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The Ecology of Transaction

Dividual Persons, Spirits, and Machinery in a Special Economic Zone in South India

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Abstract

In this paper, I analyse relations between humans and nonhuman entities, including deities and machinery, linking the concepts of dividual persons and substance-codes (Marriott 1976) with transactional networks (Appadurai and Breckenridge 1976) and the ideas of hybrid and limited networks discussed by Strathern (1996). In *būta* (spirit) rituals in the coastal area of Karnataka, people enter into transactional relations with the deities, in which all human and non-human participants appear as dividual persons exchanging their substance-codes as ‘gifts’. Such relations have been disrupted, however, by the construction of a huge industrial zone in the area. How, then, can transactional networks including unique nonhumans, such as *būtas* and machines, be recreated? Through close investigation of ritual transactions between people and *būta*, I examine how the *būta* ritual (re)creates a unique ecology of humans and nonhumans, and how the potentially limitless extension of networks in and beyond industrial facilities can be limited.

Transaction, Dividuality, and the Network in South Asia

In his essay entitled ‘Hindu transactions: diversity without dualism’ published in 1976, McKim Marriott describes South Asian society as ‘an elaborate transactional culture, characterized by explicit, institutionalized concern for givings and receivings of many kinds in kinship, work, and worship’ (Marriott 1976: 109). He also proposes that South Asian personhood is characteristically ‘dividual’:

Persons—single actors—are not thought in South Asia to be ‘individual’, that is, indivisible, bounded units, as they are in much of Western social and psychological theory as well as in common sense. Instead, it appears that persons are generally thought by South Asians to be ‘dividual’ or divisible. (111)

According to Marriott, dividual persons absorb various material influences and emit particles of their own ‘coded substances’—essences, residues, or other active influences—to others.¹ They engage in transfers of bodily substance-codes through parentage, marriage, provision of services, and other kinds of interpersonal contact. As a result, ‘Dividual persons, who must exchange in such ways, are therefore always composites of the substance-codes that they take in’ (111).

Around the same time, Arjun Appadurai and Carol Breckenridge (1976) also published an article describing the personhood of Hindu deities and the ‘transactional network’ involving humans and deities. According to Appadurai and Breckenridge, rather than as a mere image or symbol, the deity in a south Indian temple is conceived of more as a person who is both sentient and corporeal (190). Through worship and offerings, devotees enter into an ‘active transactional relationship’ with the deity, which initiates a process of redistribution. The devotees conduct transactions with the deity as a ‘special person’:

At one normative level, the deity ... commands resources (i.e., services and goods) such as those which are necessary and appropriate for the support and materialization of the ritual process described above. But these resources are not merely authoritatively commanded and received by the deity. On receipt, they are redistributed in the form of shares

¹ On the concept of ‘substance-code’, Marriott writes: ‘Varied codes of action or codes for conduct (*dharma*) are thought to be naturally embodied in actors and otherwise substantialized in the flow of things that pass among actors. Thus the assumption of the easy, proper separability of action from actor, of code from substance...is generally absent: code and substance...cannot have separate existences in this world of constituted things as conceived by most South Asians... Before one begins to think of Hindu transactions, one thus needs firmly to understand that *those who transact as well as what and how they transact are thought to be inseparably “code-substance” or “substance-code”*’ (1976: 109–10, emphasis added). See also Marriott and Inden (1977).

(*pañku*) to the royal courtiers, the donor (*yajamāna*), and worshippers at large. The authority to command and redistribute resources places the deity at the center of a *transactional nexus* in which the deity is expected to be generous. Ritual which constitutes worship provides the schematic and elementary unit in which to observe *the transactional network* where first the deity and subsequently the donor are the object of gifting activity. (195, emphasis added)

As presented by Appadurai and Breckenridge (1976), this argument has close similarities to that of Marriott (1976). If Marriott's ideas of dividual personhood and substance-code are applied to the account of Appadurai and Breckenridge, it can be said that both the devotees and the deity are dividual persons engaged in the exchange of their substance-codes as 'gifts' for each other in a transactional network that enchains them.² As we will see later in the case of *būta* worship, the substance-codes gifted by devotees to deities are offerings, while those given by deities are power (*śakti*) and blessings, distributed among devotees in the form of *prasāda* (blessed offerings from the altar). Concerning this point, Marriott (1976: 110, 113) describes particles of substance-codes as constantly in circulation, just as power, which is present in various objects such as persons, gods, and land, flows everywhere. Thus, along with offerings, which are composites of various social relations, power circulates in transactional networks between humans and deities.

Before we consider this point more closely, it is worth considering Marilyn Strathern's ideas about how persons, hybridity, and networks are presented (1988; 1994). Discussing the disposition of networks that both link and sever social relations, she points out the hybrid form of humans and nonhumans involved in the transactional process. This analysis of persons, hybridity, and networks sheds new light on the ideas of transactional networks, dividual persons, and substance-codes discussed by Marriott (1976) and Appadurai and Breckenridge (1976). Exploring these ideas further, dividual persons can be analysed as hybrid, being composed of various substance-codes or, in effect, an amalgam of social relations. Additionally, each flow and circulation of substance-codes in *būta* worship constitutes a *limited* transactional network that links, while simultaneously cutting, social relations.

² On gift exchange in Hindu society, see Parry (1986) and Raheja (1988).

Hybrid Personhood in Transactions, or How to Cut the Network

It is well known that Strathern (1988) applied Marriott's notion 'dividual person' in her analysis of Melanesian society. In *The gender of the gift* (1988) she writes that 'Melanesian persons are as dividually as they are individually conceived....Indeed, persons are frequently constructed as the plural and composite site of the relationships that produced them' (13). Her remarks indeed recall Marriott's insistence that dividual persons are always composites of the substance-codes that they take in through transactions (1976: 111).

Later, in her 1996 essay 'Cutting the network', Strathern elaborates her notion of the (dividual) person in Melanesia by applying the concepts of 'hybrid' and 'network' originally developed by actor-network theorists (e.g., Latour 1993; Warnier 1995). Using Daniel de Coppet's (1994) ethnography of the 'Aré'aré of the Solomon Islands, Strathern illustrates the hybridity of humans in this society. According to Coppet (1994: 42, 52–3), The 'Aré'aré divide living creatures into three elements: body, breath, and image. Upon death, the person decomposes into these: the body, a product of nurture from others, is eaten as taro; breath is taken away in the breath of slaughtered pigs; and the image becomes the ancestor (Strathern 1996: 525–6). Strathern thus argues that the living human being is a 'hybrid' person and, moreover, each of the three components is also a person. She writes:

I use the term 'person' since the human being is also conceived as an aggregation of relations; it can take the form of an object available for consumption by those others who compose it. In these acts of consumption, the person is, so to speak, hybridized, dispersed among a network of others. (526)

Here Strathern's main concern, however, is *not* how a network composed of both human and nonhuman persons extends itself, but how its extension can be controlled or cut. In the Solomon Islands, shell money, which embodies the image of the deceased, plays an important role. In essence, an item of shell money has circulatory power because other entities, events, and products are converted into it: past encounters and relationships circulate in condensed form in its 'body'. At death, there is a finalizing sequence of exchanges in which the two other components of the living human, body and breath, are converted into money (Coppet 1994: 53–4). The ancestor-image eventually encompasses the others, and the sequence stops at that point. 'Money thus becomes the repository or container of prior interchanges' (Strathern 1994: 526).

Strathern's close investigation of Coppet's ethnography of the 'Aré'aré (including marriage and kinship systems in Melanesia, which I cannot discuss

here) yields several important axioms regarding hybridity and networks: the hybrid is an amalgam of social relations (Strathern 1996: 527); networks—either homogeneous or heterogeneous—constructed through transactions must have limits; and the protocols for creating networks of varying lengths have different capacities for sustaining flow or stopping it (523, 528–9).

This analysis enables Strathern to identify a problem with the analytical networks of actor–network theory, which are basically regarded as limitless (1994: 523). Contrary to the network as conceived by some actor–network theorists, Strathern’s network has a certain length and thus can be cut at some point.³

In this paper I analyse *būta* worship in a rural area located in Mangalore Taluk of Karnataka state (South Kanara). Using the concepts ‘hybrid’ and ‘network’ in the Strathernian sense, I reconsider the concepts of dividual persons, substance-codes, and transactional network between humans and deities presented by Marriott (1976) and Appadurai and Breckenridge (1976).

Marriott (1976) has mainly discussed hybridity and network in the context of typical social relations in Hindu society, such as inter-caste transactions; similarly, Appadurai and Breckenridge (1976) have examined transactional networks in terms of authority, honour, and the redistribution process in Hindu temples. Of these ideas, ‘dividual persons’ has gained the widest exposure beyond South Asian social contexts, yet most discussions have focused on issues of individual–dividual dichotomy as if it corresponds with Western and non-Western personhood, or have made cross-cultural comparisons of the conceptualization of ‘person’ (e.g., Busby 1997; Mosko 2010; Rasmussen 2008; Smith 2006; Smith 2012).⁴ The category of ‘person’, however, in anthropological inquiry is not restricted to humans. As we have seen, in the 1970s Appadurai and Breckenridge were already arguing that Hindu deities are corporeal special persons, and Strathern has since further expanded the conception of the person: nonhuman components of the amalgamated human being are also persons (‘a person is made up of persons’) (1996: 526).⁵

By linking the concepts of dividual persons, substance-codes, and the transactional network with innovative ideas such as hybrid-nonhuman persons and

³ Strathern also argues, ‘if we take certain kinds of networks as socially expanded hybrids then we can take hybrids as condensed networks. That condensation works as a summation or stop’ (1996: 523).

⁴ For the anthropological debates on personhood, see Carrithers, Collins, and Lukes (1985), Jackson and Karp (1990), Lambek and Strathern (1998), and Mines (1988; 1994). See also Daniel (1984), Dumont (1965; 1970; 1980), Freeman (1999) and, for examination of South Asian conceptions of personhood, Sax (2002).

⁵ The recent arguments on ‘animism’ also focus on the relation between human and nonhuman persons. See, for example, Bird-David (1999) and Willerslev (2004; 2007).

limited networks as presented by Strathern, and by examining them in the contexts of both traditional village societies and modern industry, I attempt to show the broader significance of these concepts as effective tools for understanding the way humans relate themselves *socially* with nonhumans, and also how a unique ecology composed of both humans and nonhumans can be created through their transactions.⁶

I use the term ‘ecology’ here as distinguished from the natural environment. Ecology connotes the intertwined relationship between living things and their milieu, and likewise, a unique order, or ‘melody’ (Toadvine 2009: 88), through which all things are linked and organized. In this paper, the term ‘ecology’ denotes the unique form of flow and circulation of substance-codes, and also the assemblage of humans, nonhumans, and their milieu created through transaction.⁷

As will be shown in this paper, cultivated land and its products in South Kanara can be understood as ‘hybrid’, comprising the labour/service of people, inter-caste and intra-kin relations, and the power of *būtas* as the ultimate owners of the land. In the yearly *būta* rituals, people offer farm products to the *būtas* incarnate in impersonators, and in return they receive blessings and divine power from the deities. Thus, the people enter into active transactional relations with the deities, in which both humans and deities exchange their substance-codes (i.e., offerings and divine power, respectively). These particles of substance-codes circulate within the transactional network between humans and deities. The question raised here is, how is this flow of substance-codes controlled or limited?

One way to approach this question is to use ideas of hybridity, transactions, and networks to examine how *būta* worship has accommodated the construction of a huge industrial zone in this area. Since the 1990s, a project to create the Mangalore Special Economic Zone (MSEZ) has been underway and land acquisition by the Mangalore Special Economic Zone Ltd. (MSEZL) has displaced many people. The project has destroyed several villages and numerous religious structures.

At first glance, turned into the industrial zone, land acquired by the company seems de-hybridized: separated from existing social relations, it has become mere ‘ground’. Applying the concepts, we soon realize that the land in the industrial zone, composed of humans and nonhuman entities such as the labour

⁶ For examination of unique corporeal interactions between humans and nonhumans including deities, see also Ishii (2012; 2013).

⁷ This idea is based on the notion ‘*Umwelt*’, presented by Jakob von Uexküll, which indicates the intertwined, coherent relationship formed between an organism, other creatures, and their milieu. Ted Toadvine (2009: 88) argues that the notion of *melody*, in terms of animal–nature relationship, elucidates the ontological status of the animal’s *Umwelt*, its milieu or environment.

and social relations of people of various origins, scientific knowledge and technology, and the power of machines, is still highly hybrid. It is indeed a heterogeneous network which extends itself far and wide. How, then, can the flow of power and relations in these industrial plants be controlled, that is, how is can the network be cut? Keeping these questions in mind, let us turn to some cases from the field.

***Būta* Worship and Land as Hybrid**

The Landscape of the Perar

Worshiped throughout South Kanara, *būtas* are deities and spirits: as deities, they are often apotheosized local heroes who met tragic deaths; as spirits, they take the forms of the wild animals dwelling in the forest. The *būtas* are closely related to, as well as being embodiments of, wild, dangerous, and fertile divine power. *Būta* ritual mainly involves spirit possession, oracles, and interactions between devotees and *būtas* incarnate in impersonators belonging to the Nalike, Parava, and Pambada castes (all designated scheduled castes). Priest-mediums called *pātri* or *māni* of the Billava caste and *mukkāldi* of the Baṇṭ caste conduct the rituals.⁸ Among all the devotees at the village *būta* shrine, the shrine's patrons play the most important role. Most of them are landlords of local manors called *guttus*, who belong to the Baṇṭ caste.⁹

I conducted fieldwork in two adjoining villages, Mudu Perar (East Perar) and Padu Perar (West Perar) in Mangalore Taluk, Karnataka.¹⁰ In Perar, thick forests and shrubby hills fringe lowlands, divided, to the south by a major river. Land in Perar is classified into several categories according to its soil and humidity. The wet lowlands produce mainly rice and areca nuts, meanwhile, several kinds of vegetables are produced in the dry highlands. The landscape of Perar thus has vividly contrasting flat, green irrigated rice fields and wild hills and forests. Scattered throughout the extensive wet-paddy fields, local manor houses

⁸ The traditional occupation of the Billava caste is toddy-tapping and that of the Baṇṭ caste is cultivation. While Baṇṭ is regarded as the 'dominant' caste in the area, most of the caste groups in the research field are designated as 'Other Backward Classes' in Karnataka State.

⁹ On *būta* worship in general, see Brückner (2009), Claus (1979; 1984; 1991), Gowda (2005), and Ishii (2010).

¹⁰ These two villages formerly comprised a single village called Perar until they were administratively separated in 1904. The official language of Karnataka is Kannada, while the native language of South Kanara is Tulu. This paper follows the system of transliteration of Upadhyaya (1988–1997). The fieldwork on which this paper is based was conducted from May to September 2008, in March, August and September 2009, from December 2010 to January 2011, in March, August and September 2012; and from January to March 2013.

and the residences of landed farmers can be seen. Most of the current-day wage labourers, whose parents or grandparents were attached to the households of powerful *guttu* houses, live in the highlands.

Besides the paddy and other cultivated fields, forests and hills called *guḍḍe* are an important resource for the villagers' lives. People often go into the *guḍḍe* to hunt game or gather useful plants. Since most of the land occupied by *guḍḍe* is under the control of local manor houses, villagers who hunt there share part of the game bag with the members of the manor house. The *guḍḍe* is believed to be the dwelling not only of wild animals, but also of *būtas* and other spirits. In Perar, several *nāga* (cobra) shrines called *nāgabana* are located inside groves, and a shrine to Pilicāmuṇḍi (a tiger *būta*) is located on top of a hill near the village *būta* shrine. Because it is believed that the *būta* of various wild animals, along with other dangerous spirits, wander in the *guḍḍe*, it is regarded by most villagers as a fertile, but hazardous place.

As is apparent in local legends, the territories of Perar, including dwellings, cultivated fields, *guḍḍe*, and wastelands, are deeply related to the *būtas*' power. For example, the *pāḍḍana* (oral epic) of Perar narrates the legend of Nadu, a tragic hero who travelled across the country, and then after his death, was revived in Perar as a very powerful *būta*, Balavāṇḍi, the main deity of the village shrine. Balavāṇḍi and related *būtas* such as Arasu, Pilicāmuṇḍi and Brammabermeru are believed to be the ultimate owners of Perar land. Thus they have the power to protect the land as well as to authorize the *guttus*' rights to their territory.

Land Tenure, Kinship, and Būta Worship

In this section I will first illustrate the traditional system of *būta* worship and ritual service at the village shrine, which is closely related to land tenure and the redistribution of farm products in Perar. Next, I will examine the maintenance and inheritance of both land and *būta* worship at the kin level. From these investigations, I will show how land in Perar is, in the Strathernian sense, hybrid.

Būta worship in Perar is based on a sophisticated system called *kaṭṭu* (custom or law). The most privileged families in relation to *būta* worship are a Brahman family called the Pejattaya and sixteen *guttu* families. These families are hierarchically ranked from the Muṇḍabettu *guttu* at the top to the Perēr *guttu* at the bottom. Except for one Gowda family and three Billava families, all the other *guttu* families are Baṇṭ. Each *guttu* family has various roles and duties, which organize the rituals at the village shrine. The first and the second *guttu* (the Muṇḍabettu and Brāṇabettu) have major responsibility for patronage and

management of *būta* worship at the village level. The primary patron of the village shrine, the Muṇḍabettu *guttu* head called the *gaḍipattunāru*, has command over all the other *guttu* members and ritual workers.

The ritual roles of these sixteen *guttus* are complemented by another set of sixteen families called the *uḷaguttu* (sub-*guttu*). Under these *guttu* and *uḷaguttu* families, dozens of people called *cākiridakulu* (ritual servants / people in service) execute various services for *būta* worship at the village level. These people are from particular families of several service castes, for example, Maḍivāḷe (washermen), Jōgi (musicians), Baṇḍāri (barbers) and Pambada (*būta* impersonators). Among them, one Pambada family plays an especially important role in Perar *būta* worship. Its male members are trained as dancers and mediums of the *daivas*, or major *būtas*.

Traditionally, each *cākiridakulu* family was granted a portion of tax-free land called *umbaḷi* from the Muṇḍabettu *guttu*. Some settled on this land, which came to be named after its owner, for example, *pambadeḷe koḍi* (Pambada's Hilltop) or *jōgile bailu* (Jōgi's Plain). Also, these *cākiridakulu* families enjoyed rights to shares of paddy produced on particular plots of land called *bākimāru*, which were the property of the village *būta* shrine and were managed mainly by the head of the Muṇḍabettu *guttu*. All ritual expenses and shrine worker rewards used to be paid in the form of paddy produced on this land. Apart from the *cākiridakulu* families, in reward for their services or offerings to the *būta* shrine, other families of various castes such as Billava, Ācāri (carpenters), and Gauḍa (cultivators and cattle-breeders) also enjoyed rights to shares in the *prasāda* distributed during the *nēma* (yearly ritual in the village shrine).¹¹

In Perar, *būta* worship has thus formed the core of social and economic relations in the village through the (re)distribution of land, local products, and *prasāda*. Perar land and its products are primarily regarded by the villagers as the embodiment of the *būta*'s power, and each family is granted rights to shares in plots of land, local products, and privileges in exchange for performing different services at the village *būta* shrine.

Būta worship in the area is also closely related to kinship. The ritual roles and status of each family in the village *būta* shrine are inherited within the descent group. For example, in a Baṇṭ family which follows matriliney (*aḷiyasantāna kaṭṭu*), ritual roles and status, family land, and other family properties are all inherited

¹¹ This system of *būta* worship in Perar can be interpreted as a 'system of entitlements' (Tanabe 2006), which existed in pre-colonial West and South India in various forms. In the pre-colonial system of entitlements, Akio Tanabe argues, members of a local community were granted various rights to shares of local products and royal and/or community honours and privileges in exchange for performing different duties and functions for the reproduction of the state and community.

within the matrilineal descent group (*kuṭuma*). It is also notable that in addition to worshipping at the village *būta* shrine, most Hindu families in Perar worship ‘family *būtas* (*kuṭumada daiva*)’ and ‘land *būtas* (*jāgeda daiva*),’ which belong to a particular family and its land, at their own family shrines or altars. In the yearly *būta* ritual (*kōla*) at the family level, the head of the family organizes the ritual and all family members are expected to join. They give offerings to the *būta*, incarnate in an impersonator and, in return, the *prasāda* provided by the deity is distributed among the donors. These family or land *būtas* are inherited through the unilateral family line. It is also believed that if the descendants of a family fail to properly maintain *būta* worship, everyone in the descent group will suffer the curse of the *būtas*.

As summarized above, *būta* worship in Perar is based on the interrelation of villagers of various castes, and on kin relations within each descent group. In other words, *būta* worship can be understood as an amalgam of social, economic, and kin relations in the village society, or a ‘socially expanded hybrid as a condensed network’ (Strathern 1996: 523, 527). Furthermore, the land and its products in Perar are also hybrid. As mentioned, *būtas* are believed to be the ultimate owners of Perar land. Thus the land and its products primarily accrue to the *būtas* and also embody their fertile and dangerous power. At the village level, both a portion of *umbaḷi* land and its products are distributed to families in exchange for their ritual service at the village shrine; meanwhile, at the family level, family land is inherited and its products are distributed among the family members. Both at the village and family levels, a portion of paddy, coconuts, areca nuts, and other farm products, the fruits of the service and labour of the people on the land, is first given to the *būtas* as an offering and then (re)distributed among the members worshipping the deities. The land and its products are thus composed of both human and nonhuman constituents, such as the *būtas*’ divine power, inter-caste/familial relations as well as intra-descent group relations, and human labour and service on the land.

If we view *būta* worship as a condensed network and the land and its products as hybrid entities, how do the fragments of each component circulate, and how is the flow controlled in transaction? Next, focusing on the ritual transactions between people and *būtas* in Perar, I will examine these issues.

Ritual Transaction, Dividual Persons, and the Circulation of Power

First, I examine with the *baṭṭalu kāṇike kambuḷa* ritual (henceforth *kambuḷa*), which is dedicated to the *būtas* and organized by the first *guttu* of Perar. Below is a summary of the ritual based on accounts of Subba of the Maṇṣa caste,¹² who was born in the early 1940s and plays an important role as a priest (*kallāla*) in this ritual.

In the morning of the day before the *kambuḷa*, I [Subba] go to the *kambuḷa* field [of the Muṇḍabettu *guttu*]. First I put white mud on each of the coconut trees surrounding the field. This turns the *kambuḷa* field into a bride. Then I put the white mud on *pūkarē* [a stake] in the middle of the field. After that, I come back to the *guttu* house, where they give me two pieces of clothing. When it is getting dark, after taking a bath at home, I put on these clothes and go to a Billava's house. There I sleep on a coconut leaf prepared by the head of the house until around midnight. When I wake up, I go to a place called Bolinji *guḍḍē* [Bolinji Mountain]. When I reach its summit, I climb onto a giant rock and call out to all the *būtas*, including the buffaloes,¹³ to come to the *kambuḷa*. I call three times this way, '*kāṇikēda kambuḷa, eru vo eru* [kāṇikēda kambuḷa, buffalo, oh buffalo!]'.

Then I come down to a place called *manjotti*, just beside the *kambuḷa* field, where my [male] family members are playing *dōlu* [a big double-faced drum] while they wait for me.¹⁴ We dance together and when we finish the dance I throw *kōlu* [a stick] on the ground, which I have carried to the mountain with me. Then we come back to the *guttu* house where they serve us rice and vegetable curry.

On the day of the *kambuḷa*, a pair of buffaloes is taken into a buffalo house. After reciting a prayer, I tie a *nuga* [yoke] onto the necks of the buffaloes, hold it, and run onto the *kambuḷa* field along with the beasts. After that, we [Subba and his family members] go back to the *guttu* house and dance again in front of the *guttu* people. The next morning, I plant a handful of *naṭṭi* [young rice plants] in the *kambuḷa* field, on the east side of the stake.

Based on the above account, I will now analyse the transaction between *būtas* and humans in the *kambuḷa* ritual in terms of dividual persons, hybridity, and the network. The whole ritual process can be understood as the circulation of *būta* power from the wild *guḍḍē* to the cultivated field. The wild and fertile power

¹² Subba himself insists that he is an 'Ādi Draviḍa (original Dravidian)'.

¹³ According to local legend, in antiquity a person and two buffaloes disappeared on the mountain. The buffaloes called by Subba here are supposed to be the *būtas* of those vanished buffaloes.

¹⁴ In the past, on the next day of the *kambuḷa*, Subba and his family used to visit each house of the village dancing and playing instruments. Nowadays they dance and sing only at the *guttu* house.

of the *būtas*, personified in the buffalo *būtas*, is summoned by Subba. Through his invocation of the *būtas* in the *būta* territory of the wild mountain, Subba himself partly embodies their wild and fertile power. This power, concomitant with Subba's journey, first flows into the *manjotti* field, and is distributed among the male members of the Maṇṣa family.¹⁵ Then the power of the *būtas*, which is personified in Subba (metaphorically) as well as in the living buffaloes (metonymically), finally flows into the *kambuḷa* field as the 'bride'. The *kambuḷa* field is filled with the *būta*'s power, and later this power is transformed into the paddy in the field.

In this ritual, the power or substance-code of the buffalo circulates in the network, linking the wild with the agricultural fields. Hence, the buffalo can be regarded as a 'dividual person' who is involved in, as well as constitutes, the transactional network. Subba, as an interim priest, works as a medium or carrier of the power of the buffalo-*būta*-person. At the same time, his movements guide the flow of this power by leading it first into the *manjotti*, then into the *kambuḷa* field, and finally into the young paddy which he plants by hand. Correspondingly, at the time of harvest, Subba is the first person to cut the rice in this field. At this moment the *būta*'s power, which had been transformed into land and produced paddy, returns to the people through Subba. Here Subba acts as 'both container and channel, blocking flow and bodying it forth' (Strathern 1996: 528). And the paddy produced in the *kambuḷa* field can be understood as a hybrid composed of the *būta*'s power, human labour and service, and the kin relations of the first *guttu* family.

Next, focusing on the *nēma*, let us examine the process of the circulation and redistribution of the *būtas*' power personified in various forms such as human impersonators, farm products, and *prasāda*.

The yearly ritual starts on the night of the full moon in the month of *māi* and is held for three days and nights.¹⁶ It primarily consists of the rituals for Balavāṇḍi, Arasu, and Pilicāmuṇḍi and each ritual comprises the same basic process. In the *nēma*, the main deities always appear from outside the central shrine. For example, after the priests accompanied by some ritual workers walk up to the Pilicāmuṇḍi shrine on top of a hill and offer a *pūjā* to the deity, Pilicāmuṇḍi, incarnate as the possessed Pambada impersonator, who comes down from the hilltop to the central

¹⁵ According to my research assistant from this region, the dancing ritual performed by the SC family in the *kambuḷa* used to include a sexual performance: it is said that when the male members of the family waiting for the *kallāla* to return from calling the *būtas* on the mountain, they used to drink toddy; and when they were about to start dancing, they would have sexual intercourse with each other.

¹⁶ The month of *māi* in the Tulu calendar currently corresponds to about 15 February to 15 March in the solar calendar.

shrine. In a similar way, Balavāṇḍi, incarnate in the Pambada impersonator, also appears from outside the shrine as a half-naked, dangerous and furious deity.

The first stage of the ritual is called the *gaggaradecci*.¹⁷ The Pambada impersonator, wearing a heavy anklet called a *gaggara*, stands in front of the altar, on which the sacred treasure (*baṇḍāra*) of the *būtas* is enshrined. The moment the *gaḍipattunāru* offers a prayer, the body of the impersonator begins to shake and the other *guttu* heads throw rice and flowers over him. Possessed by the *būta*, the impersonator dances around the precincts and, in rank order, one by one greets the Pejattaya and *guttu* heads.

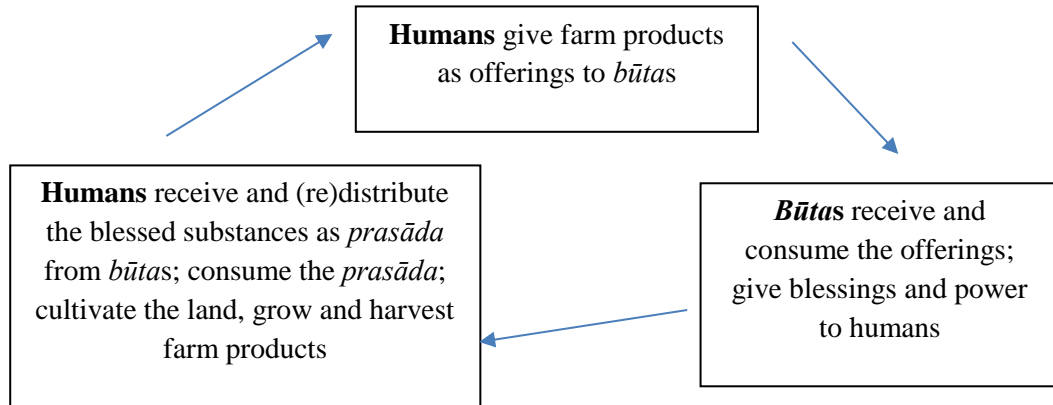
The second stage is the recitation of the oral epics by an impersonator in front of the devotees thronging the shrine. In the third stage, called the *nēmadecci*,¹⁸ the impersonator wears a big halo-like structure called an *aṇi* on his back. The priests, heads of the *guttus*, and main ritual workers follow him, and together they all march around the precinct. Then, possessed, the impersonator speaks oracles in front of all the *guttus*. He receives a young coconut from the *gaḍipattunāru*, pours its juice on the floor and gives it back to the *gaḍipattunāru* with blessings. At the end of the ritual, the possessed impersonator touches the hands of each *guttu* head with his sword and gives them blessings.

During the ritual, the devotees interact with the *būta* through the Pambada impersonator. The most significant and repeated form of their interaction is the mutual gifting between the *guttu* heads and the *būtas*. In the yearly ritual, the *guttus* offer the *būtas* a part of their farm products such as paddy, coconuts, and areca nuts, which embody the fertile power of the *būtas*, the labour and service of humans, and the social relations in the village. The *būtas* receive and consume these offerings,¹⁹ and return oracles and blessings to ensure the future prosperity of the whole village. Finally, some of the offerings are redistributed as *prasāda* among the devotees. Through this ritual process, condensed in the farm products, offerings, and *prasāda*, the *būtas*' power flows and circulates in the transactional network comprising part of the more extensive network between humans and deities, as illustrated below:

¹⁷ *Gaggaradecci* is the initial dance performed by the impersonator wearing sacred anklets (Upadhyaya 1995: 1036).

¹⁸ This word originates from the phrase '*nēmada ecci*': the shivering of the *būta* impersonator's body during the annual festival (Upadhyaya 1997: 1844).

¹⁹ On the consumption of offerings by the *būtas*: after the ritual for Pilicāmuṇḍi inside the precinct is complete, the deity is offered both vegetarian offerings and blood sacrifices right outside the shrine building.

Figure 1: The transactional network between humans and *b̥tas*

In these transactions, the offerings and their transformed substances, *prasāda*, regarded as the substance-codes of humans and deities, that is, hybrid ‘persons’, are consumed and thus dispersed among the network (Strathern 1996: 526). Similar to the role of Subba in the *kambuḷa* ritual, here the *b̥ta* impersonators act as mediums or carriers of the *b̥tas*’ power, and at the same time their movements induce and direct the flow of the substance-codes.²⁰ Likewise the *b̥tas* and devotees are regarded as dividual persons who exchange their substance-codes with each other; or to use Strathern’s words, they act as the ‘turning point for directing the flow of the fertility back’ (Strathern 1996: 528).

Both in the *kambuḷa* and the *nēma*, the flow of substance-codes is primarily personified in and directed by the medium or priest or both. It is also noteworthy that the extension of the transactional network is limited by the rights or belongings of both humans and *b̥tas* (see Strathern 1996: 525). On the side of the humans, the extension of the circulation and (re)distribution of substance-codes as *prasāda* is restricted to members who have the right and duty to enter into transactional relations with the deities (moreover, the flow and (re)distribution process of substance-codes is ordered according to the rank and sex of the participants²¹). On the side of the deities, the extension of the circulation of substance-codes as offerings is limited to *b̥tas* worshipped by the main patrons of the ritual, that is, *b̥tas* belonging to or personifying the power of a particular house, land, and *guḍḍe*.

From the above description, it is clear that the ritual transactions and flow of substance-codes in the transactional network performatively link the participants, both human and nonhuman, and at the same time set the boundaries

²⁰ Although the role of the priest is also very important to ‘controlling’ the flow of the *b̥tas*’ power in the yearly ritual, there is not enough space to elaborate on this point here.

²¹ For instance, in the ritual held at the family level, first the head of the family and other male members receive the *prasāda* and then it is distributed among the female members of the family.

separating the people according to their belongings and the *būtas* according to their identification with particular territories. It is thus regarded that the transactional network of humans and deities creates the unique ecology of Perar, which is composed of various hybrid, dividual persons such as the land, *būtas*, and people.

Next, let us examine the relations between humans and deities in a huge development project which has almost totally destroyed traditional social relations and local networks, focusing on a new turn in *būta* worship and the ‘revival’ of the transactional network in industrial plants.

The Land ‘De-hybridized’? The Developmental Project and Land Acquisition

Since the 1990s, a huge project aimed at the creating the Mangalore Special Economic Zone (MSEZ) has been promoted by the central and state government, as well as by several multinational corporations (mostly related to the petroleum and petrochemical sector). In the course of this project, several villages and numerous religious structures, including *būta* shrines, have been destroyed, and land acquisition by Mangalore Special Economic Zone Ltd. (MSEZL) has displaced many people from their land.²²

According to MSEZL’s website, the proposed MSEZ enclave encompasses 4,000 acres. In the first phase of the project, 1,800 acres were acquired by the company. By the end of the 1980s, before the foundation of MSEZL, Mangalore Refinery and Petrochemicals Ltd. (MRPL), an industrial entity adjoined to and closely involved in the MSEZ, had already acquired another 1,700 acres in five villages and displaced 609 families (Dhakal: n.d.). Against this compulsory land acquisition, destruction of villages, and environmental contamination by MSEZL, various anti-development movements led by local farmers and fishermen’s associations, college students, social activists, and journalists have arisen in Mangalore.

The relationship between the people and the *būtas* has undergone drastic changes owing to the construction of the MSEZ in the area. I will now briefly examine the case of Thokur village, located near Perar village. The first *guttu* in Thokur is a historic family which is referred to in a seventh-century epigraph. This family has played the central role in the village-wide worship of a powerful

²² MSEZL is a combination of both central and state government institutions and a private financial company. It currently consists of Oil and Natural Gas Corporation Ltd. (ONGCL), the Karnataka Industrial Area Development Board (KIADB), Infrastructure Leasing and Financial Services (IL&FS), and the Kanara Chamber of Commerce and Industry (KCCI). The New Mangalore Port Trust (NMPT) is also an equity partner of MSEZL (Dhakal n.d.: 3).

būta called Jārandāye. In 1993, during MRPL construction, most of the villagers were displaced from their land without adequate compensation and moved to a rehabilitation area constructed in a nearby town. Due to this destruction of the village and emigration of the villagers, *būta* worship in Thokur lapsed for about a decade.

The main members of the first *guttu*, however, continued negotiations with the company and, in 2003, they finally succeeded in regaining part of their land. They reconstructed a new shrine for Jārandāye on the top of a small hill surrounded by industrial plants and construction sites. Although the Thokur *guttu* managed to rebuild the village *būta* shrine at a new site, the agricultural land and forest of the village had already been destroyed and most villagers had left the village. In the absence of social relations among the villagers and without the persistence of intimate relations among the land, people, and *būtas*, it was impossible for the *guttus* to perform the *būta* ritual as before.

In the process of land acquisition and the destruction of the unique ecology of this area, the transactional relations among humans and deities were disrupted. At the same time, it seems that Thokur land that was once composed of the *būta*'s power, inter-caste and intra-kin relations, and the labour and service of the villagers became alienated from these local relations and turned into mere ground. In other words, the land which used to be a hybrid of humans and nonhumans was de-hybridized by industrialization.

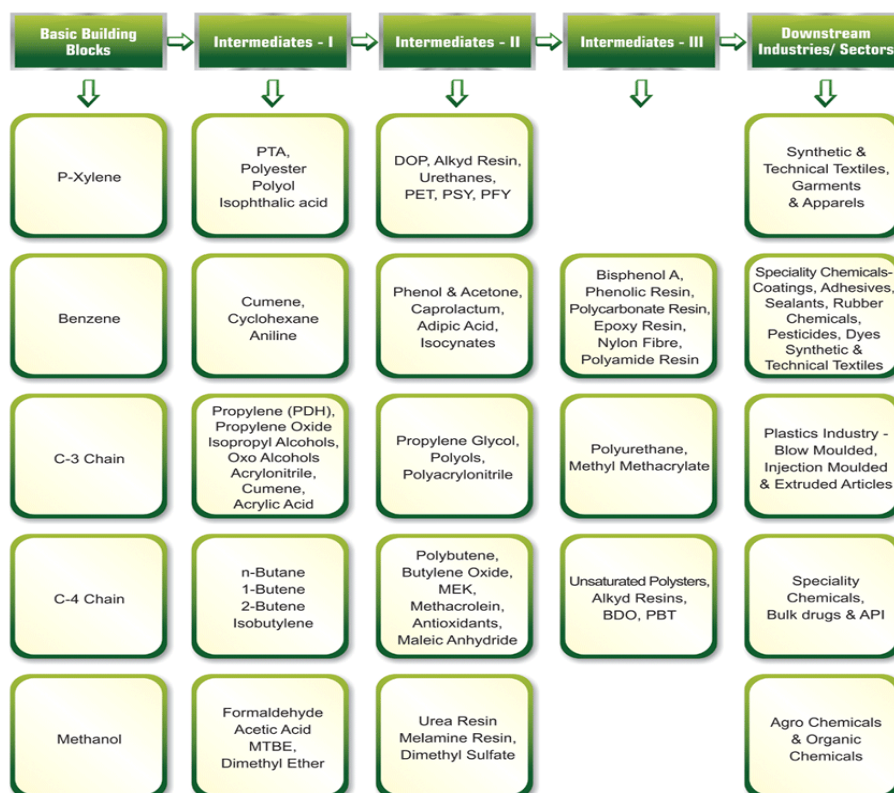
Close investigation of the situation soon reveals, however, that the land in the MSEZ, or rather the MSEZ itself, is still hybrid, but in a new sense. It is composed of humans and nonhumans, scientific knowledge and technology, and the power of various machines. It is indeed a condensed network which extends itself far and wide. There follows an examination of the industrial plants as hybrid entities.

The Mangalore Special Economic Zone as Hybrid

The MSEZ is a heterogeneous network. First, it is composed of several complexes of interconnecting components such as manufacturing facilities, pipelines, and of other support facilities (which are also composites of feedstock, chemicals, machines and technologies, human labour, and so on). Second, the MSEZ extends itself via infrastructure such as roads, railways, harbours, airports, underground pipes and cables. Third, it is connected to the natural environment through, for example, the disposal of industrial effluent into the Arabian Sea, the damming of rivers, and environmental assessment and monitoring. Lastly, the MSEZ is linked

to the global economy via the national and international flow of finance and labourers as well as the entry of multinational corporations.

Let us first look at the basic composition of the MSEZ. Developed as a petrochemical cluster, the MSEZ has mutually supportive units connected in upstream and downstream linkages that feed raw material input and supply internal markets (see Fig. 2). MSEZ phase-I comprises the MRPL phase-III refinery, an aromatic complex, and an olefin complex.²³ These complexes have been developed on the already-acquired 1,800 acres of land by the anchor promoter of the MSEZ project, ONGC-MRPL (Dhakal n.d.: 4).



(Figure2: Mutually supportive units in the MSEZ. <http://www.mangaloresez.com/index.html>)

Next, let us examine the infrastructural networks that link the MSEZ/MRPL to the outside world. According to Shiva C. Dhakal (n.d.), the MSEZ is connected to New Mangalore Port (NMPT) via a road-cum-pipeline corridor for the transportation of cargo, crude and products. The corridor also connects the MSEZ to the national highway. Three more roads are planned to give

²³ The aromatic complex produces mainly benzene and paraxylene, and the olefin complex produces high-density polyethylene (HDPE), linear low-density polyethylene (LLDPE), butylene, polypropylene, and other products.

access to MSEZ phase-I, the industrial zones for the olefin complex, aromatics complex, and several other plants inside the MSEZ (Dhakal n.d.: 4).

Regarding this, an article on MSEZL's website entitled 'The dedicated corridor from the port to the plants' says, 'A dedicated pipeline-cum-road corridor bridges the distance...between the port and the MSEZ. This ensures that material is moved in minutes between the port & SEZ units.' Similarly, the MRPL's website includes an article on pipelines, reproduced in part below:

Pipelines

MRPL Oil Jetties are located inside the NMPT. There are 6 lines running from the Refinery [MRPL] to the coastal terminal out of which four are White Oil lines and 2 are Black Oil lines....Products are loaded using hoses at virtual jetty and jetty-9. Marine loading arms at jetty 10/11 are hydraulically operated and interlock facility for tripping the loading pumps and disconnecting the loading arms is also available. Maximum loading/unloading rate through each loading arm is 2200kl/hr. With a view to reduce transportation cost of evacuation, a cross country pipeline between Mangalore and Bangalore became a necessity. Accordingly the Petronet MHB Limited was formed to implement the project and operate this Cross-Country pipeline. ONGC holds a 23% equity holding in this pipeline.

As emphasized in these articles, the MSEZ/MRPL is linked to mega-cities such as Bangalore and Delhi and then to national as well as global markets through infrastructural networks based on the most up-to-date scientific technology. As shown below, the plants are also linked to the natural environment through the disposal of industrial effluent as well as environmental monitoring.

Waste water treatment

The state-of-the-art Modern Wastewater Treatment Plant (WWTP) that has been installed to treat Refinery waste water containing sulphide, phenol, oil & grease etc., and thus meeting the limits of MoEF [The Ministry of Environment and Forestry] Standards / KSPCB [Karnataka State Pollution Control Board] Standards. The treatment consists of physical separation, chemical and biological treatment and final filtration with polishing. The treated waste water is discharged into the sea ... at a distance of 650 M. and at a depth of 6.5 M. The discharge point was selected by the National Institute of Oceanography after carrying out a detailed study on the effect of this stream on marine life. The quality of the treated waste water and marine environment around the discharge point is monitored by an independent agency all around the year ... The MRPL has developed and implemented a process for treating the effluent with hydrogen peroxide, which reduces the sludge formation. There is constant monitoring of the quality of the treated waste water and air emissions. The MRPL is a certified ISO

[International Organization for Standardization] 14001:2004 and possess excellence in environmental performance.

It is noteworthy that the concept of ‘environment’ appearing in the above article connotes a clearly different meaning from the local concept of *gudḍe* in this region. As we have already seen, the *gudḍe* is a particular place closely connected to the power of *būtas*. It is also connected to certain groups of people through land tenure, hunting and gathering, and the circulation of *būta* power actualized in *būta* rituals. In particular, the transactions between the village people and the *būtas* dwelling in the *gudḍe* construct a network of restricted length (Strathern 1996: 529). By contrast, the ‘environment’ in the context of the wastewater treatment and environmental monitoring and care in industry indicates the global environment, a ubiquitous system of almost limitless extent.

Finally, let us briefly investigate how the MSEZ is linked to national and international labour markets and the global economy. According to Thomas Farole (2011), SEZs in general are primarily established with the aim of attracting direct investment by foreign investors, including multinational corporations. Heather P. Bedi (2013: 38) argues that SEZs are unique enclaves with a free-market orientation and are thus privileged with legal and tax concessions that transcend prevailing national laws. The creation of SEZs enables a country to create areas of advanced infrastructure and incentives that cannot be pursued throughout the nation. Similarly, Michael Levien (2011: 454, 461) argues that SEZs are ‘hyper-liberalized export enclaves’ or ‘free-market utopias.’ In the case of SEZs in India, according to Levien, the private sector is enticed with offers of cheap land to develop the zones and create a ‘world-class’ industrial and commercial infrastructure. Additionally, streamlined bureaucratic procedures and blanket tax and tariff concessions draw exporting companies to set up offices and factories in these zones. Although SEZs are ‘spatially delimited experiments with extreme levels of liberalization’ in a nation (Levien 2011: 454), they develop themselves as cosmopolitan cities directly connected to the global economy.

The MSEZ is no exception. Numerous multinational companies have launched developmental projects in the MSEZ and some foreign companies have joined these projects as the subcontractors or technological advisors of Indian companies such as Indian Strategic Petroleum Reserves Ltd. (ISPRL). Though MSEZ/MRPL employs people from all over the country, most of the well-paid employees such as managers, engineers and other specialists are from the urban middle class, while most of the unskilled labourers, including not only members of the displaced households but also migrant workers from other regions, are of rural origin (see Levien 2011: 476). The MRPL has a residential area called the

‘colony’ for its white-collar employees, which contains modern facilities such as a shopping complex, swimming pool, recreation club, public school, hospital, and bank branch. Suddenly appearing in a rural area, the MSEZ/MRPL is a cosmopolitan enclave that has expanded at the expense of local villages, landscape, and ecology.

As seen above, the MSEZ is a heterogeneous network which extends far and wide. It is also understood as an amalgam of humans and nonhumans: it consists of human labour and service, scientific knowledge and technology, manufacturing facilities, infrastructure, feedstock and chemicals, and so on. Similarly, each product of the ‘downstream industry’ in the MSEZ can be regarded as a hybrid of various components such as feedstock, machines and technology, and the labour and social relations of the people who participate in the manufacturing process.

Nevertheless, the form is obviously not the same as the human–nonhuman relations or transactional network found in *būta* worship. In the *būta* ritual, the flow of substance-codes in the transactional network is activated and controlled by both humans and the deities. Here, they both appear as dividual persons, as donors as well as recipients of gifts to and from each other. In other words, they act as the ‘turning point for directing the flow of the fertility back’ (Strathern 1996: 528).

By contrast, even though the people in the plants well understand infrastructure such as roads and pipelines as ‘networks’ in the usual sense, they do not generally experience participation in a transactional network which links them with the nonhumans in their surroundings. Apparently, humans are the only intentional agents organizing and controlling, in addition to the power of the machinery, the flow of substances such as feedstock, products, and industrial effluents. In such a situation, the human–nonhuman relation in industrial plants is not regarded as social; neither humans nor nonhumans appear as dividual persons who transact their substance-codes as ‘gifts’ to each other.

Moreover, the MSEZ networks extend almost limitlessly outwards. As suggested in the web article about MRPL’s wastewater treatment, for example, the flow of substances such as industrial effluent is to some extent controlled by the experts. Yet they cannot follow, monitor, or control the flow completely: the whole process of the flow in such a heterogeneous network linking the plants to the outside world, global environment, and global economy cannot be fully grasped or controlled by a handful of specialists.²⁴ In other words, there is no

²⁴ This corresponds to one argument on risk: ‘... lack of control is an important characteristic for situations involving environmental and technological risks. Although there is a strong link to

perfect device to control, block, or turn back the flow. Thus in the MSEZ, humans and nonhumans, in effect, take on their roles *individually* in a single part of a limitless network, and have no sense of how to stop its extension.

This situation can occasionally be changed, however, and the local transactional network between humans and nonhumans can be recovered or newly created. One such occasion is that of crisis or accident inside the plant.

Crises in the Industrial Plants and the (Re)creation of the Transactional Network

Accidents or crises occurring inside the industrial plants provide people with occasions for changing the usual human–nonhuman relations in industry. In such situations, the flow of substances or the power of the machinery is uncontrollable even inside the plants, and humans are overwhelmed by the power of nonhumans. To solve this predicament, people seek not merely technical solutions but try to regulate or reconstruct their relationship with their nonhuman counterparts—and here again the *būta* rituals play an important role, as shown in the cases below.

Blast at MSEZ construction site kills 3

Mangalore, May 26: A blast that occurred at a crude oil storage project site belonging to Indian Strategic Petroleum Reserves Limited (ISPRL) near Bajpe, on the outskirts of Mangalore, this evening is believed to have killed 3 people including a Korean and injured 5 more.

As reported above, there was an explosion on 26 May 2011 at a plant inside the MSEZ owned by ISPRL. Three persons died, including a Korean engineer, an employee of the Korean company SK, which had received a contract from ISPRL.

On 25 July 2011, *The Canara Times* published a special report headlined ‘Dismissing SEZ works, Korean engineers are busy constructing a *gudi* [shrine] for daivas!’ According to this article, despite taking adequate precautions, the Korean company had often encountered similar accidents. This time, an SK employee arranged a ritual (*aṣṭamaṅgala praśne*) conducted by an astrologer, and as a result, the following ‘facts’ were revealed: At the place where ISPRL built its plant, a powerful *būta* called Pilicāmuṇḍi had formerly been worshipped. The explosion and other accidents inside the plant were caused by the ire of the *būta*

human intervention, it is often not possible to point to one particular decision or a particular culprit. Beck speaks in this regard of “everyone (being) cause and effect, and thus non-cause”, which in a complex industrialised world leads to a state of “organized irresponsibility” (Beck 1992: 32–3, 50)’ (Bergmans 2008: 180).

over the discontinuance of these rituals. To appease the deity, SK organized a ritual at the site and decided to build a new shrine for Pilicāmuṇḍi.

Interviews with Vaadiraaja, a Brahman astrologer who conducted a ritual for SK, and Deeveraj, an Indian employee of the same company, corroborated the facts given in *The Canara Times* report: after the accident, several ISPRL officers visited Vaadiraaja. Hearing their request, he conducted a ritual and found that there were originally shrines for Pilicāmuṇḍi and *nāga* at the site. Following this revelation, the Korean managers of SK organized a ritual called *mṛtyuñjayahōmo* [ritual for saving lives] on a large scale inside the plant. In this ritual, not only the Indian employees but also the Korean managers played the important role of the patrons; they dedicated offerings to the deity and received *prasāda* from the Brahman priests.

This was not the first ritual for *būtas* to be organized within the plant. In the late 1990s, during the construction of the MRPL plants, numerous, but not all, religious structures were demolished. One of remaining structures is a *būta* shrine called the Raktēśvari *sāna* (shrine). It is said that when the company was about to demolish this shrine, they received an oracle from an astrologer saying that they should not demolish it. As a result, it was saved and is now a site of worship for workers inside the plant.

According to Prakash, an MRPL executive officer, a compressor broke down in 1999 at a site near the Raktēśvari shrine. Japanese engineers who were posted at the MRPL site for technology transfer, checked the Japan-made machine. Try as they might, they could not find the cause of the malfunction. They checked the machine and soil again and again, but were unable to solve the problem. Finally, they agreed to consult an astrologer. Following to the oracle's prescription, the engineers performed a ritual at a temple in Mangalore. They offered a sacred *tolasi* tree (*Ocimum sanctum*) to the Raktēśvari shrine and also constructed a place of worship at the site. After the ritual, the machine worked again.

As shown in these cases, in critical situations such as explosions or breakdowns, the operation of machinery and the flow of substances in the plants is uncontrollable, even for experts. In such situations, the power of machines is often perceived to ultimately be a manifestation of the *būtas*' power and agency. As with the living buffaloes in the *kambuḷa* ritual, which embody the *būtas*' wild power, an uncontrollable machine personifies the power of the *būta* dwelling there. Like the buffaloes in the *kambuḷa* field, the machine here becomes a dividual-person who embodies and transfers the *būta*'s power. Identifying the power of machines with that of a *būta*, the people in the plants seek a way to reconstruct

human–nonhuman relations and control the flow of power and substances, but not in the usual technical way.

In *būta* rituals conducted in the plant, people give offerings to the *būtas* whose power is embodied in the machine-person. With the help of priests, the *būtas* receive these offerings and return *prasāda* to the people. The dangerous flow of substance-codes, or the power of the *būtas* in the plant, impersonated in the machines, is thus channelled into a newly created transactional network involving humans and nonhumans, and turned into ‘grace’ to be distributed among humans.

As I suggested earlier, in the yearly *būta* ritual in Perar, participants, both human and nonhuman, are performatively linked by the flow of substance-codes in the transactional network between the *būtas* and devotees. At the same time, the *nēma* sets boundaries both to separate people according to their belongings, and to separate *būtas* according to their identification with particular territories. Similarly, the *būta* ritual in the plants performatively links the various people such as the priests, company officers, managers, foreign engineers, other employees and wage labourers with their nonhuman counterparts, then turns them all into dividual persons through the transactional process. At the same time, it separates them from others who do not have the right and duty to participate in this transactional network.

It is notable here that this boundary is not always self-evident but is performatively created through the ritual process itself. In Perar, only the people who are responsible for certain territory participate in the ritual for the *būtas* dwelling there; at the same time, their responsibility for the land, as well as their right and duty to attend the *būta* ritual are guaranteed by their service at the *būta* shrine. Likewise, only the people responsible for the work at the site participate in *būta* rituals at industrial sites; at the same time, their responsibility for the site, not merely as their workplace but as the *būta*’s land, as well as their right and duty to participate in the ritual, is created through and guaranteed by their worship of the *būtas*. In other words, they create their own unique positions in the plant by linking themselves to particular territory, *būtas*, and people—but not to others. Through this ritual process, the seemingly limitless network of humans and nonhumans in the MSEZ is temporarily cut and is transformed into a local, circulative network of finite length.

The *būta* ritual in industrial plants thus (re)creates a unique ecology composed of various dividual persons such as humans, *būtas*, and machinery; they transact their substance-codes as ‘gifts’ to each other while also acting as both stimulators of and turning points in the flow of the transactional network.

Conclusion

In this paper, focusing on *būta* worship and the construction of a huge industrial complex in South Kanara, I have examined the relationship between humans and nonhumans, including deities and machinery. By linking the concepts of dividual persons, substance-codes (Marriott 1976), and transactional networks (Appadurai & Breckenridge 1976) with the ideas of hybridity and limited networks (Strathern 1996), I have reconsidered these concepts as effective tools for analyzing human–nonhuman relations both in traditional South Asian societies and also in other social settings.

As we have seen, cultivated land and its products in South Kanara are understood as hybrids composed of the labour/service of people, inter-caste and intra-kin relations, and the wild power of the *būtas*. In *būta* rituals, both humans and deities exchange their substance-codes as ‘gifts’ for each other. The substance-codes circulate within the transactional network between humans and deities, both of whom act as turning points for ‘directing the flow of the fertility back’ (Strathern 1996: 528). Here, the flow of substance-codes and the extension of the network are limited by the rights or belongings of both the humans and the *būtas*. This analysis has shown that the transactional network of humans and deities creates a unique ecology composed of various hybrid, dividual persons such as land, *būtas*, and people.

While the indigenous transactional relationship between local people and *būtas* has largely been destroyed due to industrialization in this area, the MSEZ itself has developed as a heterogeneous network composed of both humans and nonhuman entities. In the limitlessly expanding network of the MSEZ, human–nonhuman relations are not, in effect, transactional or social: neither humans nor nonhumans appear as dividual persons who exchange their substance-codes as ‘gifts’ for others.

In this context, accidents inside the plants may become occasions for changing the usual human–nonhuman relations. Identifying the power of a machine with that of a *būta* dwelling in the site, people, in effect, (re)create the transactional relations with their nonhuman counterparts. Through the ritual process, the *būta*’s power embodied in the machine flows into the newly created transactional network between the people and *būta*-machines, and is turned into ‘gifts’ for the humans. The *būta* ritual in the industrial plants thus (re)creates a unique ecology composed of dividual persons, both human and nonhuman, who link themselves with each other and, at the same time, limit the flow by making boundaries, or cutting the network.

The above analysis suggests that the concepts of dividual persons, substance-codes, and the transactional network may be useful outside of the traditional South Asian social settings originally examined by Marriott (1976) and Appadurai and Breckenridge (1976). Moreover, the ideas suggest how it may be possible to cut an immeasurable network, which is not merely an ‘analytical network’ (Strathern 1996: 523) but also an actual industrial and environmental one. They suggest a way to limit the flow by transforming the limitless network into a transactional circulation in which the substance-codes of both human and nonhuman persons flow as ‘gifts’ to each other.

Applied in a new context, these classic concepts have been enlarged as ever-creative tools for understanding how humans relate themselves socially with nonhumans, and how a unique ecology composed of both humans and nonhumans can be generated. Consequently, in order to create a unique ecology of post-humanist anthropology, it may well be needed to let these ideas flow in a network of humans and nonhuman entities, including anthropologists, their research fields and ethnographies, as fertile gifts for us all.

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