

DECEMBER, 2021

NTFP-EP

INDIA

Leaf Litter

WINTER SOLSTICE ISSUE

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Editorial

Language and territory

The year 2019 was declared the Year of Indigenous Languages by the United Nations,ⁱ which was a recognition that indigenous languages were gravely endangered. Of the approximately 7000 indigenous languages, one disappears every fortnight, and 600 have become extinct in the last century. Many discussions and meetings were held among a varied group of people worldwide during 2019, keeping indigenous people at the centre, and including researchers and various government bodies. This has led to the Los Pinos Declaration made in February 2020, in Mexico City. The decade 2022-2032 has been declared as the Decade of Indigenous languages with the aim of “prioritizing the empowerment of indigenous language users”. The Declaration further *“emphasizes indigenous peoples’ rights to freedom of expression, to an education in their mother tongue and to participation in public life using their languages, as prerequisites for the survival of indigenous languages many of which are currently on the verge of extinction. With regard to participation in public life, the Declaration highlights the importance of enabling the use of indigenous languages in justice systems, the media, labour and health programmes”*.ⁱⁱ

Even if countries with indigenous populations took the Declaration as binding it is worth scrutinizing the feasibility of how this will play out on the ground. For this, we need to consider some of the reasons given for this declining trend and extinction of indigenous languages. The International Working Group on Indigenous Affairs states that indigenous “..... cultures are gradually disappearing as a result of land grabbing, conflicts, climate change and economic development projects that impact their traditional ways of living”.ⁱⁱⁱ One can add to this list several other factors such as migration, deforestation, the expansion of monocultures driven and supported by the state, etc. The Los Pinos Declaration approaches the loss of indigenous languages, and hence their rejuvenation and empowerment, as a matter of ‘human rights’; and wants political, social and economic inclusion of peoples who speak indigenous languages. The Declaration then goes on to strategize about how to make such an inclusion possible, and how indigenous peoples will not be discriminated against due to their language.

In effect, what the Declaration offers is a ‘welcoming’ of indigenous languages in the mainstream aspects of life. In education, in public spheres, like banks and courts, and in business, sport and employment. It would mean that if indigenous peoples want to participate in any aspect of modern life they would be able to do so without their language being a disadvantage. This is a positive step. But is it enough?

Nowhere in the Declaration is there a clear message that the non-violation of indigenous territories is a prime requisite for cultures and languages to survive. That it is the violation of territorial rights of indigenous peoples – recognized in many countries but seldom granted and followed through in spirit – that causes cultures to shatter, lose many of their traditional activities, and with that the terms and languages used to describe them. Restoring a language, or at least to prevent it from fading away, is more than a matter of ‘preserving’ its vocabulary and grammar. One needs to be aware of the domains that are in danger – for instance, a community may no longer be able to hunt, and gradually lose all the terms connected to hunting – and figure out how to record and preserve such terms before they are lost forever. Any activity that is discontinued inevitably takes away with it a whole section of language. If a people stop fishing in freshwater streams due to it being dammed or polluted, or denial of access to the area, words and concepts related to fishing, in that language, may disappear over time.

No language is just speech and lexicon. Nor can it flourish outside its territorial context and achieve its full potential. Languages of forest peoples suggest a way of 'seeing' and 'relating' to that particular landscape, which then influences their behaviour and expression. This is explicit in the way such cultures understand their environment, and pass on what they know from one generation to the next. This is not only done through language, in the ordinary sense of the term, but also through shared experiences, songs and stories, dreams, metaphors, riddles, stealth and silence. If by language we mean 'communication' then all these actions and means of perception qualify as language.

The true challenge in the decade ahead, if we are to halt the decline of indigenous languages, and restore and rejuvenate those that are endangered, would be to work according to this broader definition. Such a framework of language will help us appreciate the manifold links that words and concepts have to the physical and the intangible realities of the world, and test our linguistic and documentary expertise. More importantly, we will be alerted and perhaps be able to combat threats to indigenous territories, threats often justified by both the state and the corporate sectors for myriad reasons, but most of which set in motion another linguicide. It is hoped that the Declaration is taken seriously by all countries and that, through the decade, it identifies the deeper reasons for cultural loss and shows a way out of the crisis.

Merry Christmas and A Happy New Year!

- i. <https://www.un.org/development/desa/dspd/2019/01/2019-international-year-of-indigenous-languages>
/ ibid
- ii. <https://www.iwgia.org/en/news/3302-year-of-indigenous-languages.html>
- iii. <https://www.worldindigenousforum.com/products/los-pinos-declaration-chapoltepek-outcome-document>

Doors, Products, Planet

Alan Johnson

Standing on the toes of my feet, I stretched my arm as far as it would go inside the refrigerated cabinet. Success! Two fingers grasped the edge of the last carton of oat milk on the rack. Triumphant, I started to pull it towards me—then froze. “Alan!” a voice boomed. “Report to the front!” Caught, dammit! I thought. On camera! My armpit was still pressed uncomfortably on the edge of the shelf, the carton halfway to freedom. I began to slide it back up, anticipating a reprimand, eviction even. “Alan,” repeated the voice—over the store’s speaker system, I now realized. “Report to your station at counter three.” I relaxed as if I’d received a last-minute stay of execution. I pulled the carton to me, clutched it tight, and let the glass door close with an ebullient thud. I laughed aloud. Shoppers beside me suddenly found themselves interested in aisles far away.

But when, back home, I deposited the treasured carton in our fridge, sardined among the miscellany of bottled and jarred and packaged comestibles, it inexplicably lost its shine. Why had I strained so hard to secure this strange libation? After all, I’d managed to live my life, until a few weeks ago, in blissful ignorance of oat milk. Until our son, up on the latest gustatory trends (he lives in a hip city), explained its benefits to me: no lactose (a big plus for my ageing gut), nutritious (more fiber), creamy. But correspondingly pricey—nearly three times the cost of cow’s milk. Was it worth nearly losing an arm—okay, self-respect—for? No. Still, I looked forward to a warm mug of it later in the day.

I wonder how much of my desire for this new-fangled drink—and for this particular brand (it’s a competitive market)—stems from its makers’ earnest declaration,

stamped proudly on each carton, that they produce this purely out of a “passion” (“obsession even,” they add) to share it with others. They mean: It’s not about the money, not at all; it’s about devotion to craft in a world of identikit products. Drink this to be rare. Drink milk to remain common.

Passion is consumerism’s word of the day. Car-makers and distilleries, universities and religious centers, start-ups and coffee shops, all are driven by the wish to make you, their client, happier. If buyers today want sustainable products, businesses are pleased to provide. Some call this progress, others (more skeptically) “green sheen.”

If a product were truly unique, it would not be in a store, singing from its lofty shelf to gulls like me. Its limited supply in the store only enhances its promise of chic distinction. And yet . . . I sigh as I write this, because although I understand the marketing ploy, a part of me yearns for rarity in a world of industrial uniformity.

Which brings me, as you would expect, to the Chettinad door. A Chettinad door, usually carved from a single block of teak, is as singular a product as one can hope to find. Each is a world unto itself; no two doors are alike. Even the wood is uncommon, imported from Southeast Asian teak forests. Each door proclaims its crafter’s passionate vision, even if the general design—depictions of events in Krishna’s life, for example—was commissioned by its wealthy Nattukottai Chettiar purchaser. I say “was” because these doors, which started to be made in 1850 to adorn the 15,000-plus Chettiar mansions that would be built in Tamil Nadu’s Chettinad region over the next century, were no longer produced after 1950, when Chettiar fortunes declined.



"Teak Chettinad door, Asian Civilisations Museum" by Jnzl's Photos is licensed with CC BY 2.0. (<https://creativecommons.org/licenses/by/2.0>)

In one teak plane, an anonymous crafter has carved diminutive Parvatis, a bas-relief mandapa, trompe-l'oeil braids and filigreed gopurams, dollhouse chandeliers that dangle impossibly, whorled vines and diaphanous Garuda wings. Each door is extravagant without being overwrought, balancing the celestial and the marvelous, sacred and profane, according to the artist's discretion. This fusion is not surprising: The Chettiars, who earned much of their fortune as creditors in British Burma and Malaya and traveled the world, were smitten by the medley of styles and artifacts they saw, from Venetian chandeliers and Birmingham glazed tiles to great mirrors framed with reddish-brown mahogany and Swiss grandfather clocks. The mansions housing this miscellany reflect their proprietors' in-

terests, both aesthetic and financial. Over a century ago, when European banks refused to extend credit to Burmese cultivators, the Chettiars obliged, with the result, says historian Sunil Amrith, that land given over to rice paddy expanded enormously. The unintended consequence was, Amrith notes, an acceleration of widespread forest destruction in Burma which colonial administrators endorsed, just as they did throughout the subcontinent and in Malaya, where timber plantations had been replacing biodiverse woodland since the early 1800s.

The irony of all this is that those wonderfully singular Chettinad doors came to life just as their woody birthplaces were becoming more and more uniform. Today, therefore, our delight in the doors is salted

with a sense of this discordant history, of the tree-cutting and sweat and money that engendered them. Of course, great art has never shied from such contradictions. The lapis lazuli that Michelangelo crushed to create brilliant ultramarine for his palette came from arduous cave mining in Afghanistan, as it had for millennia. The pigment's allure owed as much to its rarity as to its eye-catching hue. Only the wealthiest patrons, such as Vatican cardinals and Florentine nobles, could afford it. And only they and their peers could enjoy it, all in the name of piety and behooving pomp.

I'm not suggesting that a troubling backstory is essential for exquisite craftwork to exist. More revealing is that there are now a great many people—you, me—with the power of choice once enjoyed only by Chettiar financiers and urban gentry. We can choose, for instance, to buy oat milk that is ostensibly more sustainable for the planet than cow's milk (even if we must suffer a painful arm-stretch and momentary indignity to obtain it). We can satisfy two inclinations at once by massaging our social conscience and burnishing our artisanal credentials. Never mind the cost of the packaging and delivery and marketing, or the fattening of creditors' pocketbooks.

In fact, it's the packaging, Amanda Mull tells us, that catches the eyes of today's consumers. In a world of commercial sameness, artful and slick packaging stands out. Package designers are the new wood-crafters, working with a template of company and consumer expectations to target the right demographic at the right time. The template evolves with buyers' tastes. Much as a Chettiar merchant once snatched up Italian marble and Belgium crystal, those with disposable income nowadays gush over the latest Michael Kors bag or Chanel fragrance in part because of their iconic presentation. As one website informs shoppers, "Every Chanel shopping bag is decorated with a white Camellia, which was Coco Chanel's

favorite flower," which "die hard Chaneliacs collect."

Ironically, many of these (mostly educated) purchasers also express a desire for eco-friendly products—an inclination quite at odds with fancy packaging. How do they reconcile these oppositional wants? They don't. This is partly because, Mull says, shopping is how people—she means Americans, but this is true of consumers worldwide, including in India—"construct their identities, express their opinions, and mediate the drudgery of everyday life."



"...packaged in milk cartons and displayed in a fridge" by Bex.Walton is licensed with CC BY-NC-ND 2.0. <https://creativecommons.org/licenses/by-nc-nd/2.0>

(Website where I found the milk cartons photo: <https://search.creativecommons.org/photos/d291b6fd-8555-4405-bade-779c4ff4e0b3>.)

Which is why “packaging designers have to thread [a] needle, giving people both what they insist they want and what their actions indicate they actually want.” Successful packaging marries the vision of a graphic designer, the company’s profit motive, and consumers’ conflicted sensibilities. In a way, the Chettinad door crystalizes these contradictions on a smaller scale by materializing the talent of its carver, the acquisitive instincts of his patron, and colonial economies of scale. These doors also, therefore, mirror the often grim incongruities of artistic production I mentioned earlier. It seems impossible, in short, to please both our commercial cravings and our ecological (or any other) conscience. The balance each Chettinad door-carver has managed to achieve with an otherwise eclectic assortment of figures mocks the ethical imbalance of our world.

What to do? Should you buy or boycott oat milk, however passionate the seller professes to be? Can you wear a Gucci shirt while volunteering for World Cleanup Day? If I knew the answer, I’d sell it to you. At the very least, we can try to be cannier, more intentional buyers. We can admire a vendor’s ingenuity or a product’s artistry while also exposing the moral dodges in its supply chain. Maybe we can look beyond packaging so that one day we can buy things we need without sacrificing handiwork or our planet.

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Anthropology and Genocide

Felix Padel and Malvika Gupta

Anthropology is a subject that has opened untold numbers of minds to the differences between cultures, and to the depths of indigenous or tribal cultures in particular. Often regarded as one of the most exciting of university subjects in many countries, this is not always its reputation in India. It is interesting that many of India's leading sociologists, from 'founding fathers' such as G.S. Ghurye and M.N. Srinivas, to J.P.S. Uberoi and Veena Das (Felix's two main teachers when studying sociology at the Delhi School of Economics) and many since, have studied anthropology abroad before becoming Indian sociologists.

The reasons for this lack of anthropology's popular appeal in India, and this frequent transformation of Indian anthropologists into sociologists, are worth exploring. One set of reasons involves the multiplicity of identities and traditions in India, that calls out for looking at 'tribal' societies in their context of other social formations, including the caste system and Dalit identities. Another has to do with anthropology in India still being in many ways 'colonial' in how it objectifies people and cultures, through writing as well as its role in a persisting tradition of insensitive and unimaginative display of tribal cultures in museums.

The Anthropological Survey of India formalizes the British-era role of anthropologists as government 'experts,' whose job is to record and 'write up' tribal cultures, constructing 'knowledge' that aids the work of administrators in 'serving' them, 'giving them development,' or exerting power and authority over them. In this latter sense, anthropological 'knowledge' about India's Scheduled Tribes is implicitly hierarchical, in the colonial mould.

Anthropologists 'serve' tribal people by recording and museumizing their cultures, but the authority for doing this is not usually granted by tribal communities, but by universities and other hierarchical structures, who appear to assume the authority to define 'what knowledge is.'

The ASI have published many detailed studies of tribal cultures, which have great value, but these do not tend to analyze the social and power structures that include the administrators and anthropologists themselves, as if these power relations are 'above analysis.' The assumption seems to be that 'objectivity' comes by making tribal people into objects of study, instead of involving them as subjects, who have as much understanding of administrators (or anthropologists, or nontribal people) as these have of them. *Adivasi* analysis of the relationships imposed over them are often extremely perceptive – if and when we hear them! – since they often see through the hypocrisy of those ruling over and exploiting them with great clarity.

One example we witnessed in October 2007 was a Kondh leader outside the Supreme Court in Delhi on the day the apex court was ruling on the Vedanta issue, when an Odia judge appeared to be selling off Niyamgiri by emphasizing a separation between Sterlite and Vedanta and the need for natural forest destroyed by bauxite mining to be replaced through compensatory afforestation by working out its NPV (Net Present Value). Informed of this, the Kondh leader said just four words: 'Taro Karma, Amoro Dharma' – 'his sin, our duty' [to protect the mountain] – a succinct socio-political-economic analysis combined with a flawless expression of ancient Indian philosophy.

One does not find such analysis in ASI works, and perhaps one cannot expect to, as it would demand objective analysis of the system of exploitation that implicates administrators alongside corporate entities, politicians and many others. In terms of B.D. Sharma's celebrated *29th Report as Commissioner for Scheduled Castes and Scheduled Tribes* (1989), the tribal situation in central India demands to be understood in terms of internal colonialism; and the role of the anthropologist has played a significant role in this, practising a form of anthropology that still focuses on understanding tribal people and their 'development' in isolation from analysing the non-tribal people who affect them and exercise power over them.

To cast light on this, one of the most heart-opening anthropology books about native Americans is *Ishi in Two Worlds* (1964) by Theodora Kroeber, whose husband Alfred Kroeber was one of America's most influential early anthropologists. He befriended a Californian Indian who appeared 'out of the blue' in 1911 at a rural slaughterhouse where he was searching for food and got arrested by the local sheriff. His tribe, known as the Yahi, was presumed extinct since 1872, after local cowboys had literally hunted them to extinction. Alfred Kroeber rescued this man from the sheriff's cell, and befriended him, installing him in the Museum of Anthropology in San Francisco, where Ishi lived his last few years as an object of intense anthropological study, as well as earning his living as a janitor. Kroeber expressed his intention of writing a book about him and his culture but never did so. In the Yahi language (classified as the southernmost dialect of the Yana languages, all now extinct), 'Ishi' meant 'Man', and it became this man's name through Kroeber's sensitivity to personal names being taboo to share publicly in Yahi culture. He never pressed Ishi to reveal his 'real' name; and probably it was this sensitivity that inhibited him from writing the intended book about his friend's defunct culture.

What makes Theodora Kroeber's book so powerful is its sensitivity to what it means to witness the genocide of one's whole people and to live between worlds, as Ishi did; and its uncompromising portrayal of how this extermination was carried out. First it was the California goldrush of 1849 that brought an estimated 300,000 new people to California, where most lived in poverty while trashing remote mountain areas in search of riches. Yahi and Yana were hunter gatherers, similar to the Maidu Indians of Northern California, who survive in several small, federally recognised tribes. Like Maidu, Yahi were derogatively called 'digger Indians' after their humble lifestyle, that involved digging roots and tubers; and like Maidu they made baskets of extraordinary beauty and intricacy. Expert hunters, they were not a 'warrior' tribe like Lakota or Cheyenne, and their numbers were small. When their territory in the Sacramento Valley was invaded by gold diggers and ranchers, some of them got jobs on ranches while others lived on in the last remote areas until cowboys organised hunting parties using dogs to exterminate the last family groups, even writing books about this.

In a 1992 film portrayal of Theodora's book, [*Last of His Tribe*](#),ⁱ Ishi was played by native Canadian (Oneida) actor Graham Greene, who had just come to fame playing Kicking Bird in the film *Dances with Wolves* (1990), which uses the Lakota language to portray the genocidal attacks on Lakota by blue-coat yankee soldiers. What makes this 1992 film particularly poignant is its depiction of Kroeber's first wife, Henrietta Roosevelt, interacting with Ishi before dying of TB - as Ishi did 3 years later. Alfred's grief at his wife's death echoes Ishi's grief at the death of his people, and Henrietta as well as Ishi are shown confronting Kroeber about white culture's inadequate ways of facing death. It is significant that Theodora never met Ishi, and wrote her book after Alfred too had died.

In India, one can understand a similar situation regarding the native peoples of the Andaman Islands. While focus is now on the Jarawa and Onge, as well as the North Sentinelese, these all speak dialects of a language completely distinct from that of ten other native peoples, collectively known as the Great Andamanese. Radcliffe Brown (Srinivas' main teacher) made the Great Andamanese his object of study in his book *The Andaman Islanders* (1922) – a work in which anthropology's 'objectivizing' tendency is now painfully apparent. This is especially so because fewer than 60 individuals from these Great Andamanese tribes now survive, from a population that numbered at least 5,000 when the British occupied the islands in 1857. The Battle of Aberdeen (17th May 1859) and other skirmishes exterminated these peoples in conjunction with introduced diseases, including venereal diseases. Only a handful of Great Andamanese still speak their original languages. When Boa died in 2010 she was aged about 85, and had lived her last 40 years as the last speaker of the Bo language of this [group](#).ⁱⁱ

It is to India's credit that the inhabitants of North Sentinel Island are the only indigenous island people in any country who have been allowed to maintain their independence, preventing anyone from landing on their island with spears and arrows. At a conference at Port Blair in December 2014, Felix was amazed to hear an ASI anthropologist express the view that 'we have to go there though - otherwise how do we know how many of them there are?' – an extreme expression of the maxim of the Chicago School of Economics that something only exists if it can be counted!

If the Andamans case is extreme, the situation of most Scheduled Tribes has also witnessed extreme forms of imposed change recently, often leading to rapid decline in living standards and social cohesion, through displacement by dams among many other causes. Accompanying this, Ganesh Devi's

Peoples' Linguistic Survey of India (2010-2015) has recorded a rapid decline in use of several hundred tribal languages. One reason for this is that most tribal schools fail to use them in the classroom, and have often punished or humiliated children even for speaking them. This needs to be understood as part of an ingrained cultural racism that mocks or denigrates tribal identity, languages and ways of life.

This issue comes into focus by examining India's biggest tribal school, which is also the world's largest residential school – KISS (Kalinga Institute of Social Sciences), which hosts an estimated 27,000 children on its campus in [Bhubaneswar](#).ⁱⁱⁱ KISS has termed itself an 'anthropological laboratory'. At first glance, this appears strange in light of the uniformity imposed on children, who wear school uniforms and have their hair cut short on arrival (and kept short for boys). No ornaments are allowed, apart from dressing up for special dances of tribal children choreographed for visiting dignitaries. Girls and boys (including brothers and sisters) are strictly segregated, in contrast with traditional norms. KISS has a UN-approved 'lab' for Multi-Lingual Education, though from those we have talked to who have followed how this was set up, this functions 'tokenistically' rather than getting children to communicate and express themselves freely in their languages.

The idea of KISS as an anthropological laboratory was reinforced when KISS was chosen (in Brazil, 2018) as the site for the next World Congress of Anthropology in 2022 (now deferred to January 2023). This takes place in a different country every four years under the auspices of the IUAES (International Union of Anthropological and Ethnographic Sciences). To anthropologists sensitive to the history of North America's notorious indigenous boarding schools, holding a major anthropological conference in a residential school seems a betrayal of anthropology and indigenous cultures; and

the IUAES cancelled this controversial arrangement in 2020, heeding a petition that called for [this](#).^{iv}

Some Indian anthropologists termed this decision 'colonialist'; while other social scientists emphasize the internal colonialism implicit in Indian anthropology and evident in collusion with KISS authorities. The issue appears to have divided Indian anthropology – if not world anthropology – as none ever has before: the venue of a conference meant to bring together anthropologists from every country has become a matter of unresolved [conflict](#).^v The issue has only intensified during 2021, and KISS along with a considerable number of Indian anthropologists have refused to accept the IUAES decision, issuing invitations to the Congress still planned on its campus to many foreign [anthropologists](#).^{vi}

An article about this by Virginius Xaxa analyzes the role of Indian anthropology in light of this collusion with [KISS](#).^{vii} Xaxa is one of India's most esteemed sociologists, an Adivasi himself, who has specialized in studying the situation of India's tribal peoples, and chaired the ground-breaking Report of the High level Committee on Socio-economic, Health and Educational Status of Tribal Communities of India for the Ministry of Tribal Affairs ([May 2014](#)).^{viii} Yet his article about KISS and anthropology has come under vicious attack in the form of abusive end-comments as well as legal [threat](#).^{ix} – a tactic KISS has used against a succession of critics, as spelt out in an article about KISS by a native [American journalist](#).^x

The Maori in New Zealand are among the world's indigenous peoples who have worked hardest to decolonize their identity and education, to the extent where white New Zealanders ('Pakeha') learn some Maori language and culture as part of the curriculum of every school, and are proud to call their country by its recognised Maori name Aotearoa. Linda Tuhiwai Smith is

an outstanding Maori scholar, whose book *Decolonizing Methodologies: Research and Indigenous People* (1999/2012) is a direct attack on the objectivizing tendencies in anthropology. Worldwide, most anthropologists have taken on board its message that anthropology now can only have integrity if we reverse the power structure implicit in past models of research, and give primacy to indigenous perceptions and epistemologies.

The ornaments and traditional dress, artefacts and skills forbidden for daily use at KISS are on display at Odisha State Tribal Museum, in the campus of the Scheduled Castes and Scheduled Tribes Research and Training Institute in Bhubaneswar. Life-size models of Odisha's 62 registered tribes are a prominent feature in this museum, as in a number of other tribal museums in Odisha and other states. Going around this museum with Adivasi friends, or a similar museum in Koraput for example, one senses their shock to see their culture on display in the form of beautiful artifacts and written words. Where did these artifacts come from? Often of course they were bought, turning musical instruments, weapons and ornaments into commodities. Many were taken from remote villages before these were destroyed by a dam or a factory. Now, in museums, they are objects on mass display for all to see – trophies, as it were, of a conquering culture and its 'superior' knowledge system.

Looked at in this light, what is the 'knowledge' that anthropology still claims to control or disseminate? Should anthropologists still make any claim to have expert knowledge of tribal cultures? Shouldn't they be trying to promote a more integrated model of education that uses tribal languages, for example?

Anthropological museums in the USA and Canada have preserved thousands of items from these nations' original cultures of incalculable beauty and value. Yet these astounding collections were put together just

as the communities they came from were being destroyed forever and surviving populations herded onto reservations, with children sent to boarding schools to be 'detrified'. The indigenous boarding schools in Canada and the USA (as well as Australia, New Zealand and many other countries) were enforcing a policy of assimilating tribal peoples into the mainstream through what is now recognized as cultural [genocide](#).^{xi} This is in contrast to the policy of integration based on mutual learning, that was supposed to be the official tribal policy in Independent India. Linguistic [genocide](#)^{xii} is just one aspect of what is happening to India's several hundred tribal [languages](#).^{xiii}

The assault on indigenous or tribal cultures is therefore not just in terms of the savage dispossession of communities and political repression. Displacement by dams and mining projects is anyway paralleled by expulsion from sanctuaries and national parks, dividing India's forests into areas for exploiting resources and 'protected areas', from both of which tribal populations are increasingly [excluded](#).^{xiv} *Environmental justice* refers to the aim of counteracting this exclusion: an environmentalism that takes its lead from indigenous systems of conservation and movements, and is hugely needed in [India](#),^{xv} and worldwide.

But tribal cultures are also under attack from the very schooling system that was meant to raise them out of poverty. Cognitive justice represents the quest to redress this imbalance between knowledge and value systems in the modern world. 'University knowledge' has been taken as a universal system, but does it really offer an equal status for indigenous philosophy and the knowledge of shamans? Articulating the concept of cognitive justice, Shiv Visvanathan cites Ananda Coomaraswamy's critique of museums as places that help to kill the very cultures they '[preserve](#)'^{vi}

Anthropology has most to offer when it

reconceptualizes itself from a recognition of the genocide that's been imposed on countless indigenous cultures, and starts to turn this around. In Aotearoa, as also in Ecuador and other countries, indigenous-run schools and universities are coming up that question the fundamentals of 'knowledge' from an indigenous standpoint. Such initiatives have started in India in the form of scattered networks of small-scale schools, but these need much wider recognition in anthropology and beyond if the tendency towards obliteration of indigenous cultures is to be reversed. Arguably, this wider recognition is not only needed for these cultures, but for all of us, if our modern lifestyle's assault on the ecosystems that support us can be halted before it's too late.

i. Last of His Tribe is available online at <https://www.youtube.com/watch?v=aQEmMof3-tw>

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Promoting Forest Gardens to improve sustainability of the Jara-Kurwa shifting cultivation based system of the Pahariya people of Sundar Pahari, Godda District, Jharkhand

Surja Pahariya and
Rohan Mukerjee



Dharmendra Pahariya in his forest garden in Bada Palma village

The Pahariya people in the hills of Sundar Pahari, in the Godda District of Jharkhand practice *Jara-Kurwa*. This is a shifting cultivation based agricultural system. The first year of cultivation, known as *Jara*, legumes such as cowpea and rice bean are sown. After a year of *Jara* the *Paharia* people carry out one to two years of their traditional mixed crop cultivation, the *Kurwa*, in the same plot. Currently, the principal seeds sown under *Kurwa* are *Gangi*/Maize, *Ture*/Pigeon pea, *Tialo*/Sorghum and *Kak-ro*/Rice bean. In addition, some millets like foxtail millet, pearl millet and little millet, and a variety of vegetables are also sown.

After 2 to 3 years of cultivation the land is left fallow for 3 - 5 years for regeneration. Ideally, the minimum optimal fallow should be at least 10 years but this gradually declined over the years. These less fertile soils have brought in invasive species like Siam Weed (*Chromolaena odorata*), resulting in loss of biodiversity and nutrient depletion. In order to extend the fallow period, Pahariya families have been encouraged to develop Forest Gardens through the cultivation of shade tolerant crops aimed at generating additional livelihoods and sources of food. The fallows selected for Forest Gardens are fenced to prevent grazing and are protected from

fires. These fallows are now used to grow certain subsistence food crops, like tubers and other wild foods. This is expected to encourage the community to extend fallow periods and improve the sustainability of the *Jara-Kurwa* system.

In 2019 three pilot forest gardens were established in forest fallows of different ages in Chamdade, Telo and Ghagri villages. These initial efforts helped select the mix of shade tolerant crops which currently includes *Haldi* / Turmeric (*Curcuma longa*), *Adrak* / ginger (*Zingiber officinale*), *Kachu* / Taro (*Colocasia esculenta*), *Ol* / Elephant Foot Yam (*Amorphophallus paeoniifolius*). In 2020 and 2021 four more farmers from Bada Palma, Porkhani, Cheo and Gadsingla villages established forest gardens in their Kurwa fallows. Currently there are 7 forest gardens in operation.



Wild and cultivated *Kurchi* / Taro growing alongside each other in Bameshwar's forest garden

In September 2021 we visited two of the old forest gardens in Chamadade and Telo villages and two new forest gardens in Bada Palma and Porkhani villages. Our visit to Bameshwar Paharia's Forest Garden in Porkahni village revealed that cultivating crops without felling trees is an alien concept for the Paharia and will take some time getting used to. Bamehswar had established a forest garden in his five year old Kurwa

fallow. He had fenced off a large area for the Forest Garden and was cultivating turmeric, ginger, *kachu*, and *Kesor Alli*. While most crops were doing well he had been advised to clear some vines to enable more light to reach the crops. However, he misunderstood and cleared several young trees in the rear of the plot. These are initial teething problems that are often faced at the initial stages of the implementation of a new concept. We aim to facilitate awareness and training programs and knowledge exchange between farmers and exposure visits to successful forest gardens in order to promote increased understanding and adoption of the concept. A discussion with Bameshwar focusing on the objectives of forest gardens revealed that he was aware that shorter fallow periods prevented regeneration of natural vegetation. Valuable trees were on the decline and also important food and medicinal plants. He pointed out that he tries to leave his land fallow as long as possible but when his neighbours request him to allow them to carry out *Kurwa* in his fallow lands he feels obliged to give in to their demands. He shared that he is doing his bit to promote growth of trees and has planted numerous saplings which include species like mango, amla, jamun and guava.



Bameshwar Paharia with a variety of wild *Kursa* / velvet bean

He showed us a patch in his fallow which was covered by creepers of a wild variety of *Kursa* / velvet bean. This variety (*Mucuna pruriens*) had large, yellowish hairy pods which Bameshwar warned cause a lot of scratching and irritation if our skin comes in contact with it. This variety of *Kursa* is prized for its medicinal properties, the seeds help treat joint pain and other pain and the roots are also used to treat different diseases. Bameshwar was proud that his fallows were one of the few places in which this wild variety of *Kursa* is still found and with a twinkle in his eyes pointed out that "*khali mera jungle men milega*" (this can only be found in my forest area). Several varieties of wild tubers were also found in Bameshwar's fallow, and they included *Eihe Halli* / *Ikjo Halli*, *Chambia Halli*, *Churke Halli*. Bameshwar showed us a deep pit from which *Eihe Halli* had been recently extracted. He also showed us the wild variety of *Kachu* growing alongside the variety that had been provided to him. While Bameshwar had cleared a portion of the plot, there were still a number of trees in the rest of the plot and they comprised a variety of local species which included *Putalo*, *Kurchi*, *Telo* and *Sidde*.

We next visited Dharmendra Pahariya's forest garden in Bada Palma village. Dharmendra had decided to experiment with the Forest Garden concept in a small area of his three year old *Kurwa* fallow. Turmeric, ginger, *Kachu* and *Kesor Halli* had done particularly well in Dharmendra's plot and even a few *Ol* plants had survived. The plot also had a variety of wild tubers like *Eihe Halli* / *Ikjo Halli*, *Churke Halli* and *Napdu Halli*. While showing us around his forest garden Dharmendra came across two species wild mushrooms – *Mako Osdu* and *Ero Osdu*, and he collected a gamcha full for his family. Dharmendra shared that he was intrigued with the concept of cultivating crops under trees and so he decided to try it out in a small area. He was delighted that the crops he planted had done extremely well and he is happy to learn that it is possible to cultivate some crops under tree cover without

having to fell the trees. He was not sure any of the crops would grow under the trees in his plot, but he has found that they do grow and in fact they have grown well. With his trial plot proving a success Dharmendra now plans to establish a similar forest garden in a larger area in 2022.

On the 24th of September we visited Surja's own forest garden plot in Chamdade village and Jaora Pahariya's forest garden in Telo. Surja's forest garden had been established in a *Kurwa* fallow which was over 6 years old, and a number of large *Sal* trees had



Dharmendra Pahariya with *Mako* and *Ero Osdu* collected from his forest garden

been left in this plot during the cultivation cycle. This was the first forest garden to be established in 2019 and this is the third consecutive year of cultivation. While in the first year a large number of different crops were experimented with, currently turmeric, ginger, *kachu* / taro, and *kesor halli* are being cultivated and they have all been growing well alongside several trees which in addition to the dominant *Sal* (*Shorea robusta*) include *Putalo*, *Telo*, *Sidde*, *Kurchi* and *Piyar*. Wild tuber varieties - *Ikjo Halli*, *Churke Halli*, were also present. Surja shared that he was happy with the productivity of different crops in his forest garden and would continue this approach for some years. The last forest garden we visited was that of

Jaora Paharia in the adjoining village of Telo. This forest garden had also been established in a *Kurwa* fallow which was around 6 years old. Joara had been provided the same mix of crops and while we came across turmeric, ginger and *Kesor Halli* plants they were considerably smaller than those in the other forest gardens we had visited even though planting had been carried out at the same time. Surja felt that the different local conditions could result in a lower productivity.

This requires further research.

On the whole 3-4 varieties of crops have done well in the forest gardens and the farmers are happy with the results and have plans to continue cultivation and even expand the areas under forest gardens. There is a need for research into the role of different ecological and environmental conditions to make forest gardens more successful. It was good to see that along with cultivated crops the forest gardens could host wild foods.



Turmeric



Ginger

The success of these forest gardens could serve as a platform to advertise the benefits of this initiative and encourage more farmers to adopt this practice. It will also enable us to fine-tune our methods and understanding.



Flower of Kesor Halli (*Pachyrhizus erosus*)

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On the significance of plant intelligence

Savyasaachi

As long as our understanding of 'intelligence' is connected with the capacity to 'think,' and to brain matter, it is difficult to appreciate the significance of plant intelligence.

For those of us who wish to explore a different notion of intelligence, Stefano Mancusoⁱ points out that:

It isn't too difficult to imagine that intelligence is not the product of one single organ but that it is inherent in life, whether there is brain or not

Further, in a discussion on "Memories without a brain" he argues,

All plants are capable of learning from experience and therefore have memorization mechanisms. If you submit a plant, for example an olive tree, to a stress such as drought or salinity, it will respond by implementing the necessary modifications to its anatomy and metabolism to ensure its survival. Nothing unusual in that, right? If, after a certain amount of time, we submit the same plant to the exact stimulus, perhaps with an even stronger intensity, we notice something that is surprising only on the surface: this time, the plant responds more effectively to the stress than it did the first time, It has learnt its lesson...

Memory here is not the 'gift of looking back' and thinking. It is not the ability to not forget and memorise facts and figures. This memory resonates experiences.

Plants are intelligent: they communicate with each other and memorise the resonances of human beings, and they don't need a brain.

How can it be known that plants

communicate?

Richard Grant, in his article "Do trees talk to each other?," shares his conversation with the German forester, Peter Wohlleben, a tree whisperer.

Wohlleben takes me to two massive beech trees growing next to each other. He points up at their skeletal winter crowns, which appear careful not to encroach into each other's space. "These two are old friends," he says. "They are very considerate in sharing the sunlight, and their root systems are closely connected. In cases like this, when one dies, the other usually dies soon afterward, because they are dependent on each other."ⁱⁱ

'How did he know the intimacy between the two massive beech trees growing next to each other?'

Whispering is a mode of communicating 'presence.' Whispers are soft sounds that are uttered and received in most intimate relations. It is a quiet communication between quiet beings.

I cannot speak for Peter Wohlleben.

However, I can share my understanding. Peter Wohlleben heard the whispers between the two big birch trees.

Peter Wohlleben and the trees are perhaps attuned to each other!! His entire work in "Secret Networks of Nature"ⁱⁱⁱ are a testimony to his attunement.

Eduardo Kohn argues,

Signs don't come from the mind. Rather, it is the other way round. What we call mind, or self, is a product of semiosis.^{iv}

Signs are more than things. They don't squarely reside in sounds, events, or words. Nor are they exactly in the bodies or even mind. They can't be located in this way because they are ongoing relational processes. Semiosis is the name for this living sign process through which one thought gives rise to another, which in turn give rise to another, which in turn gives rise to another, and so on, into the potential future.^v

Memory plays a very significant role in this semiosis. It is not determined by the gift of thinking back.

In this regard, Rupert Sheldrake^{vi} tells us about animals:

In 1980's neuroscientists discovered that when animals watched other animals doing something, for example a monkey peeling a banana, changes in the motor part of their brains mirrored those in the brain of animals they were watching. These responses were described in terms of 'mirror neurons'. But this term is misleading if it suggests a special kind of nerve. This is better thought of as a kind of a resonance. In fact, Vittorio Gallese, one of the discoverers of the mirror neuron refers to the imitation of movements or actions by another individual as 'resonance behaviour'

Here, memory that mirrors resonance, is an aspect of 'mind' (that is not reflected in thinking). This could be described as an aspect of the 'inclusive of mind'

John Dewey argues that this togetherness constitutes "Social as a Category"^{vii}

Denial of the opposition between the social and the natural is, however, an important element of the meaning of "social" (p165)... Social phenomena are not of themselves, of course, equivalent to social as a category (p168). ...When we return to the social, we find that communication as the existential occurrence involved in all distinctly communal life, and we find that communication

effects meaning and understanding as conditions of unity or agreement in conjoint behaviour (p172)...The view of those is superficial who fail to see that in the social the physical is taken up into a wider and more complex and delicate system of interactions so that take on new properties by release of potentialities previously confined because of the absence of interaction. (p 169)

The inclusive mind enhances the potential embedded in the togetherness of human and non-human nature.

Respect for plant intelligence presupposes reverence for life.

In this communication the observer is observed by animals and plants. With the awareness of being observed by animals and plants the observer begins observing 'its-self', and this makes it possible to 'see' the difference and relationship between one's (observers) own self and the entire realm of non-human nature where-in the act of observation is happening.

This recursive reciprocal communicative relation, where 'the observer is the observed', clears the ground to explore the intelligence of plants who don't have brain matter. The intersubjectivity generated from the reciprocity of the observer and the observed makes it possible to see that 'thinking' reflects only one aspect of intelligence. Thinking communicates conceptual intelligence only as an aspect of the 'inclusive mind' which is located not only in the physical brain material, but in other physical materials of trees, and plants. Its resonances continue to exist independently after the physical matter decomposes and dissolves, in the course of its life cycle.

This recursive reciprocal communication triggers a semiosis.

Indigenous people say that all non-human nature, meaning animals and plants along

with other aspects of the landscape, constitute a living system and therefore have intelligence. To know of this, it is necessary to acknowledge that the realm of non-human nature is observing the observer. This is as if, when walking in a particular landscape, say the forest, a person is aware that the trees, the birds, the insects, the hills etc., are saying to each other, "we know who this person is". They remember.

Indigenous voices across the world have indicated that this mainstream knowledge system is based and promotes anthropocentric intelligence. What this means is that it is observer centric in so far as it privileges the observer over the observed. It has been pointed out that the gaze of the dominant knowledge system has 'fixed' not only people but the entire realm of the non-human as 'being observed' under the microscope, or under surveillance by the panopticon. This gaze denies subjectivity as it frames the observed for the sake of observation.

This panoptical gaze defines the mainstream modes of forestry as well as agriculture, both modern and traditional. Modern practice frames pesticides, genetically modified seeds, and mega hydro-electric dams based canal irrigation. Modern organic practices uses organic manure, indigenous seeds, lift-irrigation...etc. In both instances, aspects of traditional knowledge is used to undo the damages caused by modern agricultural knowledge, such as the loss of crop and seed biodiversity, the loss of nutritional substance, the loss of crop resilience, the loss of ground water etc.

These mainstream modes manipulate living plant materials, depriving them of their inner resilience and immunity to external forces. In the process the distance between the human and non-human nature increases. Consequently, a large population who live in proximity with non-human nature is marginalized.

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ii. Richard Grant "Do Trees talk to each other" *Smithsonian Magazine* March 2018. <https://www.smithsonianmag.com/science-nature/the-whispering-trees-180968084/>

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iv. Eduardo Kohn *How Forests Think-Towards an Anthropology beyond the Human*. University California Press 2013 (p34)

v. Ibid (p33)

vi. Rupert Sheldrake. *The Presence of the Past-Morphic Resonance and the Habits of Nature*. Collins, 1988 (p269-270)

vii. John Dewey *Social as a Category in The Monist* Vol 38, No 2 (April 1928)

Kurwa: a way of managing the worst invasive species

Soumik Banerjee

The Paharia community of the Rajmahal hills in Jharkhand practice Shifting Cultivation on the hill slopes with 2 years of Cropping Phase (Jara-Kurwa) followed by fallows varying from 3 to 10 years, meanwhile carrying out farming in another previous fallow parcel.

Siam Weed, also known as Bangla Jara, has been entering the Rajmahal hills in Jharkhand since the 1970s. These plants have taken over the Kurwa (Jhum) fallows of the Paharias, especially on the higher slopes and sunny areas.

SIAM WEED- *Chromolaena odorata* (earlier *Eupatorium odorata*) is a highly invasive sun loving rapidly growing perennial shrub of the Sunflower family; it is native of the American continents and was introduced across tropical Asia, West Africa, and Australia. In the 19th century it escaped from the Botanical Garden in Dhaka (Bangladesh) and spread across India, especially the north-eastern and eastern parts.

The plant is multi-stemmed and reaches heights of 2.5 m in open areas; the leaves give off an aromatic odor when crushed. The flowers are white to pale pink with 10 to 35 flowers per branch. The seeds are hairy and are **spread by the wind** (Jan-Mar) and they can cling to fur and clothes for longer dispersal.



About **80,000-90,000 seeds** are produced from one plant and they need light to germinate; it shows **enforced dormancy** so that **several cohorts can appear in later years (upto 6 years)** the plant can also regenerate from roots **growing 3 cm per day** in favorable conditions. Siam weed is toxic to cattle and releases allelopathic compounds that **suppress other plants. It is one of the Top 100 of the World's Worst Invasive Alien Species in the world (IUCN).**

Before the advent of Bangla Jara, the Paharia people carried out poly-culture Kurwa (Chorani) for 2 continuous years by clearing, felling, and burning the vegetation in the summer months, followed by the sowing of seed at the onset of monsoons. Cotton was sown in the third year followed by fallow of 6-12 years.

As the market demand for cow-pea & rice-bean flourished the Paharia people shifted to carrying out Jara with either of the 2 pulses in the first year and poly-culture Kurwa in the second, and leaving the land fallow subsequently.

They found that **cow-pea yields** increased when grown in fallows that have Bangla Jara; this was due to a **higher biomass, higher retention of moisture** and a **faster decomposition of Bangla Jara leaves** due to a lower C:N ratio and a low concentration of lignin and polyphenols (C: N Ratio – 13.4ⁱ : 1, Lignin- 15.12ⁱⁱ %) as compared to predominant forest species such as Sal (*Shorea robusta*) whose leaves decomposed slower (C: N ratio- 47 : 1, Lignin- 21%ⁱⁱⁱ). Also, the removal and faster decomposition of Bangla Jara allowed **late sowing**.

In the adapted system the Bangla Jara plants would be slashed and let to decompose in the soil in late July or early August; by mid-August, cow-pea seeds are dibbled over the decomposing Siam Weed, and the seeds harvested in December. The following year poly-culture Kurwa is carried out with maize, millets & pulses.



Slashing Siam Weeds in August for Jara ^{iv}



Maturing cow-pea in Nov



Harvesting Cowpea in Dec

As the land is left fallow subsequently, Bangla Jara regenerates profusely from the soil seed bank as well as vegetatively. The Paharia farmer can come back to the same land parcel within 2 to 3 years and repeat the cycle again, as compared to at least 5-10 years in case of forest species.



Regenerating Siam Weed post Kurwa



Drying Siam Weeds in Fallow in May

In this unique system of Slash & Mulch-the Paharia people are not only managing the spread of the highly invasive Siam Weed but they are also supporting their livelihoods in the process. The system does not use any fire as compared to several other such shifting cultivation systems across the country; the land parcels with taller tree stands (e.g.-Sal and other associates) are comparatively less preferred for Kurwa now, thus limiting the opening up of old forest fallows and thus restricting the spread of Siam Weed.

This is an example of a Coupled Human & Natural System (CHANS)^v that characterizes the dynamical two-way interaction between human and natural systems. This coupling expresses the idea that the evolution of humans (the Paharia adapting to modified Kurwa) and natural systems (the spread of Siam Weed) may no longer be treated as individual isolated systems but as complex inter-linked evolving systems.

On the flip side this adapted system has some limitations. There is an increase of soil erosion on some slopes, reducing species diversity in the adapted fallows, creating hideouts for wild pigs (who raid crops) as well as increasing the risk of forest fires in dry seasons.

i. <https://link.springer.com/article/10.1007%2Fs003740050344>

ii. <https://www.ajol.info//index.php/jasem/article/view/131252>

iii. <https://link.springer.com/article/10.1007/s11676-016-0208-3>

iv. [Photo by Rohan Mukerjee](#)

v. https://en.wikipedia.org/wiki/Coupled_human%E2%80%93environment_system

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Barking up the right tree: a note on plant identification techniques and their relevance to knowledge

Madhu Ramanth

One of the most highly developed skills in contemporary Western civilization is dissection: the split-up of problems into their smallest possible components. We are good at it. So good, we often forget to put the pieces back together again.

– Alvin Tofflerⁱ

Identifying plants

It is quite commonly assumed that the leaves, flower and fruit are essential for the nomenclature of plants. Indeed, most plant keys focus specifically on the flower and fruit; the number of stamens and petals, the position of the ovules in the ovary, and the position of the ovary itself become crucial factors in determining the family of the plant species in question. I spent much time in botanical gardens and was trained in this system.

Such a system of looking at plants is alien to the forest peoples I have lived with (Central India, Borneo) and from whom I learned another way of looking at plants. Though not counting and quantifying plant parts to ascertain plant identities in the Linnaean manner, indigenous plant identification is extremely precise: it has to be, as most of their needs, and even their survival, depends on this. A few examples would help in understanding the kinds of categories that are of daily importance in forest-life.

Indigenous plant knowledge

For instance, one needs to know the basics about toxins. There are several plants used to kill fish: leaves of certain plants, the roots of some, and the fruit of others (*Cansjhera*, *Derris*, *Randia*) are used to stupefy or kill fish; these specific plant parts are processed (mashed, dried and powdered) and used to gather the fish that are stunned. Many species of plant foods too have toxins (*Dioscoreas*, some aroids, etc.) and need to be sufficiently neutralized before consumption.

Woods are known according to their strengths as well as their flexibility before being put to use. They are also known for their ability to hold a fire. The latter quality is especially useful when sleeping outdoors. Logs of *Terminalia chebula*, *Anogeissus latifolia*, *Terminalia tomentosa* stay alive and up through the night and are preferred; some logs burn only in the company of the woods just mentioned, and some, like those of *Diospyros melanoxylon*, are avoided as they are angry and tend to spark! Such knowledge may be categorised as 'wood anatomy.'

There are hundreds of food plants, whose precise identification includes many more aspects than the mere outward recognition of the plant. The depth of the tubers that are dug up, and the processing required before they can be consumed, is species specific. The stage of maturity of leaves when they are harvested is crucial; too old and they don't cook, too tender and they become a useless mush.

There are many common plants used for their fibres. These plants belong mainly to the families *Sterculiaceae*, *Tiliaceae*, *Aclepiadiaceae* and *Malvaceae*; for specialized needs there are a host of others such as *Bauhinia vahlii* and *Caryota urens*. Another area of plants deal with medicine, not only for humans but also for animals. Plant parts are used in illnesses such as coughs and colds, for bone-fixing, aches, skin diseases, increasing one's appetite and much more; and whether we subscribe to it or not, there is an array of plants known for their efficacy in magic, particularly 'love magic.'

Knowing such a vast amount of plants, intimately, implies much more than just a superficial 'recognition' of an outward appearance, which is all that is guaranteed in modern botany. The indigenous system understands the inner character of the plants that they know and use, or those that they avoid, or those that they call by name, or those that they leave unnamed.

Limitations of mainstream botany

The lack of obsession with 'naming' is a particularly remarkable feature of indigenous botany; the tendency of naming a plant, without knowing the least bit of what the plant entails, is one of the most hollow features of modern science. An extension of this craze is the desire of botanists to find 'new' species, so that their name can be known to the world!!

The botanical nomenclature proposed by Linnaeus, now popular in many related fields, is also known as the sexual system due to the description of stamens as 'husbands' and pistils as 'wives,' and on which the classification depends. This system, though very practical and used by botanists all over the world, was criticised in the 18th century by Alexander von Humboldt, the father of plant geography. Humboldt, like Immanuel Kant, stressed that botanists should study more than just individual species and their

outward appearances; he was interested in the total phenomenon of nature, in finding out the different plant species that grow together, how they are grouped, and the influences of the environment upon them and their interactions:

*rather than discovering new, isolated facts
I preferred linking already known ones
together. The discovery of a new genus
seemed far less interesting than an ob-
servation on the geographical relations of
plants, or the migration of social plants, and
the heights that different plants reach on the
peaks of the cordilleras.* ⁱⁱ

Humboldt was much influenced by Wolfgang von Goethe, the great poet and philosopher, who was his friend and with whom he shared many of his thoughts and ideas. Goethe wrote:

*Every one thing exists for the sake of all
things and all for the sake of one, for the one
is of course the all as well. Nature, despite
her seeming diversity, is always a unity, a
whole a relationship to the rest of the sys-
tem.* ⁱⁱⁱ

The pursuit of botanical classification, finding unique characteristics that identify individual species, has had far reaching consequences. Specific and unique markers of identity are usually at the micro-level, focusing on the structure and composition of the ovary. This search for a universal marker for individual species – that is, traits exhibited by all plants of a particular species – has led us further and further away from observing the whole plant or tree.

For the kind of botanical classification that Linnaeus introduced, herbarium specimens are a prime requisite. During much of the year most plants in the wild do not flower or bear fruit, making traditional plant keys, that depend on flower and fruit for identification, quite useless. It is for this reason that research entails the collection of plant



Haldina cordifolia (left) and *Mitragyna parviflora* (right), both under the indigenous (Durva) generic term 'mundi', both members of the Rubiaceae family, with fruit similar in shape but varying in size.

specimens, when the plants flower and fruit, then dried and stored, and then described following botanical norms.

Bark as a prime characteristic in tree identification

Adivasi tree identification relies mainly on the recognition of the bark. Some tree species have dark or black barks (most *Diospyros*, with the exception of *Diospyros montana*) Many species that grow in open sun-lit spaces have pale or whitish barks (*Anogeissus*, *Lannea*); some trees, as they age, have 'wounded' barks that exude gums and resins (*Pterocarpus*, *Shorea*); some trees have thick 'crocodile skin' barks (*Terminalia to-*

mentosa). Some trees have flaky barks that peel off (*Linoceira ramiflora*); there are papery barks (*Sterculia urens*), prickly barks (*Bombax ceiba*) and so on. Each of these are known and recognized by the adivasi people of the region, who differentiate them with the same ease with which we tell people apart.



Shorea robusta (sal) barks. The right one is attacked by the sal borer (minute holes), the left one exudes resin (white patches).

At times additional confirmation is sought by blazing^{iv} the tree; occasionally the leaves are also taken note of. The advantage in this method is obvious when the trees are tall without lower branches, making them cumbersome to climb, and with the leaves, or fruit and flowers well out of reach.

Barks of trees vary considerably within the same species. Age, terrain, and direction, all affect bark texture and colour. The same tree species, at different times, could have barks that appear quite different at a casual glance. The shade of colour, the cracks or fissures, or the natural presence or absence of 'wounds' may suggest that they are different species but an experienced eye is able to factor in the effects of time and terrain on the tree. That nature is not

constant, that there are no external features that are unvarying, and that there is an ongoing and continuous dialogue between the various plant species and the environment, is a 'given' in indigenous observation. This notion of doing away with the 'constants' (specific number of floral parts, position of ovules), and tuning one's observation skill to the changes in vegetative characteristics of plants (variations in size or the tomentation of leaves, distortions and texture of the bark) is diametrically opposed to the Linnaean technique perfected in the herbarium.



Diospyros montana (left), one of the few species of the Ebenaceae family that does not have a black-tinged bark. The large thorns of the early years fall off as the tree ages. The right one is *Diospyros melanoxylon*, the bidi tree, with the typical black-tinged bark.

The adivasi ability of identifying tree species, usually by the bark alone, as explained above, is a method that transcends the usual, logical steps used in classical taxonomy. It does away with the binomial technique of step-by-step elimination – for a good botanist these steps may be implicit, but they nevertheless exist – and suggests a spontaneous and lively conversation between people and nature. This relationship with nature is what defines and underlies indigenous ‘knowledge’ (for want of a better word) about the forest they inhabit. The identification of species, the understanding of the ‘character’ of the plants and hence of the landscape itself, the uses various plants and plant parts are put to, the detailed taxonomy of tubers based simply on the depth they are found in and their taste and texture when cooked, the preferred food plants of animal species, etc., are some of the specialities of such ‘knowledge,’ and what Humboldt may have been tempted to call an ‘indigenous plant geography.’



These three barks are of *Lannea coromandelica*, of varying ages, growing in slightly different terrains within a sal (*Shorea robusta*) forest.

In conclusion

I would venture to say that many of our problems with regard to understanding nature and the way we deal with the environment – the classifying, the obsession with naming, isolating and splitting individual parts of organisms, and the underlying arrogance of the ‘specialists’ in modern culture – are due to a specialization that is unending as well as unnecessary. It has not, and will not, be able to show us a way out of the multiple crises that humanity is faced with today: climate change, food and water insecurity, ‘conflicts’ between humans and animals, a declining biodiversity, etc., all of which are related and stem from a few very related and common causes. Through the past two years of the covid pandemic, most of the world’s indigenous peoples have been able to pull through without the vast support systems that the urban populations demanded. They have also been able to procure their own food from their environments during the lockdowns, and even contributed to neighbouring urban centres that were badly off, as in India.

The indigenous knowledge system – the identification of plants, their uses and roles

in the landscape, etc. – is also a system of values. The latter aspect, of values, regulates human behaviour. Without values, ‘knowledge’ remains ungoverned, with the plants and other natural resources prone to appropriation and exploitation. This is most apparent in the way ethnobotany is usually practiced. Though as an area of study ethnobotany is said to concern itself with the interaction between humans and plants, with the available traditional knowledge, it has come to view plants only for their monetary gain, or individual fame. Pharmaceutical and agro-industries, and plant hunters of most hues, have become predatory in their pursuit of ‘knowledge’ and explorations, (mis)using indigenous societies and their knowledge systems. Most researchers have done little better, perhaps as their obligations lie with their academic institutions and not with the people whose knowledge they appropriate.

How nature is perceived by a society also reveals the relationship between them, of a people and their environment. This is understood by the way nature is seen and studied: in its entirety, with the landscape as a seamless and undivided space that encompasses forest and rivers and soil and people

or, nature in its individual components, each part split into further divisions and sub-divisions, each with an identity of its own, separate from the whole, and which can be dealt with (or appropriated) independently, devoid of the consciousness that connects and interconnects the stamen to the bee, the leaflitter to the crab, the silkworm moth to the timing of the leaf-fall of the merdengi trees^v.

Modern science has led us to look at, and understand, the components of nature without taking in the broader holistic view. It has been easy to deal with the smaller elements of the landscape, like a species, or parts of a species (roots, bark, seeds, horn or tooth), and best put it to use economically, justified in anthropocentric terms. However, it has led to a consistent and ongoing divorce of knowledge from ethics, and the erosion of values inherent in all knowledge, and justified this divorce by using notions premised on very short-term anthropocentric goals.

The need now is to reverse the process and to instill value into the various 'areas' of knowledge, which are actually one and interconnected, beginning with the first steps in the identification of plants. This will lead to a new perception and relation to the plant-world as well as the landscapes we inhabit. It will open up new ways of approaching our landscapes where the driving force will be the 'inclusion' of factors in the natural world, including us. We have, for too long, split up our world in our quest for knowledge, and it has led us nowhere. It is time to put the pieces back together again.

i. In the Foreword (Science and Change) to *Order out of Chaos* by Prigogine, I., and Stengers, I.; Fontana Paperbacks, 1984

ii. In Alexander von Humboldt: *Personal Narrative*; abridged and translated with an introduction by Jason Wilson. Penguin 1995

iii. *ibid*

iv. Blazing usually entails a cut on the trunk with an axe or machete to ascertain the colour under the bark; any exudation is also observed.

v. *Terminalia tomentosa*

The Flowering of Bamboo

Snehlata Nath

Majestic bamboo clumps greet you all along Sigur plateau as well as in the Mudumalai, Bandipur and Wayanad Sanctuaries, and in the Sathyamanagalam Tiger Reserve. As always, their flowering this year was eventful, and changed the landscape drastically. The lush green environs has become a bleak brown one. In the Nilgiri Biosphere Reserve the flowering is ongoing for the past 3 years. Bamboo is known to flower once in many years, a phenomenon known as 'masting'ⁱ and also observed in some species of *Strobilanthes*. In some species of bamboo, these flowering cycles may occur even every hundred plus years. This bamboo is of the *Dendrocalamus* species, and is flowering after about 29 years. It would be interesting to know more about the phenomenon of masting across the Asian region.

In Mudumalai, the mass flowering has attracted a lot of birds and rodents to the forest. Its flowering is considered to be a bad omen as it increases the rodent population, who then attack the crops in the fields as well as in the granaries. The flowering is gregarious and so is the profuse seeding. Once this is over the entire clump dies. All the species that were dependent on the bamboo are then affected for some years, until they germinate and new bamboo saplings sprout and mature into the tall slender culms we are familiar with.

The Nilgiri region harbours the highest Asian Elephant population. Bamboo is an important food for these gentle giants. Bamboo is also the home for Dammer bees (*Trigona* spp.) and several moths and wasp families. Adivasis in this region also depend on bamboo for fencing and construction material, basket & mat making, and con-

sume the tender bamboo shoots during the season. The Kattunaicken community keep colonies of Dammer bees in bamboo hives in their homes and periodically harvest honey. The close relationship of this bamboo species to humans is well documented. Bamboo species are also harvested regularly by the forest department and sold to the paper industry.



Dry bamboo clumps after flowering.

Bamboo flowering generates a lot of seeds which, apart from the birds and rodents mentioned earlier, are also consumed by humans. The seeds are known as 'bamboo rice' get collected by adivasi women in the region. The de-husking is far more cumbersome than that of the ordinary rice-grain but it is a delicacy and much relished. Now it is sold widely in local shops for local consumption and some of Keystone Foundation's producer groups have procured some for sale.



Conserving the bamboo seeds and ensuring their regeneration in the forest is a task that needs some attention. Left to itself, regeneration may have occurred naturally. However, with the threats of seeds being eaten by rodents and collection by people, this will need special effort.

The forests are also not conducive to natural regeneration with areas being quickly occupied by invasives like Lantana and the relatively new incursion of *Senna spectabilis*.

Though Bamboo flowering is a natural phenomenon, its occurrence after long intervals and the mass dying of the species in the forest has a 'shock' effect. Navigating these rare occurrences in nature with grace and resilience is known to Adivasi people. However, with several challenges and stakeholders involved today our solutions need to be more creative, balancing nature, science, people and culture.



i. A more detailed article on masting appeared in View from a network: NTFP Exchange Programme India, by Madhu Ramnath: A brief note on masting and its implication with reference to some *Strobilanthes* spp. Keystone Foundation, Conoor Press, 2010.

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Towards a Community Forest Resource Management Plan (CFRMP): a step ahead in community governance of forest commons in south Rajasthan

*Shailendra Tiwari, Kerertan Kumar Kasota
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Introduction

Since the early 1990s, Seva Mandir has been working with local communities in south Rajasthan to conserve forest commons. The journey began in 1991, when the first NGO-supported Joint Forest Management (JFM) programme in Rajasthan was approved by the Forest Department. This was in Shyampura village of Jhadol block in Udaipur district. After that, Seva Mandir worked with Forest Protection Committees (FPCs) in 28 other villages to protect and manage their forestlands under JFM.

The forest areas in the region were troubled with encroachment and boundary disputes among villages. Also, the Forest Department was reluctant to approve the FPCs under the JFM. Local communities and Seva Mandir in 1998 constituted a Van Uthan Sansthan (VUS), in order to resolve conflicts around forestlands, which were mainly between villages and within villages. Van Uthan Sansthan also worked as a peer pressure group of FPCs to persuade the Forest Department to consider JFM proposals. Soon VUS became a strong & active network of more than 100 FPCs.

In spite of a lot of persuasion on the part of village communities, local FPCs and NGOs, the JFM did not expand much in the region. This was due to the reluctance of the Forest Department to co-manage forests with local communities and NGOs. In the decade of 2010 the JFM program almost came to a halt.



Fortunately, a provision was kept in the FRA, 2006, towards the common protection & management of forests under the Community Forest Resources and Rights (CFR). In 2008-9, VUS and Seva Mandir assisted villages to constitute Forest Right Committees (FRCs) under the Forest Rights Act. As VUS and Seva Mandir had already been working with local FPCs to conserve forests as commons, emphasis was given to develop a consensus in the villages to opt for Community Forest Rights. In 2010-11, 71 CFR proposals were submitted to the Sub District Level Committee (SDLC) in Jhadol block. Of these, in 2014-15, 38 proposals were sent on to the next level, the District Level Committee (DLC), Udaipur. However, for almost eight years the authorities took no action on the CFR proposals.



After a struggle of almost a decade, in 2019-20, 17 villages of Jhadol block of Udaipur district received collective titles under the Community Forest Resource (CFR). These communities can now constitutionally exercise their right to collectively protect, manage and govern their traditional forest areas.

PREPARATION OF CFRMPs by CFRMCs

In the villages which have received CFR titles, as per the law, Community Forest Resource Management Committees (CFRMCs) were constituted by the respective Gram Sabhas to prepare their Community Forest Resource Management Plans (CFRMP). Workers of Van Uthan Sansthan and Seva Mandir are assisting the Committees in the preparation of these Plans. To begin with, rounds of discussions were held with local communities and village institutions in preparing the management plans for the forest areas. Members of the Panchayats, local village leaders and villagers from the neighboring villages, as well as volunteers, actively participated in these discussions.



The main objective of the Plan is to make the current community conservation & management of Forest Commons sustain-

able, organized & effective. In brief, these plans aim to achieve equilibrium between the overall ecosystem & livelihood in the CFR villages.

As there was no standardized format available for preparing the CFRMP in Rajasthan the one from Maharashtra was adhered to. We were helped in this process by the Gramin Samassya Mukti Trust, Yavatmal, as well as ATREE, Bengaluru, and TISS, (Tata Institution of Social Science) Mumbai. Inter & intra village conflicts over forest areas are resolved through a process of persuasion and negotiations. Local village institutions and local leaders played a major role in the solution of conflicts, with representatives of Van Uthan Sansthan (VUS) facilitating these initiatives of conflict resolution.

Workers of Van Uthan Sansthan (VUS) and Seva Mandir assisted CFRMCs of ten villages in preparing the CFRMP document.

CFRMPs broadly captured information in following heads.

- Village Map showing its boundaries shared with adjoining villages. Forest areas falling inside & outside village boundaries. Local names of forest areas along with presence of different sacred groves. Details related to inter and intra village conflicts related to forest land were also recorded.
- Map & picture of the CFR Area of the village with its boundaries shared with adjoining forest areas etc. Actual CFR area was also measured using GPS technique.
- Brief history of the village & its current demography & available services like school, hospital etc.
- Means of livelihood like agriculture & animal husbandry, hunting - gathering activities in the forest area.
- Bio diversity available in the forest area and in the village. It included major flora & fauna present in the local landscape.

Chapter wise description of the broad areas covered in the plan

a. Protection & management

It broadly involved management of various kind of pressure on the CFR area. It involves management of grazing of livestock, collection of grass, firewood and other NTFPs from the forest area by villagers and people from adjoining villages. In addition to this, the illegal felling of trees and forest fire is also mentioned under the protection head.

b. Development

In the development plan, activities related to construction of boundary wall, soil & water conservation and production enhancement were included. The development plan was drawn keeping the health of different forest patches in mind. Most degraded patches of the CFR area are to be treated first as per the development plan.

c. Livelihood Enhancement

The plan mentions current scale of NTFPs harvested from the forest areas. It also proposes to undertake activities related to augmentation of NTFPs & establishment of sustainable harvest protocols. Possible marketing interventions for realization of appropriate price of NTFPs are also mentioned.

The plan also speaks about improving the overall farming systems of the villages to strengthen Natural Resource based livelihood of the community.

Process Followed in Approval of the Plan

a. Presentation of the draft CFRMP to the village

A special village meeting was called to present the first draft of the plan to the villagers. In this meeting, the plan was shared

in detail.

b. Approval of Final Plans in the Gram Sabhas

Plans complete in all aspects were presented before the Gram Sabhas which were called by local Sarpanches of concerned Gram Panchayats. These plans were read out before the members present in the Gram Sabha. After approval by the members present, these plans were signed by the Sarpanch & Secretary and then registered in the official records of the Gram Sabhas.



Next Plan of action

The Tribal Area Development Department (TAD) Government of Rajasthan has announced a scheme called Samudayik Van Adhikar Vikas Yojana (SVAVY) under which village proposals that have received CFR titles can get financial assistance upto Rs. 10 lakh.

The villages who have gotten their CFRMPs approved by Gram Sabhas are submitting their applications for receiving a grant under SVAVY.



Conclusion

CFRMCs have a constitutional mandate to govern the village forest as a common pool resource. After a long struggle, there is an emergence of hope for communities who can take decisions in a decentralized manner for regarding their forest commons. This decentralized model however has an equal possibility of failure. Now, the responsibility lies with community based institutions and civil society organizations to capitalize on this constitutional provision. It can definitely transform the forest landscape of the country through grassroots democracies in the form of CFRMCs.

Annexure- CFRMCs

- As per provisions under the CFR of FRA 2006, in the villages which have received CFR titles, the Gram Sabha (GS) will constitute a CFR Management Committee (CFRMC).
- i. The CFRMC will be the executive committee of the GS for planning, management and conservation of the community forest resources. It will manage the revenue being generated from the management of community resources. It will manage funds received

from the government & keep accounts of the funds that have been deposited and spent, and will carry out all administrative responsibilities related to the FRA. The CFRMC represents all forest rights holders within a Gram Sabha. It would have a minimum of 5 and maximum of 11 members. The quorum of the committee will be not less than 50% of all members of which 1/3rd should be women.

- ii. The CFRMC will elect with majority a President, a Secretary and a Treasurer from among its members. One of these positions should be a woman and the President should be from a Scheduled Tribe.
- iii. The notices for conducting the meetings of the Committee will be signed by the President/Secretary of the committee.
- iv. Emergency meetings of the CFRMC must be announced with drums and other traditional methods of announcement in the village at least half - an hour before the commencement of the meeting.

v. At the beginning of the meeting the Secretary should read out the minutes of the last meeting and get the approval of the committee. The secretary should also update the committee on any actions taken as per the previous minutes.

CFRMC is a legal entity constituted under the FRA and hence does not need to be registered under any other Act or Institution. The Collector as the Chairperson of the District Level Committee must direct all the banks to open bank accounts for the CFRMCs on priority basis without any hurdles.

(Source- Govt. of Maharashtra document on Guidelines for CRFMCs, 2015).

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Shifting Cultivation of the Juang

Pravat Kumar Mishra

Gonasika is the place where the sacred river Baitarani originates, in Odisha. It is the place where the Juang people live. The Juang are a tribal people who practice shifting cultivation on hill slopes, and hunt and gather in the surrounding forests. The Juang people live in 'communities' with strong rules that govern their social and cultural institutions. People leaving the community and moving away are termed 'bhagoda' and disowned.

The Juang terms for their cultivation spaces are as follows: the hill slopes for shifting cultivation are called "taila"; plain and dry regions for cultivation are called "guda"; vegetable cultivation patches are called "wadi" and the lands selected for rice cultivation are called "bila". Taila is where minor millets and oilseeds are grown.



The following day the people worship their agricultural implements and axes, and then clear the areas for shifting cultivations. The cleared patches are distributed amongst the community members and usually this is done on the basis of previous practices. The weeds and branches in the areas are burnt and left for a month. The ashes are used in the field and are also kept in bunds prepared by stones and small logs. Again, in the month of Jyestha, the women clear the hedges from the land and in the month of Ashadha, rasi (a kind of sesame oil seed) is sown.

Normally, rotational cropping takes a period of 6 to 7 years. The shifting cultivation areas are earmarked accordingly in different directions and is a wonderful way of ensuring soil fertility. Most destructive pests and insects are controlled during the process of field preparation; according to Juanga people, the "uduma disease" in crops is not known in shifting cultivation. Cow urine and ash are sprayed on the crops to eradicate the harmful insects and a natural predatory system is followed in the process. The Juang cultivate more than 24 types of crops during each crop season.

In January, the Juanga celebrate "Pausa Purnima" for three days. There is good food, new clothes, the changu drums roll and there is dancing. On the fourth day, the "Bhuin Bandha Puja" is performed for mother earth. The people worship Pata Devi of Baitarani, also selecting the direction of podu cultivation fields the same evening.



According to the Juang leaders, many changes have taken place in the last 30 years. Some crops have disappeared as the seeds are not available. The forest department discourages shifting cultivation, as does the special project Juanga Development Agency. (JDA). The JDA provides different kinds of seeds and agricultural support to the people and traditional agricultural implements are now replaced with modern tools. The focus on pulses has reduced considerably, giving way to rice and vegetables. "We used to eat many raw foods, now we consume mainly cooked foods."

There has been a considerable reduction in shifting cultivation practices. However, due to non-availability of sufficient plain lands, guda land, the alternative is podu land. The Juang follow definite procedure while cleaning the shrubs, creepers and climbers, small under growths etc. Usually, they do not clear any useful plants. Similarly, the application of fire is restricted to the cultivable area only. They select the traditional boundary of their podu area with stones, big trees, streams, hills etc. Now, the spread of education within the community has provided employment opportunity to some youth. Some people are engaged in small business activities. These livelihood opportunities have alienated them from the community, and from shifting cultivation.

Implementation of the FRA in the Juanga Pidha started with the IFR (Individual Forest Rights), which focuses on individual agricultural lands; this is against the practice of the Juanga. Now both community farming and Individual farming is seen in case of podu cultivation and forest protection as well as conservation was strong. Outsiders did not dare to enter into Juang forest areas. However, the situation has changed and timber smugglers now operate in the forest and as a result many valuable trees have disappeared.

Such Particularly Vulnerable Tribal Groups like the Juang are now at a crossroads. Mainstream culture is changing their life and livelihoods. The less probable and difficult alternative is the protection and preservation of their values and culture, along with their natural habitats and resources. Development projects and agencies, and the current policies and political scenario do not bode well for shifting cultivation and sustainable livelihoods around that. The new generation of the Juang know little about their habitats, their natural resources, or their traditions, customs and cultural practices, or their history.

An in depth research is recommended on the subject of the Juang.

I'll Think of a Title Tomorrow.....

Shakuntala Ramnath

Introduction

In 700 BC, the Greek poet Hesiod wrote "Do not put off your work till tomorrow and the day after".ⁱ

Clearly, we didn't listen. While procrastination has old roots, its prevalence in society today is higher than ever before, with 88% of the working population admitting to procrastinating at least sometimes.ⁱⁱ In the 1970s, the percentage of adults identifying with being 'chronic procrastinators' was 5% and in 2020, this was 20%.ⁱⁱⁱ Procrastination is so common that it is statistically measured in terms of how many times per day one procrastinates and for how many hours.

Defining procrastination

Procrastination comes from the Latin word *procrastinare*, which constitutes of *pro* meaning 'forward' and *crastinus* meaning 'belonging to tomorrow' from *cras* which means 'tomorrow'.

The common definition of procrastination is the action of unnecessarily and voluntarily delaying or postponing something despite knowing the negative consequences for doing so.^{iv}

A common example of procrastination amongst students is when they find themselves stressed and cramming the whole night before an exam while there was logically plenty of time to have studied earlier to avoid sacrificing one's sleep.

The circular nature of procrastination is that there are usually consequences to putting off a task, but these consequences do not

stop this behaviour from repeating itself. The student who finds themselves in an anxious time crunch before an exam may promise themselves to utilize spaced studying for the next one, but find themselves refilling their coffee mug in the same pattern.

While the prevalence of procrastination is high in the field of academics, it is not only about tasks with deadlines, but it extends into other areas of life as well. For example, personal fitness goals, going to therapy, or dealing with daily concerns stemming from climate change.

Why do we procrastinate?

Procrastination is often coupled with the Greek term *akrasia* which is the state of mind in which someone acts against their better judgement through weakness of will.^v It is a common belief that procrastination is a personal failure, not having enough will power, or in psychological terms 'a failure to self-regulate'. While this approach is reasonable, it only tells half the story.

To understand why we procrastinate, the term must be broken down into what it is essentially: a resistance. Several psychological studies have investigated this phenomenon and found that numerous factors are responsible for this resistance. These include: perfectionism, laziness, fear of failure or criticism, lack of belief in oneself, difficulties in concentration or focusing, failure to prioritize, resisting challenges and/or a lack of planning, to name a few.

Let's take perfectionism as a hypothetical example. The trouble with perfectionism is that one will often have trouble meeting

their unreasonably high standards. Procrastinating would mean forcing oneself to do the work in a time crunch. Therefore, the quality of the work is sensitive to the time it was done in. One can avoid taking full responsibility for the outcome by shifting it onto the shoulders of circumstance. If the task were to be an assignment, a disappointing result can be blamed on not having had enough time. A satisfying result reinforces the perfectionism through the comforting premise that they would have done even better under different circumstances i.e., having had enough time. This system preserves one's perfectionism and inadvertently encourages the behaviour even if the individual isn't aware of it themselves.

For some people, procrastination is chronic. They claim that they work best under pressure and force themselves into high-stress, time-constrained conditions to complete work, which is usually successful – hence the habit. However, this is usually unsustainable considering one's health as stress has a number of adverse effects on physical and mental well-being.

What happens in the brain?

Psychologists refer to procrastination as a dance between two brain regions: the prefrontal cortex (the reasoned response), and the limbic system (the emotional response). The prefrontal cortex, located at the front of the brain, deals with executive functioning, planning, decision making, self-regulation, and self-control. Understanding procrastination as a failure to self-regulate, and not having enough will power or self-control emphasizes the role of the prefrontal cortex.

The limbic system is the system of emotion and includes the amygdala. The amygdala releases the hormone adrenaline in response to aversive stimuli, controlling the body's fight or flight response. This system has had immense evolutionary benefits for avoiding dangerous or unpleasant situa-

tions for survival. Unlike the prefrontal cortex, which is concerned with planning and the future, the limbic system deals with immediate situations.

When we procrastinate, we are avoiding doing a task because it is unappealing in the moment. The limbic system interprets this situation as a modern threat and takes control, promoting the response that is most comforting to the individual: avoiding the stimuli. Avoiding the stimuli results in a physiological response that is relaxed and pleased with having avoided the unpleasant situation. The limbic system is concerned with immediate gratification, and therefore fails to consider the consequences of postponing this task.

In other situations, the prefrontal cortex takes charge, allowing an individual to plan ahead, and think of how immediate actions will impact the future. In the dilemma – to procrastinate or not to procrastinate- there are a number of factors that contribute to which region of the brain takes charge (put simply). This depends on the development of the prefrontal cortex and the limbic system, which are affected by genes (shown by twin studies), upbringing (shown by developmental studies), and numerous socio-cultural factors. For instance, research has shown that in chronic procrastinators, the volume of the amygdala is larger than normal, triggering stronger reactions to unpleasant or unappealing situations.^{vi}

Conclusion

One of the reasons that procrastination is such a common problem is because procrastinators are often successful. Procrastination is highly correlated with IQ^{vii} and many individuals claim that they work best under pressure. Pressing deadlines in many cases, result in the 'fight' response of the limbic system, and individuals ride this adrenaline rush to finish tasks in a state of panic.

While there may not be immediate consequences, putting the body in a state of stress repeatedly has long term consequences for physical and mental health that build up over time. These effects can range from anxiety and trouble sleeping, to depression and digestive problems. Moreover, procrastination has effects on one's performance at work, and their ability to balance different priorities in their lives. An effective method for managing chronic procrastination is meditation. Neuro imaging studies have shown its effectiveness in reducing the size of the amygdala, and down-regulating it's activity.^{viii}

When it comes to writing papers or tasks that are not structured, the most difficult part can be getting started. This is where breaking tasks down into components can be helpful, as tasks can be broken down into the most minute steps that need to be taken to begin – for example, opening up a document and writing a title. The two-minute rule is also important in this context, as it states that if a task can be completed in two minutes, then it should be completed now. For bigger tasks, working in small time frames (for example 25 minutes) and then rewarding oneself with a small break or snack can be effective and motivating to keep working. It is also important to hold oneself accountable, setting realistic goals that can be achieved and taking them seriously. Sometimes it helps to inform a peer that you're going to work for an hour, so you feel more responsible to follow through. Lastly, it is important to internalize small successes and give yourself credit where it's due.

As Mark Twain said, Nothing is difficult. It's only getting around to doing it that's difficult.

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The Roma: connection between India and Europe.

Paul Wolvekamp

The Portuguese explorer Vasco da Gama is considered to be the first European to reach India via the Atlantic Ocean when he arrived at Calicut on the Malabar Coast in 1498. For more than four centuries, trade, colonization and war, travel and tourism have contributed to exchanges between India and Europe. It led to widespread adoption of ingredients of India's culture, taste and philosophy by European societies. Indian spices have become indispensable elements of European cuisine. Meditation and Ayurveda have become parts of health, self-exploration and lifestyle. Ravi Shankar inspired George Harrison and the other Beatles. There are over 38 Hindi-Bollywood film channels in Europe. The question is, however, whether these exchanges really did happen only because of da Gama's 'discovery' of India?

The answer is clearly in the negative. The Romany people originating from Northern India (from present-day Rajasthan, Haryana, and Punjab regions) started traveling across Asia and Europe already over a thousand years ago, in a sort of diaspora. They have retained the Romany language, which finds its roots in Sanskrit, the only 'New Indo-Aryan' spoken exclusively outside the Indian subcontinent.ⁱ Many words which the Roma migrants borrowed during their wanderings give evidence that they stopped in northern Persia (Iran) and among the Armenian and Greek speaking peoples in Byzantium (now Istanbul). There are accounts of the Roma arriving in the Balkans before 1350.ⁱⁱ

The earliest traveling Roma populations supported themselves as performers, artisans and tradespeople. They also enchanted and entertained society as fortune-tell-

ers, singers and dancers. In England and Ireland, they became famous for their skills



Roma children in the Black Forest, Germany. Source and Photo credits: Bruce Dale, in 'Gypsies. Wanderers of the World' by Bart McDowell, 1970

with horses. In addition, the Roma people are most celebrated for their musical heritage, which has influenced jazz, bolero and flamenco music, as well as classical composers. During their travels, the Roma adopted the various folk dances they encountered on their journey, which they then adapted to create their own culture, identity, art, and a way of expression. For example, the famous flamenco dance, which by now has achieved a global status, originated

in the 15th century with the arrival of the Roma (Gitanos) on the Spanish (Iberian) Peninsula. The Flamenco embraces three forms: the Cante (song), the Baile (dance), and the Guitarra (guitar) – the three forms of expression in which most Roma excel. Spain has 47 provinces and they each have their own style of dance. https://www.youtube.com/watch?v=nr4sD5BE_ZA



A Hungarian Lovari grooming his horse. 'A Gypsy without a horse is no genuine gypsy', goes an old saying. (Source and Photo credits: Bruce Dale, in 'Gypsies. Wanderers of the World' by Bart McDowell, 1970)

Whereas traditionally, Roma traveled from place to place, the majority of Roma are now settled. They included artisans (for example, wood and copper-smiths), farm workers, blacksmiths, musicians, fortune-tellers and entertainers. At first, they were welcomed for their skills, but they were also met with suspicion and superstition. Soon governments and the church considered them outsiders and 'heathen.' Often, the Roma were treated with outright discrimination, labeled as thieves and vagabonds. In many instances, such intolerance led to repression and persecution. During the second world war, under Nazi terror, historians estimate that the Nazi's and their allies killed between 250,000 and 500,000 European Roma.ⁱⁱⁱ

The sad reality is that millions of Roma now live in isolated slums and struggle to enjoy basic educational and health care services. Many Roma live with the daily threat of forced evictions, police harassment and violent attacks. Roma children also often suffer segregation in schools and receive a lower standard of education. It is a direct result of centuries of discrimination from governments, institutions and individuals. This has pushed many Roma to the margins of society.

Approximately 12-14 million Roma people live outside India. There is no official or reliable count of Romany populations worldwide. In Europe, there are approximately between 10 and 12 million Roma; most of them live in the central and eastern European countries, where they make up between 5 and 10 per cent of the population.^{iv} Many Roma refer to themselves by one generic name, Rom: meaning "man". Non-Roma are often referred to by the term Gadge or 'Gadjo': meaning bumpkin, 'stranger' or 'barbarian'. The group is also known by a variety of other names throughout Europe – notably gypsy (as for long the general understanding was that the Roma originated from Egypt), 'Zigeuner' and 'Sinti' (Netherlands/Germany), Gitans (France), Cigány (Hungary),



Young English travellers cooling and watering their horses in the Eden River. (Source and Photo credits: Bruce Dale, in 'Gypsies. Wanderers of the World' by Bart McDowell, 1970.)

Gitanos or Calo (Spain), and Ciganos (Portugal) or Dom (Middle East, North Africa) and a great variety of other names.^v

The legacy of centuries of Roma contribution to European culture is thus visible and audible in all corners of the continent, up to this day. The lives and fame of musicians and singers-dancers such as Jean "Django" Reinhardt and Carmen Amaya^{vi} are illustrative of the imprint left behind by many Roma performers. Another important and unique Roma contribution is in occultism. Fortune telling, tarot card, spells, talismans are attributed to the Roma. This has given rise to a myth called the 'gypsy curse,' which is said to be malevolent and fearsome.^{vii} Roma have often been portrayed to be fiery, intense, unfaithful and independent. Carmen, in Bizet's opera 'Carmen' is the arche-type of the strong and independent Roma woman and femme fatale: <https://www.youtube.com/watch?v=K2snTkaD64U>

as mentioned, horsemanship. Great Britain and Ireland have, on various occasions, won gold medals in world championships thanks to Roma and Traveller boxing champs. And nowadays, young Roma and Travellers gather and participate in the traditional bare knuckle fights, accompanied by heavy betting. It is an intrinsic part of their culture. As Mikey Walsh (author and scion of a lineage of Roma boxing champions) puts it: "Whether they go for the crown or not, all Gypsy men will have to fight as part of their day-to-day life, ... It would be impossible for any Gypsy man, no matter how much he might wish for a quiet life, to be in the company of other Gypsy men without being asked to put his hands up. And when he is asked, that is what he must do."^{viii} It is unsurprising that Roma and Traveller boxers from all corners of Britain have won the World Heavyweight,

Also, when it comes to sports, the Roma have established a solid reputation in Europe, especially in the field of boxing and,



Roma keeping their vigil, in a church in France. Many Roma in Europe are catholic. (Source and Photo credits: Bruce Dale, in 'Gypsies. Wanderers of the World' by Bart McDowell, 1970)

the World Middleweight, the Commonwealth Featherweight and the British Light Heavyweight title.^{ix}

We are fortunate that a number of Roma film makers have been able capture the rich, complex, tragic-comic and diverse culture of Roma societies. Famous film directors are Emir Kusturica and Tony Gatliff.

Some recommended films are: Latcho Drom: <https://www.youtube.com/watch?v=r3lqH-vk3f28>

A film by cineast Tony Gatlif: Vengo: <https://www.youtube.com/watch?v=r3lqH-vk3f28>

The surrealistic film Black Cat White Cat by Emir Kusturica: <https://www.youtube.com/watch?v=r3lqH-vk3f28>

Gajo Dilo: <https://www.youtube.com/watch?v=JlxLVULbkR0&t=107s>

<https://www.youtube.com/watch?v=QZr-1tuS2V0>

Time of the Gypsies: <https://www.youtube.com/watch?v=UJkjh-kIdHE>
<https://www.britannica.com/topic/Rom>



Roma enjoying themselves and attracting a large crowd in Brussels before the Town Hall, after the Mayor formally welcome the Roma for the first time in the history of the city. (Source and Photo credits: Bruce Dale, in 'Gypsies. Wanderers of the World' by Bart McDowell, 1970)

i. Source: https://en.wikipedia.org/wiki/Romani_language

ii. Source: Gypsies. Wanderers of the World, by Bart McDowell, 1970

iii. <https://encyclopedia.ushmm.org/content/en/article/genocide-of-european-roma-gypsies-1939-1945>

iv. There are also sizeable Romani minorities in Italy (around 150,000 Roma and Travellers), Spain (600,000-800,000), France and the UK (up to 300,000 in each country). An estimated 1 million Roma live respectively in the US and Brazil.

v. Many Roma consider the name Gypsy to be pejorative, referring to illegality and vagabonds.

vi. <https://www.youtube.com/watch?v=FCca6d2cel0>

vii. <https://timesofindia.indiatimes.com/where-do-gypsies-come-from/articleshow/18791132.cms>

viii. <https://www.csmonitor.com/Books/2012/0228/6-memories-of-growing-up-as-a-Romany-Gypsy/Boxing-is-one-of-the-most-important-parts-of-a-male-Romany-Gypsy-s-life>

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ix. <https://www.travellerstimes.org.uk/features/how-traveller-boxers-took-over-world>

Reclamation in Kuthiraiyar

B.Satheesh Muthu Gopal

I visited Kuthiraiyar, a place in the foothills of the Palani hills, during the last week of 2019. It was a memorable visit as it happened before the covid pandemic. I went to the nursery of the Palni Hills Conservation Council centre and had a conversation with Mr.Krishnamurthy who looks after the place. He took me to the area where saplings had been planted the previous year, near the water catchment of the Kuthiraiyar dam. I learned about different indigenous plants such as the Golden Shower [*Cassia fistula*], Neem [*Azadirachta indica*], Camel Foot [*Bauhinia variegata*], Siris (*Albizia lebbek*], North Indian Rosewood [*Dalbergia sissoo*], Indian Beech [*Millettia pinnata*] and many others.

This area was the natural habitat for the Small Clawed Otter [*Aonyx cinereus*]. A researcher, Ms Meena, had conducted a detailed study of Small-clawed Otters during 1999-2000. According to her, the river ecosystem is affected due to the discharge of pesticides and industrial effluents. As the otters prey base depends on the river ecosystem, their population is affected, leading to a decline in their numbers. However, the major reason for the population decline in otters in the Palani hills is due to poaching. Otters were poached for their skin (used for drums), for their meat and their fat used in medicine.

I always looked for otters whenever I visited Kuthiraiyar but have never saw one. The forest is better protected than in previous decades and one hopes that this will bring back this beautiful creature. An otter was sighted in 2015 at Kookal. The Kookal shola and the montane grasslands are one of the

main water sources for Kuthiraiyar. Since the two areas are linked by a natural water system the protection measures can possibly rejuvenate the Small-Clawed



Grizzled Giant Squirrel

Otter population. In addition, the movements of the Grizzled Giant Squirrels [*Ratufa macroura*] was a promising sign of wildlife protection in recent years. I saw the pelage of one glistening during sunrise.



Southern Colical

I went for a bird walk in the area surrounding the dam at about 7.30 a.m. No movement or bird song was evident until about 8.30 a.m. when the resident birds, such as the Southern Coucal, the Common Myna, the Green Bee Eater, the Indian Golden Oriole, the Grey Jungle Fowl, the Laughing Dove, the Rose Ringed Parakeet, the Common Iora, the Common Tailorbird, the Rufous Treepie, the Red rumped Swallow, the Red-vented Bulbul, the White-browed Bulbul, the Yellow-billed Babler, etc., made their appearance. When the forest canopy received more sunshine at around 9.00 a.m., the flycatchers appeared. The Indian Paradise Flycatcher, a male, was perched on a tree. Other flycatchers then turned up. The Tickell's Blue flycatcher, the Brown Breasted flycatcher, the Blue-throated Blue flycatcher, Asian Brown flycatcher and the Taiga flycatcher were at the same spot.



Taiga Flycatcher

This was the first time that the Taiga Flycatcher was recorded in the Palani hills. These birds migrate from East Asia to South India during the winter. I kept moving gingerly into the jungle and started observing the Tickell's blue flycatcher which was on call. The song of the flycatcher crescendos were there. Then I started walking towards the water catchment, to the open area where the waders were. The red wat-

tle lapwing communicated my presence to their counterparts. I observed four different species of Wagtails within an hour: the White-browed Wagtail, the Yellow Wagtail, the Grey Wagtail and the Forest Wagtail. Except for the first, the others are migratory. Though the Gray Wagtail migrates from the Himalayas, the Forest Wagtail migrates from China or East Asia, as also the Taiga Flycatcher. I noticed a Common Snipe which was hiding in the grass close to the water. A pair of Spot-billed ducks landed in the middle of the dam. The Common Kingfisher and a White-throated Kingfisher were busy flying above the water surface for their turn to catch the fish. There was not much movement of birds in the area planted with Eucalyptus but surprisingly a bunch of vernal hanging parakeets were perched there on the branches. When I came back to the PHCC nursery, I noticed several more bird species such as the White-bellied Drongo and the Black-hooded Oriole. The full-grown trees and shrubs within the PHCC centre also provided a habitat for the birds.

Before I left I met and talked with the lady who works in the nursery and who belongs to a tribal community of the Palani hills. The knowledge of the tribal people can be used to study and understand various subjects in these hills, especially the mammals like the Sambar Deer, the Dhole, the Common Otter



Tickell's Blue Flycatcher

and the Small-clawed Otter. It is high time that a study of the otters habitat and population was taken up as it has not been done for the past twenty years. The water quality can be studied to understand the level of effluents in the Kuthiraiyar dam. Otter prey species can also be studied to understand the possibilities for improving the habitat for the otters.

I returned to Kuthiraiyar after a year during the first week of 2021. Due to the surplus monsoon rain the dam was full. Some areas of the forest were submerged and most of the saplings planted in the previous year were under water. Afforestation is really a challenging task due to climate change. The little efforts we put to mitigate climate change are hampered because of the existing climate change! The monsoon brings surplus or deficient rain and challenges afforestation efforts. In addition, the saplings need to be protected from cattle grazing as well. To restore natural ecosystems requires much effort, with climate and other external factors adding to the challenge. However, the reclamation process is promising in Kuthiraiyar and we hope the natural habitat can bring back more migratory birds and otters in the coming years. The primary forest should be protected to retain the native species of flora and fauna.



Vernal Hanging Parrot

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It's about water



A spot in the Kanger river, Bastar, Chhattisgarh



Atem river, Surguja, Chhattisgarh



Bathing spot in summer, Bastar village, Chhattisgarh



Boys in the Adiu river, Kalimantan, Indonesia



Descending stream in the Palani hills, Tamil Nadu



Kudhraiya dam, Tamil Nadu



Rice fields near Paro, Bhutan



Water bottle

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Special thanks to
Elly Oenema for proof reading
Layout
Ashish Kumar P

