with the explorer. From his diary like writings it is obvious that the Indians were as eager to discuss things as he was himself and together they talked of astronomy, mythology, art and religion. If Wallace hesitated in accepting the goodness of the civilisation project, Koch-Grünberg was completely convinced that the "real owners of the country" were the indians, and in contrast with previous explorers, he always granted political recognition to indigenous nations.

²¹ It has also been suggested that indigenous groups in Northwest Amazonian could developed medical treatments from plants rapidly and as a response to contact with epidemics (Davis 1998; Davis and Yost 1983: 290). And, Schultes had pointed out, in this same article on Spruce that there is not certainty that the “botanists” of indigenous societies did exist at his time (Schultes 1976: 69).

²² See note 14.

Koch-Grünberg entered Northwest Amazonia through Brazil. The name of his book was *Zwei Jahre unter den Indianern: Reisen in Noerwest - Brasilien (1903-1905)*²³. He assumed the defence of the indians out of romanticism, and described clearly the risk indigenous people faced when coming into contact with Colombians. In 1905, in the Apaporis, Colombian rubber dealers had already built a camp. Koch-Grünberg describes the character of some of the encounters between the two:

"One midday six rubber dealers, white and mestizo, with a Tshatsaha [Caribe] indian appeared. They came from Corinto and were of the same people of Tomás Prata. They were surprise and apparently not too happy to encounter two white men here. Jose [the Makuna chief - Tukano], feeling supported by our presence, was not very kind to them, so they went without paddlers. It was disgusting to see them cuddle around the nude daughter of the chief, who in that precise moment was squeezing manioc at the sieve. Only our presence prevented them from behaving as they are used to. "*Os Colombianos não prestão!*" [Colombians worth nothing] said the tuschaua, and unfortunately reason assisted him. The 28th of March [1905] we continued the journey. I could obtain two Yabahána as paddlers only after reassuring them that I would take people to the next maloca only and would not give them to the evil Colombians." (Koch-Grünberg 1995 (1909): Vol.2, 276)

In 1908-9, just a few years after Koch-Grünberg went to Apaporis, the English captain Whiffen went to Putumayo, where real atrocities were happening. It is estimated that at least 40,000 indians died in that decade as a consequence of slaughter, torture and sickness (Hardenburg 1912 in Pineda 1986), yet Whiffen does not mention a thing, on the contrary, he reports cannibal dances and portrays indians as "innately cruel" (cited by Taussig 1991: 88).

After Koch-Grünberg other ethnographers visited, but none of them were to make such comparative studies, with the exception of Nimuendaju, who in 1927 visited Northwest Amazonia. He made demographic studies in the Vaupés, the Aiary and the Içana and contrasted his results with those of Koch-Grünberg. He observed two important trends of the region: First, the Tukano languages were expanding, while the Arawack were retrieving. Second, the dance mask festivals were disappearing on the Brazilian side of Amazonia.

Nimuendaju, like Koch-Grünberg, did not have the primary economic interest in plants that the earlier explorers had. Neither were they serving an imperial campaign of civilisation and they did not consider indigenous peoples to be inferior. From then on, at least for Northwest Amazonia, there is a different interest in the other. In fact, Nimuendaju went to the area hired by the Brazilian System for Protection of the Indians. He was one of the first to question, not the goodness of civilisation – the question that at least Wallace made in Victorian times – but the benefit of contacting the indigenous groups at all.

The ethnology of the 20th century moved away from evolutionism slowly. The discussions moved to the more interesting topics of the relations between environment and society, a discussion that remains extremely important to this day²⁴. The issues under discussion had been related to the effects of 'contact': first, on the native peoples and the environments where they live, and second, on the visitors – be they explorers, colonisers or researchers, and the societies they represent. The discussion on the character of the contact and its evaluation by the people passing through the process had always remained. This is the localisation, reflection and re-localisation of the "other" and "us".

²³ Two years among the Indians: Voyages in Northwest Brazil (1903-1905). The book has been recently translated to Spanish (1995). The Spanish translation is accompanied by two valuable introductions, made by Gerardo Reichel-Dolmatoff (1992) and Otto Zerries (1967).

²⁴ For the contemporary discussion in Anthropology concerning "ecological determinism" and environment as limiting factor of Amazon population growth see Carneiro 1995: 45-70 and Denevan 2001: 116-32.

Its worth remembering that while Koch-Grünberg and Nimuendaju were distancing themselves from evolutionism, in the Colombian and Brazilian nations of the first half of the 20th century, social mobilisation was still related to ‘racial’ origin and the evolutionary ideas of the past century. In Colombia, public distinction was made between *mestizos* (Europeans and indians), *mulatos* (Europeans and blacks) and *zambos* (indians and blacks). Notice the capital ‘E’. Needless to say, those who could not claim European blood had lower status than those who could.

6.6

There was a pause in ethnological research in NWA that only began again in the middle of the 20th century when Reichel-Dolmatoff made an international call for the study of the Colombian Amazon. Since then the work has been intense. It is impossible to give an account of all these works and that is not our objective. What is interesting to us is the change of perspective and the intellectual context that allows the creation and further re-definition of ethnosciences.

In respect to economic botany, later named ethnobotany, the main move after Spruce was made by the studies of curare, the hunting arrow poison used by the Amazonian indians. In 1800 Humboldt had reported the use of *Strychnos* species as the source of curare. However there were reports of the use of *Chondodendron* (Davis 1998: 205-6). In 1942 a paper on the use of d-tubocurarine (from curare) assured that its use would allow the reduction of anaesthesia during surgeries (Griffith and Johnson 1942). However, there was still confusion with respect to the botanical source. In 1944, Biocca, an Italian biologist that visited the Vaupés, Papurí and Tiquie and was interested in physical anthropology, made a comprehensive study of Curare among the Makú (Zerries 1995).

The study of curare inaugurated a series of discoveries important for medical practices. It motivated R.E. Schultes who in 1942 travelled to Putumayo. He would work in NWA until 1953 and the ethnobotany of this region is related to his work²⁵. In the life and work of Schultes we can find the legacy of the Victorians and at the same time the complete rupture with the perspective of the other as inferior.

From the Victorians Schultes acquired his commitment to scientific work and the willingness to convert knowledge into practice. Spruce helped the British Empire to secure *chinchona*, Schultes was hired by the Rubber Development Corporation to secure the vital prime matter for the military industry during the second world war (Prance 2001).

Schultes claimed to be a royalist, always voting for Queen Elizabeth II (Davis 1998: 10). However, he was not a conservative character, but rather similar in his political perspective to Thoreau²⁶, who, like him gave great importance to individual choice. Schultes was of the opinion that the use of drugs, sexual orientation, abortion and freedom of religion should be a personal choice and not imposed by State policy.

Schultes definition of ethnobotany remained pretty much the same throughout his life:

“The study of the uses, technological manipulation, classification, indigenous nomenclature, agricultural systems, magico-religious concepts, conservation techniques and general sociological importance of the flora in primitive or pre-literate societies”. (Schultes 1992a, 1994a)

²⁵ The travels of Schultes through Northwest Amazonia had been described by Davis in book often cited here: *One river: Science, Adventure and Hallucinogenics in the Amazon*.

²⁶ Coincidentally, Thoreau, like his friend and colleague Emerson were from Massachusetts and educated at Harvard, like Schultes. Curiously, the Unitarian Church of Boston where Emerson preached until 1832 helped Schultes family (mother side) when they arrived to Boston from Midlands in the 1860s.

His criteria for differentiating ethnobotany and economic botany remained linked to evolutionism: while the former was related to the use of plants in primitive societies, the later was the “study of plants used in advanced agroindustrial societies” (Schultes and von Reis 1995: 11).

Criticism of this definition was made in the Ciba Foundation Symposium of 1994. On that occasion Balée pointed out that ethnobotany should not be limited to a certain kind of society and that the question should be whether or not indigenous knowledge and traditional medicine should be recognised as scientific. Posey went as far as stating that the concept of ethnobotany was an oxymoron, as plants for indigenous peoples are not a separated subject of study. Posey argued for a reintegration of sciences in which plants are seen in the context of the environment.

But if Schultes’ definition of ethnobotany was stuck in 18th century evolutionism, his character was certainly not. He was constantly advocating partnerships between scientists and indigenous peoples for environmental management and biodiversity conservation (Schultes 1991, 1992a, 1992b, 1994a, 1994b; Schultes and von Reis 1995). As Davis wrote:

“Though trained at the finest botanical institution in America, after a month in the Amazon Schultes felt increasingly like a novice. The Indians knew so much more...he had learned that in unveiling the indigenous knowledge, his task was not merely to identify new sources of wealth but rather to understand a new vision of life itself...” (1998: 212)

Schultes never regarded indigenous peoples as inferior and was horrified when he found out about the atrocities committed against NWA indians²⁷. I believe that his reference to primitive societies and indians had no demeaning intention. And even though it may offend some ears nowadays, these references may even reflect the indigenous peoples’ willingness to be recognized as different.

Through ethnobotany Schultes initiated partnership between IK and WS. That is an achievement that allowed ethnoscientists to integrate and transform definitions. This move had important political consequences, formalizing new values for development contact processes. Schultes repeatedly advocated the protection of indigenous territories, feared for the loss of IK through acculturation and proposed international pressure on governments that supported developmental programmes that involved the invasion of indigenous territories (Schultes and von Reis 1995).

The problem of contact, the problem of acculturation, the feelings of contamination and cultural loss may seem odd in the context of 21st century celebrations of hybridization (or *mestizaje*) but these have been core subjects for the ethnosciences. Lévi-Strauss wrote:

“I would not like you to think that this [cultural differences] itself is harmful or that these differences should be overcome. As a matter of fact, differences are extremely fecund. It is only through difference that progress has been made. What threatens us right now is probably what we may call over-communication –that is, that is the tendency to know exactly in one point of the world what is going on in all other parts of the world. In order for a culture to be really itself and to produce something, the culture and its members must be convinced of their originality and even, to some extent, of their superiority over others; it is only under conditions of under-communication that it can produce anything. We are now threatened with the prospect of our being only consumers, able to consume anything from any point in the world and from every culture, but of losing all originality.” (Lévi-Strauss 2001(1977): 15-6).

From the above paragraph I want to highlight two related issues that concern the appreciation of globalization today. The first has been pointed out by Benjamin in 1955: the actions of western society that secularize objects are “the mark of a perception whose ‘sense of the universal equality of things’ has increased to such a degree that it extracts it even from a unique object by means of reproduction”

²⁷ He even rejected an official invitation of the Brazilian authorities to visit the opera house in Manaus, stating that it was built on indian blood (Davis 1998: 346).

(Benjamin 1999: 207). The originality of indigenous artwork is displaced at the same time that its sacredness is put into question or destroyed by contact. This has important political implications. I have no doubt that this is the reason behind the disappearance of indigenous dances with masks in the Brazilian Vaupés and the resistance exercised by shamans and chanters refusing any filming or photography inside the malocas in Colombian NWA.

The second thing had previously been presented by Lévi-Strauss as an unavoidable contradiction: without communication the wealth and significance of diverse societies would not be recognized, with communication they will be corrupted (Lévi-Strauss 1973: 43). When the dilemma is translated into a personal level the implications are distressing. Ethnoscience of today are not scared of hybridization: cultural change is an adaptive tool. However, different kinds of intervention led to different results some of which could be very damaging in terms of health security, environmental impact and human rights. I shall come back to this point later, however it is worth mentioning that Lévi-Strauss pointed out that through studying – I would say localizing – the others, anthropologists detach themselves from their own society (Lévi-Strauss 1973: 392).

The ideas of hybridization and contamination, its contradictory outcomes and their perception as risks and values has prompted ethnoscience to act cautiously when dealing with peoples that resist homogenizing treatment. A reformulation of this problematic can be made in a new terminology: Are we activists or colonialists? How should we share and transmit information? Does our work reflect the interest of mainstream society or does it serve the interest of the people we work with and work for?

Part II: The path towards a political ecology of NWA

6.7 Modern democracy' in Northwest Amazonia

This story is that of the insertion of democratic idealism in late 20th century Colombian Amazonia. In 1991 a constitutional reform took place in Colombia. The main political aim of this reform was to rescue the country from political instability and to establish it as a modern state within the international context.

It was an ambitious plan. The former 1886 constitution had saved the country from disintegration, an ongoing process since independence from Spain in 1820. In a very pragmatic view of governance, the president R. Núñez attempted a constitutional reform that would centralise state power (1886). This strategy proved to be effective in preventing the complete dissolution of the country. However, it could not stop the USA instigating and supporting the independence of Panamá. The USA needed to secure control over the Panama Canal. Panamá was isolated and the politics of centralism helped independence campaigners to show the arrogance of Bogotá with respect to the region. Panamá achieved independence from Colombia in 1903.

20th Century Colombia was impregnated with conflict, just as much as it was during the previous century. During the 1950s the country lived one of the bloodiest wars in Latin America: *La Violencia* – violence in capital letters. To overcome the conflict, the leaders of the two political parties made an agreement to share the control of State institutions. The Civil Service was expanded and enrichment through bureaucratic placement was the common policy during the years of the *Frente Nacional*, National Front, which was the name given to the arrangement. The agreement did not please everybody and especially disappointed rural fighters that felt defeated by the aristocratic leaders. This led to the formation of the guerrilla movements, which more or less followed a communist ideology. They grew

during the 1960s and they remain until today although for the majority of Colombians it is obvious that they left their revolutionary ideology behind long ago.

In the 1970s drug trafficking had little influence in the economy and politics of Colombia but a decade later it was everywhere. Conflicts and arrangements between guerrilla groups and drug *capos* were not unusual and State power became very weak. Everything was getting out of control for the political elite. By the end of the 1980s, it was obvious that the judicial system should be empowered. A peace process with the M-19, a guerrilla group with public support, was on the way, but reforms had to be made to allow political participation. A similar process would happen with the EPL, Popular Liberation Army, that would be renamed the Hope, Peace and Freedom party, conserving the acronym with the Spanish nouns: *Esperanza, Paz y Libertad*. The subsequent assassination of most of the EPL politicians and of important leaders of the M-19, among them Pizarro, a presidential campaigner, demonstrates the lack of State control over the military apparatus. This fact remains a motive of distrust, impeding peace negotiations today.

The 1991 constitutional reform attempted to overcome what was by then one of the main obstacles for the peace process and political institutional development: centralism. The other major issues were more or less related to this centralism: the absence of third parties and the complete lack of representation of diverse members of society. Previous to 1991 the political elite had a continuum of repressive regimes ruled under the 'exceptional state' provisions. Something had to be done to stop such politics.

One of the main concerns of the public was the corruption of the parliament, which made impossible the effective use of State resources for the regions. Curiously, the regimens of repression functioning under the 'exceptional state' provisions were justified with the slogan of "saving the oldest democracy of Latin America". Not coincidentally the same justification remains in use today. Such were the words used by Pastrana and Clinton, when launching "Plan Colombia", the most recent drug production repression regime implanted in Colombia and that is now been extended to the rest of South-America (Forero and Woodgate 2002).

The new constitution initiated two linked processes, territorial ordering and the political reform. After 1991, constituencies were able to elect their own representatives locally, at Departmental and Municipal levels. More important "territorial transfers", resources granted by the Nation, were to be managed regionally, without waiting for the central government's long bureaucratic process of definition and approval. The constitution created a temporary commission on territorial ordering that would present a proposal for the Congress to deliver the law of territorial ordering. This has not yet happened. Instead a reform to the regime of territorial transfers was approved by congress in 2001²⁸.

The Constitutional reform of 1991 eliminated the so-called "parliamentary aids" that were use by congressmen to extend their clientele. It also eliminated supplemental congressmen, which had been used for the same purposes of clientele enlargement. However, these practices continued under different schemes. The members of the constitutional assembly that reformed the Constitution were unable to participate in the first election for congress after the reform, giving space for traditional corrupted politicians to regain political power. (Which is not the same as saying that all Parliamentary members were or are corrupted). Since then, several attempts have been made to reform the congress, but all of them have failed. In summary both the political reform and the territorial ordering process are

²⁸ The new reform was due to the imminent collapse of the public finances, a diagnosis of the IMF. It was evident that local corruption had replaced central corruption and the State resources continued to be dilapidated.

incomplete and disenchantment with the new constitution is high as shown in the statistics of *El Tiempo*, one of the main newspapers of Colombia (El Tiempo 2001, 4th of July).

Whatever the public's impression of the effects of the constitutional reform, it did have a major impact in the political, economic and judicial developments of Colombia. The Nation's multilingualism and multiculturalism were elevated to fundamental principles, empowering minorities and allowing their participation: something that had been denied until then. The installation of a prosecution system fortified the judicial system, although it is not yet fully operational. Another impacting reform was the creation of a tutelary right that allows any citizen judicial protection of his/her fundamental rights, something that has revolutionised the political order in Colombia. Political participation has also increased as a direct result of the development of the right freedom of information and the so-called popular actions procedures that were instituted by the Constitution.

Implementation of the Constitution started in 1992 and COAMA, (Network of NGOs working for the consolidation of Colombian Amazon) began working directly in the Apaporis region in 1993. It is not strange that the actions of these NGOs were in tune with the constitutional reforms. The legal team of the GAIA Foundation, (one of COAMA's NGOs network) has organised workshops of Constitutional pedagogy, aimed at informing Amazonian indigenous people of their rights and duties in accordance with the new constitution. Indigenous peoples soon realised that there was new space for participation. If the *Resguardos* indigenous reserves were placed on an equal footing with municipalities, as they were, then how could they gain access to the territorial transfers and use these resources for their own benefit? The answer was simple but involved complex transformations: the *Resguardos* would have to present projects in the same way municipalities did, the money would then be transferred to the office of the Governor, which in turn would give it to the legal representatives of each *Resguardo*.

6.8 Complexities and transformations

In Colombia there are 84 different ethnic groups whose *resguardos* cover 30 million hectares. However, proportionally to the national population, indigenous peoples account for less than 5%. Even when indigenous peoples were represented in the Constitutional assembly, they were represented as a minority. The interests, aspirations and willingness of each ethnic group had to be ascribed to those of the generic minority of 'indigenous peoples'. In Amazonia, some indigenous leaders have accepted the idea that a political reform has been occurring among the white people, but they do not feel part of that process and have not foreseen the impact of these reforms in Amazonia. In fact, during the first visit of the COAMA/GAIA lawyer to the Apaporis region he was actually impressed by the remoteness of the area. Indigenous leaders were concerned with the local territorial order but had no idea of the broader changes going on in the region or the country as a whole.

GAIA foundation was already working in the neighbouring areas of Mirití and Caquetá. This small NGO was organised into teams. There was the legal team, a field workers' team formed mostly by anthropologists, and an administrative team. The author joined COAMA/GAIA in 1994, which allowed him to follow the evolution of the COAMA and the work of the GAIA Foundation in the Apaporis. When they were not in the field, the team workers met every Monday morning in a small office in Bogotá to evaluate and plan activities. We all had little benches and we would use *mambe* (coca powder) and tobacco, just like in the field. The discussions were always animated, sometimes controversial, but always developed in a friendly environment, all of which would encourage creativity and criticism.

From my first visit to the Apaporis I had formed a strong opinion about the need for GAIA to get involved in the region. The recognised authorities of each community were called captains and they

were recognised *maloqueros* (communal house chiefs) and shamans. Their main concern was the expansion of the resguardo lands and the acquisition of resources for perceived developmental needs. Most of the people have a knowledge of Spanish but they mainly speak two Tukano languages: Tanimuka and Makuna²⁹. There were very few people with the capacity to write or read in Spanish, but interest in cultural relations and trade was high.

In Bogotá discussions about the route to follow in Apaporis were varied. The legal team was of the opinion that the methodology of workshops on constitutional pedagogy that had been developed in previous years should be extended to Apaporis. The fieldwork team agreed but insisted on the need to incorporate indigenous idioms of territoriality within these workshops. We thought this would facilitate indigenous people's understanding of how legislation could be used as an instrument for the implementation of indigenous territorial and developmental aims. The fieldwork team, of which I was a member, pointed out the risks involved in such procedures and was ambivalent about the benefit of instructing indigenous peoples in the presentation of projects to be financed by the State. It was one thing to inform people about the development of their rights, yet although related, it was quite another thing to operationalise the developmental project of the State.

The legal team pointed out that if the NGOs did not serve the assignment of State resources that had been designated for indigenous territories, these resources would probably be appropriated by regional bureaucracies. Time proved the legal team to be right, when the Governor of Amazonas of the time went to jail for illegally appropriating the funds of the State.

One of the risks was that the traditional authorities could be displaced by new leaders, making communities vulnerable to extractive economic enterprises. Another risk was that by helping indigenous peoples in the development of administrative procedures, the NGOs would end up helping the integration process that aimed to homogenise all ethnic groups and treat them as the generic 'indigenous people', something indigenous groups have resisted and that the captains were explicitly rejecting. But the alternative of turning a blind eye and quietly allowing regional politicians to appropriate resources was an equally repugnant idea.

6.9 Getting the job done

How could the risks be minimised, how could we get the message across, how could we overcome local suspicions and promote intercultural team work? I undertook a census in the Apaporis and started to inquire among local inhabitants as to how they thought they could achieve what they wanted. I noticed that legal protection for indigenous lands was a preoccupation of the captains. Although women gave their opinions, they were presented by the head of the family, usually a mature man or an elder responsible for the household. The family head always acknowledged that responsibility for the future of the communities was in the hands of captains and that they would support their decisions. It was obvious that the resistance movement was led by the captains and that this was possible through respect for the hierarchical system.

However, when I confronted these heads of houses and malocas they would always express clearly their opinion and although expressing support for their captains they often criticised some of their actions, especially if they were of a rival clan or another group. Women's concerns usually referred to the lack of money and the difficulties of trade with white people that provided them with basic

²⁹ The Arawack speaking Cabiyarí and the Yujup-Makú were to be integrated later to the incipient indigenous organisation of the Apaporis area.

industrial tools. Parents signalled the need to build schools as a way to give instruction to children, but also as symbols of community development.

So far, to respond to the challenge of money they were doing two things: minor trade with white people when agricultural products, fish, basketry and other artwork were sought by town traders. This implied travelling to white people's towns. The second thing derived from the first, during the trips white people would offer them temporary jobs: as fishers, builders, carriers or labourers. Although the trips are organised by men, women sometimes got an opportunity to travel. Women would be offered jobs as servants, child minders, and as tenders of bars and taverns. While the elder perceived these patterns as a threat to indigenous identity and reproduction, youngsters perceived the offers as an opportunity for adventure and development.

The information gathered was essential. In the GAIA foundation we had developed a picture of people's desires, capabilities and responses to their challenges. But to motivate indigenous organization towards a unification of criteria that would provide them with effective solutions, we had to overcome the problem of suspicion towards Colombians. This information was gathered in a systematic way, visiting each family of the *Resguardo Yaigojé* reserve³⁰. I got involved in the day-to-day activities. In the manner of engaged anthropology I shared all possible cultural spaces with the people of Apaporis, taking part in all the sacred and profane enterprises that I was allowed to. I managed to know by name all the inhabitants of the *Resguardo Yaigojé* reserve and slowly gained their confidence.

A great deal of time was spent in the *mambeadero* (male ritual place), with local people dedicated to the preparation and performance of seasonal rituals, the big dances. From observing this situation I came up with a methodology that allowed us (indigenous peoples and me) to discuss concepts such as needs, satisfiers, planning, projects, management and others.

A groups of families or, in the case of small communities all of them, would gather together in the school or the *maloca* (communal house) during the day. I would illustrate how the realisation of a dance was, from an outsider's perspective, the planning and realisation of a huge project. Through accomplishing what was planned, they would obtain the satisfaction to several needs. The dialog would usually take the whole day, introducing concepts like objectives, aims, methodology, results, etc. Usually youngsters, who had been to Catholic schools served as translators and all those who knew how to write would take notes, including some young women.

During the night men would take up the conversation in the *mambeadero* and long philosophical discussions consider the white way of thinking, the meaning of the concepts that had been introduced and how they could be translated into indigenous idioms. By the initiative of everybody meetings were held to decide on local priorities and how could the resources that the State had granted could be invested. Three main things came up: schools, health centres and stores.

The specialists: the changing of power structure

Captains asked the GAIA foundation for the process that had been initiated to be developed. Workshops were to be organised to fill out and return the project forms issued by the State in order to assign funds for each project designed in the *Resguardo*.

³⁰ The fieldwork of the GAIA foundation team was spread all over Caquetá and Amazonas departments but the only person of the foundation working in the Apaporis region was the author. Two years later, after structural reform GAIA would hire more specialists to conform a team which will work mainly in the Apaporis; during 1996 the author was co-ordinating that team.

I was confronted with a dilemma. I did not believe that the forms issued by the State were adequate. I did not agree with the project of integrating indigenous people by forcing them to participate in the western administrative style. I even thought it unconstitutional, as they were granted the right to exercise authority in the *Resguardos* following traditional protocols. I did not think it politically correct to talk about elections (legal representative were supposed to be elected) to people that were always reaffirming their identity by preserving their own social and political traditions. They were assuring me that each person in their society could develop integrally without negating the function he was given since birth. Some of them were to be *maloqueros*, managers of the people, others shamans, some chanters, some specialists in relations with other groups and the outside. Women had a place with their husbands and between the two they would assure the continuance of cultural knowledge and the reproduction of society.

On the other hand, communities had expectations, the Colombian government and the white men were finally acknowledging indigenous needs and offering them the opportunity to manage resources. Indigenous peoples were not minors under the law anymore. They could build their own schools and no longer had to attend Catholic institutions, they could learn to make transactions and receive fairer treatment in trade. Young people would become teachers, nurses and traders, and new perspectives would open up for generations to come. The hope for much fertile intra-ethnic and multi-ethnic relationships was there. I chose to become involved.

Only people with knowledge of writing and maths could collaborate in the actual filling of forms. Although the captain and some or all of the female and male adults attended the workshops, it was obvious from the beginning that a new group of people was gaining control over important societal matters. Years later, in 1996, when the indigenous organisation of the Apaporis was fully operational, this group of people, initially called secretaries, was renamed leaders. Already in 1995 the majority of the resources of the State were used in the payment of salary to teachers, health promoters and secretaries of the organisation.

Tensions between the new indian bureaucracy and the traditional leaders was expressed in the meetings of the organisation that I witnessed until my departure in 1998.³¹ Besides that, indigenous leaders were not exempt from learning about *non-sanctum* political manoeuvres. Taking into account that the group of leaders come from different groups (the Tukano: Makuna, Letuama, Tanimuka, Yahuna; the Arawack: Kabiari and the distinctive Yujup-Makú) and that within each group there are differential clans some of which have long lasting rivalries, it is not difficult to predict ruptures in the organisation. In fact, this was exactly what happened in 1998 prior to the incursion of guerrillas into the Apaporis region (Forero 1999).

This new elite of leaders cannot compete with chanters, *maloqueros* or shamans, as far as knowledge and political prestige is concerned, but their status as distributors of resources and managers of trade with non-indigenous peoples is unquestionable. As such they constitute new models for the new indigenous generations. This has had an important impact on power relations within indigenous society, one that should be followed. I understand that since my departure from the Apaporis in 1998 the GAIA foundation has been working mainly with this group of leaders.

Interestingly, the GAIA foundation has also undergone change during this time. The characteristics of a small place, where friends would gather together to discuss, plan and evaluate was no longer possible.

³¹ The same tension between leaders and elders has been reported to happen in ACAIPI, the indigenous organisation of the neighbouring *Resguardo* Pirá-Paraná (Hugh-Jones 1997).

As GAIA tripled in size, bureaucracy enlarged and there were always outgoing reports being made, meetings with representatives of other NGOs, governmental officers, international donors and evaluators. Perhaps it was inevitable that the creative atmosphere would be reduced with the creation of a more hierarchic structure, making it more difficult the maintenance of the high spirits and enthusiasm that characterised the beginning of the work.

Varied outcomes

From the above discussion it may seem that the whole result of this movement of the other, this attempt to move indigenous peoples into a democratic western style of management, was negative. That is not the case. When the author left the Apaporis the schools, 'health centres' and 'stores' were functioning. Although they may seem odd to western teachers, health specialists and managers, indigenous peoples have developed their own style and the presence and continuity of their new institutions constitutes a motive of pride.

On other hand, the fora, meetings and assemblies organised in the Apaporis region allowed indigenous peoples to discuss development plans and managerial styles at a regional scale and with a wider scope. And although the incipient organisation is weakened by the attack of unscrupulous characters that represent legal (conservation organisations, religious institutions, governmental officers) and illegal (guerrillas) groups, it also provides a strong opportunity for the exercise of politics in 21st century Colombia.

It is true that some strong differences between ethnic groups that once provided a sense of belonging now seem to be disappearing. But originality or distinctiveness is now located within a larger group, which means that it is not lost. In fact, the regional and national fora now recognise a distinctive voice from the local organisation of the Apaporis.

Conclusions

Are we researchers – ethnoscientists –, activists or colonisers? Both and none. In contrast with the early explorers and ethnographers our values are not linked to evolutionism, but our commitment to systematic enquiry remains. In contrast to early ethnoscientists we no longer consider as valid a distinction between economic botany and ethnobotany, we pay attention to the relationship between peoples and plants. And it is more evident that all branches of the ethnosciences are integrated and that interdisciplinary research is vital for the construction of political ecology.

It may be true that ethnosciences were shaped by imperialistic motives, and it may be true that anthropology came about from a feeling of guilt in western society. But it is also true that ethnosciences and anthropology provide a space of interaction for the other (otherness) and us to redefine ourselves together. Indigenous peoples had appropriated this space as much as we have and examples of partnership are taking place. The ethic we have, which helped the formulation of principles of environmental management, allows us to gather information that contributes to the development of all places and specially, of those societies where most of this information is generated.

Of course there are still imperialistic campaigns going on at global scale, and of course there are scientists, ethno- or not, environmental managers even, who eagerly collaborate with these campaigns, but that is inevitable within the actual state of global economic relations³². This fact should not make us

³² "Even when the new constitution recognises and protects cultural and biological diversity, the market dynamics continue to define developmental and biodiversity politics in the country –and in the rest of the world (Martinez Alier 1996)" (Escobar 1999: 197).

afraid of intervention among the less contacted indigenous peoples of the world. It was Lévi-Strauss' view that "the society we belong to is the only society we are in a position to transform without risk of destroying it" (1973: 392). But those were times when cultural purity was still conceived of.

I am not for the celebration neither the condemnation of globalisation. Globalisation is here. The lives of indigenous peoples and the conservation of the territories where they live and develop are not in their hands. It is our responsibility to intervene in the political processes that determine the future of Amazonia and its people. If such intervention is not attached to some principles of environmental management such as those that motivated the realisation of this paper, then I speculate that such intervention would be chaotic and the risks would become tragedy.

Science-based policy is not neutral; there is a historical context from which the principles of environmental management arose. Cultural purity and political objectivity are out of space statements and untenable concepts. What we should search for is fair play. Inasmuch as there is a dialectic relationship between people and the environment, there is one among cultural interactions in the contemporary world. To be fair is not to be objective, but to clarify where one stands: where we are coming from. The political debate on the future of Amazonia would gain much if each political actor could and would express their own subjectivity clearly and without hesitation.

Annex 1

6.10 Northwest Amazonian Boundaries

In the context of the discussion presented in this paper an important question arises: According to which criteria – geological, environmental or cultural – should we establish the boundaries of Northwest Amazonia? The following attempt at delimiting this region is undertaken solely for the purposes of clarifying the situation for the reader.

Manaus has been the renowned centre of Brazilian Amazonia; it marks the confluence of the Amazon and the Río Negro. Manaus is located almost at the centre of the Amazon's journey from Iquitos in the mountains of Perú and Belém, the Brazilian port when the great river enters the Atlantic Ocean; it is a strategic location for trade. It was not until the end of 19th century, however, that Manaus became such an important commercial centre. The city was built on rubber taxation, (by 1910 rubber accounted for 40% of Brazilian exports). The rubber industry, formerly managed under a regime of terror, would transform the lives of all Amazonian inhabitants in one way or another. One hundred years later Manaus has been consolidated as the centre of Amazonia.



Figure 1: Drawing of the Amazon Basin

Down the river From Manaus there are no significant bio-geographic discontinuities, such as that marked by the confluence of the Río Negro and Amazon. Halfway between Manaus and Belém the Tapajós enters the Amazon, then we find Santarém, from whence we can refer broadly to the lower Amazon. From Manaus up the river, the middle Amazon could be said to extend to the point where the Japurá River meets the Solimões. The Japurá rises in Colombia, where it is known as the Caquetá. The Solimões is the name given to the upper reaches of the Amazon within Brazil, although once in Colombia and Perú it is again called Amazonas (Amazon).

Leticia city is located nearly 400 miles up river on the Amazon from the mouth of the Japurá/Caquetá. It is the only Colombian port on the Amazon and the place where Perú, Brazil and Colombia meet. 200 miles further up river from Leticia, the Amazon receives the Napo and few miles later the Ucayali, there, lies Iquitos the main Peruvian port on the Amazon. This is western Amazonia; the environments, peoples and politics we will be talking about in this essay are to be found in this region to the North of the River itself, between the mouth of the Japurá/Caquetá and north of Iquitos.

The Northern boundary of these territories is demarcated by the Orinoco river inasmuch as it forms part of the border between Colombia and Venezuela. The transition from the Llanos Orientales (savannah like plains of Colombia and Venezuela) ecosystems to the Amazon forest ecosystems is related to the link between the two river basins, which is clearly visible when travelling along the Casiquiare channel that connects the Río Negro and the Orinoco.

The main entrance to Northwest Amazonia is the Río Negro, which arises from the headwaters of the Guainía, original territory of the Curripacos (Arawack linguistic family). From the Negro travellers reached the Tiquie and Vaupés rivers, home of the Tukanoan speaking ethnic groups; and also inhabited by the Yujup (Makú-Puinave languages). The other two major tributaries of the Amazon that linked the area to colonisation and exploration were Japurá/Caquetá and the Putumayo. Of all these rivers, the Putumayo is the only one that is easily navigable. Progress along all of the others is hampered by the presence of numerous rapids and falls. The Putumayo has two major tributaries, the Igarapará and the Karapará, home of the Witoto and Borá ethnic groups.

The Apaporis is a vast tributary of the Caquetá, with a total length of some 1,350 miles. It begins its journey to the Caquetá at the confluence of two rivers, the Ajaju and the Macaya. The upper Apaporis goes through the ridge of Chiribiquete, nowadays a Colombian National Park. It is not certain who carved the rocks of Chiribiquete, but the petroglyphs may have been made by the ancestor of the Karijona. From Chiribiquete the river flows relatively calmly through low forest for around 300 miles, before it encounters the Cananarí, home of the Taiwano, who still inhabit the area, together with the Kabiwarí (Arawack). A few miles further down the river are the Jirijirimo Waterfalls.

The transition between the middle and lower Apaporis is abrupt. This transition is evident biogeographically and it is culturally identified too. Two sets of rapids precede the Iañakopea (Yayacopí) waterfall. Iañakopea is a Tanimuka name and the territory of this group (and that of the Tukanoans) has its boundary there. A mile down the river from Iañakopea is the Yañiyaká, which is connected to another major tributary of the Apaporis, the ðopeyaká, home of the Letuama (another group of the Tukano linguistic family speakers). ðopeyaká is linked to the Guakayá, a tributary of the Mirití-Paraná. This was the original territory of the Yukuna (Arawack).

Further down the Apaporis one encounters the Pirá-Paraná, core of the Tukanoan territories and linked to the Río Negro by the Tiquié and Papurí. Another major tributary of Apaporis is the Ugá home of some of the Yujup (Makú-Puinave languages). Just a few miles before entering the Caquetá, the Apaporis is joined by the Royeyaká/Taraira, (the international boundary between Brazil and Colombia). Other major tributaries of the Caquetá, besides the Apaporis, are the Yará, with its tributary, the Mesaí; a territory covered by extend savannahs, and the Cahuinarí, the Borá-Miraña territory, where another National Park has been established by the Colombian government.

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