Fasu Solidarity: A Case Study of Kin Networks, Land Tenure and Oil Extraction in Kutubu, Papua New Guinea

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In the Fasu region of Papua New Guinea's fringe highlands, the oil extraction industry has imposed development values and the identification of corporate groups as beneficiary landowners. In response, Fasu males have tightened the boundaries of their agnatic descent groups to become exclusive patriunits. Cash royalties are incorporated into sociopolitical exchange, so the formation of exclusive kin groups allows males to expand social networks to other regions, whilst ensuring continuing wealth for future generations. Consequently, males are becoming isolated from preoil exchange networks, and females are becoming isolated within villages. In this article, I map the transition of Fasu kin networks from an ideology of descent to a dogma of descent and patrilineal solidarity, locating the transition in the symbolic codes that inform kin categories. I aim to highlight some consequences of "development" and to advance knowledge on the link between kinship and descent in a postcolonial, industry-dominated Papua New Guinea. [Keywords: kinship, descent, extractive industry, Fasu, Papua New Guinea]

The operation of large-scale oil extraction projects in so-called third world countries has an inevitable impact on local ecologies. In a number of oil-rich regions in Angola, Nigeria, Indonesia, Ecuador, and Venezuela, rural populations are faced with environmental destruction from oil spills and gas emissions (Okoko 1999), lack of state-sponsored development (Ferguson 2005; Gelb and Conway 1988; Robson 1999), and lack of landowner recognition (Ferguson 2005; Okoko 1999), generating shifts in gender roles (Okoko 1999; Robson 1999), violent conflicts and civil war (Bannon and Collier 2003; Bray 2003; Gelb and Bienen 1988; Ross 2003), and substantial external debt (Gelb and Conway 1988).

Unlike their foreign counterparts, Papua New Guinea's oil extraction industry is relatively recent, observing a more ethically sound approach than in other global locations.<sup>1</sup> The Bougainville disaster—where conflict between industry and locals forced unscheduled closure of the Panguna Copper Mine in 1989 and sparked a decade of civil war (Connell 1991; Filer 1990)—threw caution to future multinational ventures in Papua New Guinea and ensured local populations were acknowledged as beneficiaries.

The Kutubu Oil Project in New Guinea's Southern Highlands Province is the country's only oil production facility and is much smaller than the larger (and more academically well-known) mining projects at Ok Tedi, Porgera, and Lihir. The project's operational center and related infrastructure are enclosed within barbed wire compounds and policed on a 24-hour basis, and the Fasu people who host the project are significantly distanced from operations (see Figure 1). On the surface the social and environmental impact of the project seems minimal. Villages retain a traditional structure, subsistence lifestyle, and principles of sociopolitical exchange, whilst the expense put into developing ecofriendly operations, which includes an underground pipeline and isolated production facilities (Knauft 1993; McCoy 1992), has significantly reduced the probability of oil spills and ecological damage from gas emissions. From an economic perspective, the Fasu receive considerable royalties disseminated through the Incorporated Land Groups (ILG) system.

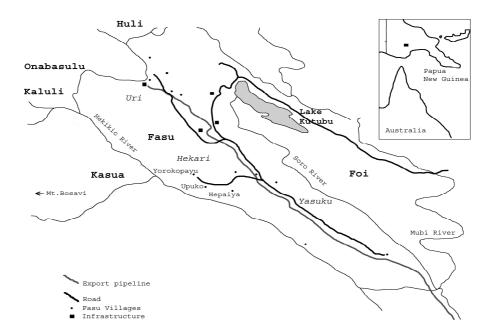


Figure 1. The Kutubu region of the Papua New Guinea fringe highlands.

The imposition of centralized judicial constructs of corporate landholding groups by the government and project operators has, however, threatened the Fasu's social world. In the recent past (precontact), the Fasu loosely organized themselves around a patricore defined by biological ties between a father and his productively mature sons within a kinship grouping known as *kepo*. Landholding was defined by paternal biological ties and social and cultural processes linking individual males to land through the transference of sago palms, ongoing segmentation and fusion within groups , and perceptions of male and female substance. Additions to the core, made through marriage and migrant filiation, ensured support in warfare and extended networks of sociopolitical exchange.

In the context of industry and royalties, the nature of group organization has changed. Warfare is no longer endemic and air travel has recently opened up the previously isolated region. Social groups are no longer loosely organized, flexible, porous units but exclusive, patrilineal groups with an agnatic bias restricting membership to a single kepo and denying migrant filiation. Whilst the relationship between bordered land, ownership, and cash is not concomitant with everyday activity, as the Fasu do not perceive ILG land as either bordered or exclusive, the relationship between ILGs and the cash wealth is acknowledged. The introduction of cash remittances has more of an effect on sociopolitical relations than on engendering a market economy, as the objective is not to prosper in capitalist terms (property, ownership, etc.) but to acquire status through traditional means—specifically, by attaining wealth items and transferring them in exchange transactions.

Within the broader sociopolitical network, social standing is garnered through transactions between affines and other exchange partners. As with other fringe highlanders (see, esp., Kelly 1993), status is reflected in the value attached to objects displayed in exchange ceremonies or given as symbols of generosity. In the context of extractive industry, items associated with the oil company—and with "white culture" in general, including four-wheel-drive automobiles, video recorders, and hard-hats worn by company employees—are particularly valued items. Air travel (a status symbol in itself) allows males to extend exchange relations, through marriage, to the larger towns where they "display" their wealth and status on a broader scale. So whilst the exchange sphere has expanded to enhance male social networks, kinship boundaries have restricted to deny males outside the line of perceived descent access to royalties.

The Fasu case is a paradigm of an emergent descent dogma with a patrilineal bias where unilineality is realized in the process of confining kinship boundaries to both access and restrict huge financial benefits from industry. It is also a paradigm of the negative social consequences of the conflict between the local and the global in rural localities as the strength of the Fasu's paternal kinship bond, steeped as it is in indigenous values and beliefs, regionally isolates them from pre–oil exchange and marriage partners, isolates females within the village setting, and segregates the Fasu from economic and social development.

Based on 17 months of fieldwork (2000–01, 2004), I examine in this article issues of group organization and relatedness in the contemporary context of resource extraction to contribute to a number of works that identify kinship as a central issue in modern anthropology (see, esp., Carsten's 2000 edited volume). I also acknowledge the development of bounded, land-owning groups to fit corporate conceptualizations of patrilineal models in Melanesia and the Pacific (see, esp., Burt 1994; Ernst 1999; Guddemi 1997; Sillitoe 1999; Strathern and Stewart 1998; Tiffany 1983; Weiner 1998). The process of institutionalizing groups in global contexts has been variously

labelled, from entification (Ernst 1999) to substantivization (Thomas 1992), within a body of literature highlighting the link between development values and the emergence of bounded descent units. In this article, I make a further contribution. I locate the relationship between cash royalties and a dogma of descent in indigenous conceptualizations of kinship bounded by symbolic codes, drawing an inherent link between social constructions of group organization and biological constructions of kinship (Carsten 2004; Schneider 1980; Strathern 2005).

Kinship and descent patterns in the Papua New Guinea Highlands and fringe region were illustrated in the early literature as innovative and transformative, responding to social effects such as population (Langlas and Weiner 1988), warfare (de Lepervanche 1968; Kelly 1968; Langness 1964), pressure on resources (Meggitt 1965), wealth influxes (Weiner 1998), and residence and cooperation (Brown 1962; de Lepervanche 1968; Langlas 1974; Langness 1964). At the same time, they remained grounded in an ideologically unilineal-or what Paula Brown has called "quasi-unilineal" (Brown 1962:60)-model of descent.<sup>2</sup> More recent discussions of kinship and descent in social settings dominated by extractive industry (Ernst 1999; Guddemi 1997; Sillitoe 1999; Weiner 1998) hint at a relationship between indigenous group organization and development processes that shed light on early British structural-functionalist work in postcolonial Africa by E. E. Evans-Pritchard (1940)<sup>3</sup> and A. R. Radcliffe-Brown (1952), and the imposition of African models of descent in the Papua New Guinea Highlands (see, esp., Barnes 1962). Andrew Strathern and Pamela Stewart (1998:217) identify the relationship between colonial development values and unilineal descent, arguing that models of unilineality and customary communal land tenure identified by anthropologists in Africa were likely to have developed in conjunction with enforced colonial ideals of land tenure and inheritance (see also Harris 1968; Kuper 1973; Ranger 1983; Tiffany 1983). A similar outcome can be identified in postcolonial Papua New Guinea where development values force indigenous customary land tenure principles to adapt in order to justify their use of, and rights to, land (Strathern and Stewart 1998). The way the Fasu justify their rights to the land on which the Kutubu Oil Project is situated was-and continues to bethrough relatedness.

I begin this discussion with a brief outline of the ethnographic background and particulars of oil extraction and royalty payments in the Fasu region. I then highlight the principles of group membership, show how biological solidarity articulates the transition from an ideology of descent to a dogma of descent, and finish with a consideration of the consequences and implications of the Fasu's encounter with industry.

#### THE FASU AND THE KUTUBU OIL PROJECT

The Fasu occupy the area between the Hekikio (Kikori) and Soro Rivers in Southern Highlands Province, Papua New Guinea (see Figure 1). As a language group, they form part of a broader classification of people know as Kutubuans that also includes the Foi, and they display characteristics of a broader regional classification know as Fringe Highlanders, which includes the Foi, Etoro, Daribi, Onabasulu, and Kasua (Weiner 1988). The Fasu are one of the smaller fringe groups, with a population of approximately 1,100 covering 1,000 square kilometres. The area they occupy lies between 300 and 1,500 meters above sea level, providing a rich and varied ecology from sago swamp valleys to dense tropical rain forest and karst limestone ridges.

Like other fringe highlanders, the Fasu are shifting cultivators practicing subsistence agriculture that provides a predominantly vegetarian diet of sago, green-

leaf vegetables, and tubers, periodically complemented by fish and small game. Both cassowary and wild pig are highly valued but rare game, forming only a small part of the diet. Semi-domesticated pigs, kept on a small scale and consumed only on ceremonial occasions, rely mainly on foraging and are fed additional foodstuffs (sweet potato and sago) by both males and females. Over the last decade, tradestore goods such as rice and tinned meat and fish have been integrated to varying degrees into the Fasu diet. Sago cultivation and gardening remain central to agricultural practice and pigs, and, to a lesser extent, shell wealth are still widely used in exchange.

The Fasu observe a regionally unique gender division of labor comparable to that observed by Michael Wood (1982) amongst the lowland Kamula, but not by other fringe highland ethnographers. Females exclusively produce sago, whilst males exclusively hunt. The attenuation of gender sociality is mirrored in habitat: Males and females occupied separate sections of the communal longhouse in the past (similar to the Daribi model described by Wagner 1967) and occupy separate houses in villages today. Division is an element of sociality which in itself contributes to both male and female solidarity. As is the case for most rural Papua New Guineans, identity is found in small local groupings with little national awareness. Geographical confinement and isolation from urban centers are central factors affecting the extent to which economic development has been imposed in this region, and these factors also have implications for effective social and economic development beyond extractive industry.

The generic term *Fasu* is used in official literature and general conversation in reference to the group of people living between the Hekikio and Soro Rivers and the language they speak. Whilst younger Fasu have recently adopted the term in reference to the broader grouping, elders do not identify themselves as part of a bounded cultural group and more readily locate themselves in relation to a shared totemic name. They do recognize a linguistic affinity between a group of people who speak the same language, *Namo Me (Namo meaning "real," Me meaning "talk")*, making reference to its speakers as *Namo Aporo (Namo meaning "real," Aporo meaning "man")*. As was common during the period of colonial administration, the name Fasu (that of a single clan) was adopted as a generic term by government anthropologist F. E. Williams, who encountered Fasu members when stationed at a patrol camp near Lake Kutubu in 1937–38 (Williams 1976). For clarity, I refer to the language group as Fasu in place of the vernacular *Namo Aporo*.

Within the broader classification, Fasu recognize three dialectically and geographically distinct groups: the Uri (those who live in the mountains), Yasuku (those who live in the rain forest), and Hekari (those who live by the water). Due primarily to environmental limitations, the three groups interact very little with one another. Relations have been more effectively cultivated with other language groups living in closer proximity. The Uri intermarry and trade with the Huli, the Yasuku with the Foi, and the Hekari with the Kasua (see Figure 1). As a result of extended ties, many Fasu are at least bilingual.

According to Edward Schieffelin and Hiroyuki Kurita (1988), Kutubu was first reached by explorers and prospectors in 1911 (see also Kurita 1985; Schieffelin and Crittendon 1991), later becoming a colonial administrative center under Australian control from 1937 onwards (Ernst 1995). During this time, Kutubuans moved about the region in line with gardening cycles and sago palm maturity, oscillating between small-group communal longhouses and individual bush houses on group territory (Weiner 1988). Administrative control in the late 1940s forced scattered groups to form permanent villages, which in the Fasu region resulted in the Uri forming five villages, the Yasuku five, and the Hekari three.<sup>4</sup> Architecture shifted to accommodate larger numbers: Communal longhouses became male-only, and females occupied smaller female-only houses on the village periphery (similar to the Foi model described by Langlas 1974). The 13 Fasu villages have changed very little since colonial times, moving within a limited area when new longhouses are built whilst retaining a primarily bush-material composition.

Missionization in the Kutubu region was most influential during the 1960s and 1970s with stations situated on Lake Kutubu and in the Hekari region in Upuko village. Missionaries of the Unevangelized Fields Mission commissioned airstrips, class rooms, churches, and communal clearing for commercial cropping; in addition, they introduced Western clothing, salt, steel tools, and cash as payment (Kurita 1985). According to Paul Freund (1977), the Upuko mission was a center of religious and social activity, attracting individuals from the Kasua and Kaluli regions in search of work and marriage partners. Missionary influence saw the prohibition of warfare, cannibalism, and ceremonial activity. There has been no missionary presence in the region since the early 1980s, but its enduring impact is evident in weekly church services and Christian burials. Warfare and cannibalism are things of the past, but sorcery is still very much a part of sociality and ceremonial dancing has been reintroduced (Busse et al. 1993).

Since 1992 the Fasu have hosted the Kutubu Oil Project, a branch of the joint venture for oil and gas extraction in Papua New Guinea that includes the Moran and Gobe fields and makes up the Kutubu-Gobe-Moran Project. The Kutubu Oil Project was the first of the three to commence commercial production in June 1992. The projects operate under a number of Petroleum Development Licences, the Kutubu branch covering Petroleum Development Licence 2 (PDL 2). The Fasu are majority shareholders of PDL 2, receiving 90 percent of royalties and awarding the neighboring Foi 10 percent on grounds of good will. Royalties for PDL 2 are based on two percent of well-head production value.

The method of royalty distribution is the Incorporated Land Groups (ILG) system, a development of the Lands Group Incorporation Act (LGIA) established by the national government in 1974 to allow local groups to register as customary landowners (Goldman 2004:70; see also Marru 2002; Sagir 2004; Weiner 1998). The 54 Fasu groups registered in 1992 were those "clans" or named groups that existed at the time of initial registration. In line with the natural growth cycle of the kepo, comprising father and mature sons, groups do segment and continue to form new kepo.<sup>5</sup> As such, in 2005 there were approximately 88 ILGs registered in PDL 2 compared to the 54 in 1992. Regardless of the number of ILGs, the amount available for dissemination remains unchanged.

The Fasu area is conceptually and loosely divided into uneven and, since the introduction of villages, often uninhabited territorial pockets, each one being "owned" by a single ILG. The Consolidated Benefits Summary from January of 2006 calculated that between 1993 and 2005 Fasu ILGs received in excess of 34 million kina in royalties (kina is Papua New Guinea's national currency), 4 million kina in compensation, 1 million kina in land rentals, and 82 million kina in equity dividends. Royalties are paid biannually into ILG bank accounts, accessed with the signature of any member of the ILG.<sup>6</sup> The 88 ILGs registered in 2005 received approximately 58,500 kina each in that year alone.<sup>7</sup> This is topped up in some cases by consultancy contracts, making the Fasu extremely wealthy by Papua New Guinea standards.

Oil Search Limited (OSL) superseded ChevronTexaco (previously Chevron Niugini) as operators and majority shareholders of the Kutubu oil fields in 2003.

Infrastructure for the project includes two company camps, two production facilities, a number of well heads, several access roads, a small airport, and a 267-kilometre pipeline from Kutubu to an offshore terminal in the Gulf of Papua (see Figure 1). The operation is characteristic of oil and gas extraction sites in other global locations (see, e.g., Ferguson 2005), where infrastructure and operations are restricted from locals. OSL operations and employee camps are tightly secured units, policed on a 24-hour basis.

When production began the estimated life expectancy of the Kutubu oil fields was 25 years (Simpson et al. 1998), but with production peaking in 1993 at 130,000 barrels per day, the supply of oil is now rapidly depleting (Goldman 2004). The increasing likelihood of the project developing into a gas venture will, however, increase project life by at least 50 years, whilst extending the impact area into Gulf Province, the Torres Strait, and Queensland, Australia.

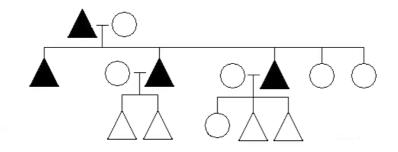
OSL largely takes on a government role in the Kutubu region, providing basic services including class rooms, aid posts, and access roads. Most Fasu live a significantly isolated distance from central operations with all but one of the 13 villages accessible by road (see Figure 1). Isolation from operations, absence of government responsibility, and lack of social and economic development programs has meant that the crude oil sector of Papua New Guinea's resource development has had a minimal overall effect on the livelihoods and potential economic sustainability of local populations (see Gilberthorpe n.d.). Education and health service is poor, life expectancy and literacy are low, and female income and education achievements are far lower than males, which drastically conflicts with the apparent wealth of the region. Much of the cash provided as benefits is absorbed into the exchange arena in bridewealth and compensation payments (bridewealth being in the region of 30,000 kina). Material items-such as four-wheel-drive automobiles, generators, electrical appliances (especially radios), and tradestore goods-have also entered into exchange, whilst air travel to the capital Port Moresby is a frequent male pursuit and a clear expression of status, as are displays of wealth carried out in bars and stores in the capital (see also Gewertz and Errington 1999).

# THE PRINCIPLES OF GROUP MEMBERSHIP AND LAND RIGHTS

The principles of Fasu group organization underscoring identification of ILGs as exclusive patrilineal units is the procreative bond linking a father and his mature sons to an area of land. The father–son bond is established through the lineal transmission of substance (semen) and maintained through the lineal transference of sago palms and growth-inducing meat. Importantly, the bond is sustained by residence and resource sharing so that biological ties are malleable and can be easily severed. The kin category of father and sons, known by the exclusive term *kepo*, represents the social and cultural recognition of biological relatedness, solidarity, continuity, fission, and segmentation underlining Fasu ideas about relatedness and kinship.

#### The Kepo

The kepo (meaning "origin" or "base of tree") is the primary kinship bond representing the base of a larger cohabiting group. A kepo is an exclusive bigenerational unit (see Figure 2) who inherit sago palms, territorial rights, and headman status; members share territory and resources and support each other in bridewealth and, in the past, warfare. Sociality is individually upheld through establishing ties with other individuals and groups through marriage and trade. Kepo comprise either father and productively mature sons, or a band of brothers with immature offspring. In rare cases (and only one of these exists today in the Hekari region), the kepo is represented by a single male with no living brothers or male children. Whilst the kepo is distinctly patrilateral, it is an idiom of lineage continuity that links the kepo to a common male ancestor. With shallow genealogical depth, the reality of this connection is more of an ideology than being founded on true genealogical descent.



**Figure 2.** The typical *aporo ira* is made up of a single *kepo* of father and mature sons – here represented by the shaded symbols.

Females, who also have kepo (the woman's father and brothers) but are not a part of it, have their own schema of relatedness based on real or de facto cognatic ties. Her access and user rights to resources are based on kin relations as mother, wife, or sister, and neither palms nor land are transferred to her. Productively mature females join two kepo together through marriage, establishing paths of affinal exchange relations. Whilst individual males are part of a kepo, they belong to the broader totemic grouping of the *aporo ira*, membership within this group being defined by mutual land use and exchange.

#### The Aporo Ira

Since the introduction of ILGs, Fasu groups have self-registered under the identity of "clans," a modern gloss on kin-based, residential support units known as *aporo ira* (lit., "man tree"; see Figure 2). The aporo ira is a totemic, autonomous group, numbering between one and 20 persons. In principle one aporo ira is represented by a single kepo, but during periods of endemic warfare (precolonial) several kepo commonly grouped into a single, named, totemic unit for support and safety. The aporo ira is a male institution, with female connections determined by a woman's relationship to males as a mother, wife, or sister, and through activity within shared territory. Females may be connected to any number of aporo ira in their lifetime as a consequence of widowhood, divorce, and remarriage; the woman's impermanence limits her rights to resources and direct participation in exchange. Whilst male agemates within the aporo ira refer to each other as *mae* (brother), there are a number of referents of the term to include individuals with cognatic connections within a single generation who are regionally close and active in exchange (B, MBS, FBS), demonstrating the extent of support and obligation beyond the kepo and the aporo ira.

Migrants were welcomed in the past, either integrated into established aporo ira or given land and awarded the status of group founder. Only in cases of marriage and uxorilocal residence were immature sago palms and, in some cases, land transferred to migrants (see Story 1, discussed below). Bachelor migrants were integrated into already established aporo ira but sago palms were not transferred. Usufruct rights to gardens and hunting land were instead awarded, sago being provided by resident females as secondary exchange via the host kepo. The transfer of sago palms, which is only done upon marriage, signals a change in status for migrants; their role as dependents is at that time superseded by that of exchange partners. (The reasons for this will become clear in the section of this article titled "Metaphorical Connections.") Migrants, then, are not bound by consanguinity but observe a de facto brotherhood through exchange and marriage. The ILG system has recently frozen the incorporation of migrants into Fasu groups, the dogma of unilineal descent ensuring that palms and land are no longer transferred outside the kepo.

Each aporo ira has a headman, the eldest living member of the core kepo, known as the *aporo unihi* (lit., "head–eye man"; *aporo* meaning "man," *uni* meaning "head," *hi* meaning "eye"). This form of hereditary headship was also identified amongst the neighboring Foi by Williams (1976), who noted "*kabe-ga*, which means 'the man (*kabe*) at the base'... is properly the leading male descendent in the direct patrilineal line of that clan which claims to be the first established in the village. The common mode of succession is from elder brother to younger brother" (1976:206; see also Weiner 1988:28). The aporo unihi is obligated to ensure that resources are disseminated to younger members and, in the past, generate support networks through the appropriate transfer of land and sago palms to migrants.

Social categories within a broader territory—such as *aporo kara* ("important man"), *aporo fana* ("first man," in a temporal sense), and *hinamo fana* ("first woman")—refer to individuals acknowledged for their oratorical skills and generosity in exchange and gift transactions, particularly of highly valued game such as cassowary, wild pig, and large fish, as well as shell wealth and, more recently, cash (*aporo kara*). It also refers to those known for their depth of traditional knowledge through old age (*aporo fana, hinamo fana*; see Gilberthorpe 2004). These figures often have more political influence than the headman, and often, where the aporo unihi is young, his aporo ira is affiliated to another through affinal or consanguineal ties. Structurally, interrelated aporo ira work together and respect elders so that social categories are not limited to a single aporo ira.

#### **Group Organization**

Genealogical depth is shallow and there is little interest in tracing lineal connections beyond three generations. Historical connections are, therefore, ambiguous, and affiliation based on patrilineal descent is only putative. In a preoil setting, the lineage principle was only loosely acknowledged as determined by social factors of endemic warfare, disease, and migration. Prior to colonization, members of aporo ira lived scattered about the region on loosely demarcated territory. Each group maintained a single communal longhouse (*ape*) separated into male and female sections. They moved periodically (every four to six years) within group territory, according to the maturation of sago palms and the gardening cycle, constructing a new house each time. Seasonally, wet periods were spent in the communal longhouse, whilst smaller family bush houses near garden plots and mature sago palms were occupied during dry spells (Gilberthorpe 2004; cf. Weiner 1988). Relations between aporo ira depended on proximity, which, due to the nature of the landscape, limited contact between broader groupings.

The population of an aporo ira is primarily dictated by social climate. During periods of endemic warfare, aporo ira tended to be codependent with broadly related

groups living in close proximity often on the land of one whilst maintaining access and user rights to their own. According to Thomas Ernst (1995:6), prior to the establishment of the ILG system Fasu aporo ira numbered between three and 65. These groups supported each other in disputes and warfare, came together for ceremonial events, and interacted in an ongoing cycle of exchange, with larger events such as house openings, bridewealth ceremonies, and mortuary rituals bringing together a broader band of allies. At the time of my own research, aporo ira numbered between one and 30, reflecting the impact of the ILG system on group organization in a warfare-free, industry-dominated environment.

The link between a group of males and an area of land is realized through perceived lineal connectivity to a group founder. As corporate group membership and rights to land are based more on obligatory interaction within a bigenerational unit with extensions beyond this imposed by social climate, identity is defined through the act of transference independent of patrilineal inheritance and historical connections. As a consequence of endemic warfare and shallow genealogical depth, a number of the "clans" that today register as ILGs were established by migrants. The following stories from the Hekari region demonstrate Fasu principles of organization, stressing the authority of transference over descent in establishing land ties and group alliances.

#### Story 1: Imaporo aporo ira, Yorokopayu Village:

A man from Fakamaiu [Kasua-speaking people] came to this side of the mountain. He saw no people, only deep bush, animal tracks, and birds. There were no bush gardens and he saw no smoke. There was a river separating him from the uninhabited land so he constructed a raft to cross it. He cut bamboo poles and tied them together to make the raft. When he reached the other side, still he saw no trace of people, so he took his raft apart and planted the bamboo in the first footprints he'd made, to show others he was there. Then he went in search of people so he could take others back to this empty land and build shelters, make gardens, and so forth. He came to the village of Kaipu [Uri region] where Lolofe aporo ira lived. He told them he'd walked from Mount Bosavi and had found some land where no one lived; he asked if some of them would come with him to live on this land. They told him to stay with them overnight and they would discuss the matter amongst themselves and come to a decision by morning. In the morning the man was surprised when Lolofe presented him with a woman and sago palms and told him that he would now be recognized as one aporo ira called Imaporo [lit. "man from the bush"]. The man and woman were married and went back to the land to build a house. The man noticed that the bamboo he had planted had grown and was sprouting new shoots. The people of Imaporo know the place where the first bamboo was planted. It is considered a special place and they do not take water from where the raft landed out of respect.

### Story 2: Kikiri aporo ira, Upuko Village:

Kikiri are not from this region but migrated some generations ago from the west. Three brothers broke away from the Konomo people of Wawee, and came and formed Kikiri. They came because of fights over land. Three came, one went back and two, Kapakoo and Arwane, stayed. They married [females from Upuko aporo ira] and were given land [by Upuko aporo ira]

and formed Kikiri. After some years Kikiri split, there are now several Kikiri aporo ira [in different villages] but we are no longer brothers.

Story 3: Yafaraka aporo ira, Yorokopayu Village:

The area with Yafaraka Creek running through it was inhabited by Kasore aporo ira of Kaipu [Uri region], but when all of the male members died, killed by Sokai aporo ira [Yasuku region], the area was inherited by the husband of a Kasore female living in Yorokopayu village. He broke from his kepo and went to live by the creek, thus forming Yafaraka.

#### Story 4: Fasu Foke aporo ira, Yorokopayu village

There is only one man in this aporo ira. The group was founded from a swamp dwelling bird called Iro. When Fasu Foke hunt, they hunt in the swamps, they are good hunters in the swampland and can move through it quickly and quietly.

These stories divulge the basic principles of recruitment, revealing the connection between aporo ira and a male (or mythological) group founder, with or without affinal or consanguineal connections to existing or previous land-holding units. In the modern climate, these stories play a role in representing a collective group history linking a group of males—albeit putatively—to a lineage core. As such, stories create a lineage history (Ernst 1999) for those involved and, by establishing lineage connectivity (and banning migrants), ensure benefits for successive generations. Whilst genealogical shallowness was useful in the past, in an area where extractive industry is set to last for at least a further 50 years, genealogical depth has become an essential element of landownership.

#### LAND AND RESOURCES

Fasu land tenure principles state that land (*hauaka*, meaning "ground," "soil," or "land") is not necessarily owned, controlled, or inherited by a stagnant patrilineal unit, as the above stories demonstrate. Aporo ira segment or fission to form new groups, or they join others in response to disputes, accusations of sorcery, and group extinction. Whilst land ownership is essential to benefit claims, its role in the benefit scheme is more-or-less irrelevant in terms of actual use. The demarcation of borders and association of plots with fixed "clans" for ILG status is more of a formal labelling system to assist in benefit distribution, rather than the process actually having anything to do with land as a resource. As the commercial resource is extracted from below the surface and well heads are scattered and unobtrusive, land within PDL 2 has little bearing on operations. As such, at the local level, the way people relate to land on an everyday basis does not match perceptions of it as bordered territory for benefit streams.

Individual males belong to totemic groups that are distinguished from each other by the area they occupy. It is the land itself that is associated with the named group rather than the individuals who occupy it, so that the association of place name with group name is as important as genealogy (Kurita 1988; Schieffelin 1976; Weiner 1991). Individual connectivity to land is through corporate membership and use, so there is a physical ongoing connection between a certain area, a named unit, and individual males. Whilst males retain rights to sago palms after extended periods of absence, untended palms can be taken over by another group. Disputes over palms, however, are rare as there is no shortage of resources.

Like group membership, there are levels of relatedness to land dictated by the solidarity of certain kin relations. As a member of an aporo ira, Fasu acknowledge connectivity with an area which differs from connectivity with land accessed through affinal and extended kin relations. Individual males have access and user rights to land through affinal, matrilateral, cognatic (FBS, FFBS), and noncognatic ties (migrant allies), planting sago shoots on allied land to signify ongoing relations between two lineages (cf. Weiner 1988:24).

Land rights and intra- and intergroup alliances are formulated through the transference of sago palms. In terms of "ownership," the aporo unihi is the *hauaka wafaya* (lit. "father of the land"), and whilst all members of the aporo ira have access rights, he alone is obligated to ensure parts of it are transferred and palms are transmitted to develop exchange networks. Individual status within a kepo is realized through individually owned sago palms, transferred from father to sons (i.e., within the kepo) in a gradual process of "showing palms" (cf. Weiner 1991:45 for the Foi). Beginning when sons are very young, immature palms are "shown" by fathers, their growth ideally matching the growth of male offspring. The palms are themselves symbols of inheritance representing the first level of connectivity to place (Kurita 1995; cf. Weiner 1991). When sons enter conjugal relations, rights are activated and they take on responsibility for planting new shoots as their own kepo develops.

The transmission of resources from one generation to the next does not necessarily follow patrilineal lines (Kurita 1985). In the past, alliances with new aporo ira (established by migrants) were concretized through the transference of palms and maintained through exchange. The transmission of resources in this way is permanent and overrides any genealogical ties to an ancestor. The aporo unihi alone as hauaka wafaya can transfer land but individual males are responsible for transferring their sago palms to kin.

Movement around a broad territory is not tightly restrained or exclusive. Any number of pathways to bush houses, gardens, trade routes, and marriage paths represent connectivity between groups and individuals. Borders are only loosely demarcated by natural features such as ridges, creeks, and rivers, whilst fences and ditches, constructed to keep foraging pigs out of garden sites, are never used to demarcate group boundaries.

Males "own" sago palms, but females exclusively harvest them and control their distribution whilst males control the distribution of game and wealth. Importantly women do not seek permission to harvest palms and more closely identify with them on a personal level than males, singing about them, harvesting sago grubs in them, and keeping a close eye on their growth. Male relations with palms are guided more by the role they play in symbolizing relatedness than as an actual exploitable resource. Connectivity between individual and place, then, is controlled by kin relations and activated through the transmission of resources, so whilst males represent internal bonds of solidarity, females represent external ties and exchange paths.

# METAPHORICAL CONNECTIONS: THE KEPO AND THE SAGO PALM

Sago palms are not so much symbols of ownership as symbols of connectivity for an extended network of individuals. The cosmological undertones for this connectivity are founded in physiological reproduction and the continued transference of substance (semen, meat) and objects (sago palms, shells, and now cash) between males, conceptually tying them permanently to the ground vis-à-vis the flow of substance (menstrual blood) in females, characterizing them as temporary inhabitants and

representatives of extended relations. This is an essential metaphorical symbol of Fasu group organization that underlines the development of lineal connectivity in the current climate of resource extraction.

For the Fasu, kin relatedness is inherently biological, individuals being connected prior to birth (see also Strathern 1988; Weiner 1998). It is the maintenance of ties through transference, however, that connects individuals to each other and to place. In the past, biological ties could be maintained or severed and could be displaced by migrants so that local networks were dictated by both biological and social kinship. In the modern climate of ILGs and royalties, however, the once permeable distinction between biological and social ties has been restricted to acknowledge only the biological relatedness of the kepo.

The significance of the kepo kin category in the face of extractive industry is best understood using the Fasu metaphor of the sago palm, a cultural symbol of group structure and agnatic kinship. The kepo unit (kepo meaning "origin" or "base of tree") is metaphorically aligned to the base of sago palms, whilst the aporo ira (meaning "man tree") is represented by the tree itself. The analogy between the kepo and the sago palm allows relationships between nonkin to develop so individuals are more distantly related as the palm grows and spreads.

Metaphorical connections between sago palms and the agnatic unit are supported by perceptions of corporeal constitution underlining perceptions of males as permanent in opposition to more distantly connected migrants and female kin. As is common in the Highlands and fringe region, Fasu perceptions of male and female and masculinity and femininity are grounded in concepts of blood (meyasi) and semen (kore) in the process of corporeal constitution and the metaphorical associations of these substances in nature (Kelly 1977; Meggitt 1965; Strathern 1972; Wagner 1967; see also Jorgensen 1983). In Fasu belief, foetal flesh and blood are created by female menstrual blood, and bones and nails by male semen. Teeth and bones are further developed through ongoing transmissions of semen throughout infancy (Kurita 1994). As a character trait, masculinity is said to develop and deplete throughout the male life course, developed through the transference of semen and growth-inducing meat at initiation and depleted through ongoing heterosexual reproductive activity.<sup>8</sup> Feminine attributes pertaining to weakness and debilitation are characterized by loss of menstrual blood throughout the mature period of the female life course and metaphorical associations with still water and natural decay (cf. Weiner 1991).

The connection of males to land (in opposition to females) is further legitimized by perceptions of the dissipation of male and female elements at the time of death. From platforms constructed, until very recently, some distance from villages near rain forest and waterways,<sup>9</sup> flesh and blood (female constituted parts) disseminated from the body transforming into ancestral spirits (cf. Schieffelin 1976; Wood 1982),<sup>10</sup> whilst bones and teeth (male constituted parts) remained (Gilberthorpe 2004). As such female substance is seen as ephemeral in opposition to the permanency of bones, constituted of male semen.

Connectivity between fathers and sons is realized in an animating force known as *himu*, which is transferred from father to sons in the semen of conception. Only sons inherit their father's himu which manifests itself in physical and active characteristics. The *himu* is a similar concept to the Orokaiva *ivo* (Schwimmer 1973), Melpa *ndating* (Strathern 1972), and Etoro *hame* (Kelly 1993). The himu symbolically connects the agnatic unit—that is, men who share himu are recognized as kepo. It is the relationship between the kepo and the himu, representing the "one father" idiom, which underscores the Fasu idea of "true descent" (cf. Strathern 1972:10–11). The strength of Fasu conception ideology determines gender segregation in habitat and production that encourages conjugal segregation and gender solidarity, defines descent constructs and group organization, and underlines Fasu response to extractive industry, land ownership values, and the ILG mentality.

# FROM APORO IRA TO "CLAN"

In a preoil context, the aporo ira represented communal values dictated by residence and the sharing of resources on different levels across a broad region. In the social climate dominated by extractive industry a more formal conceptualization of lineages has developed based on ownership of land through ILG membership. Oral histories now play an important role in socializing the next generation, and patrilineal descent is the only criteria for group membership. Whilst there is obvious continuity in Fasu group organization, the restrictions imposed by the ILG system engender social imbalance. The tightening up of land tenure principles to link land to a single lineage, a kepo, has had an effect on activity and interrelations that are not conducive to cultural reproduction and economic and social development. Whilst the project's sustainable development aims rely on the growth of "umbrella investments" and "investment corporations" (see Knauft 1993:188), increasing emphasis on the kepo as the basic unit of land custodianship makes the likelihood of larger group activity more and more doubtful. However, the process of the aporo ira becoming a clan-and the social imbalances this has generated—is not solely the result of extractive industry but, rather, of broader historical processes.

Western development values were instigated some 60 years ago: at the time of colonization when related groups were forced together in permanent villages. At this time some aporo ira came together under the umbrella of a single totemic group identity, as happened in Tamatiki village where, when social mapping for the proposed Kutubu Oil Project was carried out in 1990, Tamatiki was identified as "one clan." It was only on closer inspection by contracted anthropologist Thomas Ernst that at least three smaller corporate units were identified (Ernst 1995:16). In other villages (particularly those furthest from the administrative center at Lake Kutubu), identity was more clearly maintained under the kepo idiom, and villages and the male-only longhouse were segregated. Forced communality isolated people from their own group territory and encouraged interrelations between cohabiting units.

By the time extractive industry came along, the Fasu had developed ties within a tighter community, as the Tamatiki case illustrates. The state policy of land ownership in order to receive cash benefits contradicted the communal ideal imposed by colonists and missionaries and enforced the conceptual segmentation of units that was more in line with precolonial structures.

Whilst the state-oriented ILG system reinforces anthropological ideas about "culture" and "society," the Fasu were never particularly interested in reproducing themselves as "Fasu," rejecting large-group ideology in favor of smaller kin-based units. As descent became a principle of belief rather than an element of inherent identity, the aporo ira came to be represented by a single kepo (the exclusive landholding unit), prohibiting nonagnatic male migration and defining itself as both a "clan" and an ILG (see also Sagir 2004).

Whilst the kepo as the core of corporate grouping is a long-standing descent principle, perception of it as a "clan" in the first instance and an ILG in the second has had a significant effect on how individual Fasu relate to each other and to other groups. Sago palms are now only transferred within the kepo, whilst cash and purchased items are taking over the role of other natural resources (fish, game, shells) as vehicles for establishing and maintaining broader relations. The role of land in creating affiliations through transference has disappeared as bordered territory is now inherited within aporo ira represented by a single kepo.

One of the problems threatening long-term sustainability in the region is the organization of the kepo as a beneficiary ILG. Typically, males continue to operate within the transaction arena, establishing and maintaining *bisnis* (business) relations with local and distant individuals through exchange. In the current context, cash permeates the exchange network and its dissemination within that network is controlled by men (a practice further influenced by male-only OSL activity). Benefits are accessed by a signature of any clan member, which, as the clan is a single kepo, is always male. Females are neither entitled to access nor receive a share of those benefits. All money granted to them by male kin is to purchase foodstuffs from stores and markets. As sago production still takes up a large amount of female time, they are less likely to be educated or literate and currently remain confined within village localities.

Male control of female marriage has intensified as concerns shift to ensuring money either circulates within regions (Uri, Yasuku, Hekari) or flows to conceptually more developed areas such as Mendi, Port Moresby, and Mt. Hagen. This not only isolates the Fasu from regional trade and marriage partners, particularly the Foi and Kasua (who can rarely afford the high bridewealth the Fasu impose), but also affects female conjugality as males show a preference for establishing broader ties. As such, a number of Fasu women remain unmarried with increasing pressure to provide the staple starch, causing what Henrietta Moore (1988) refers to as a feminization of subsistence in contexts of development (see also Polier 1996 for a similar example from the Ok Tedi region).

Importantly, in the face of extractive industry, the ideology of male relatedness and connectivity to land is the informing factor in the growing stratification and isolation of the Fasu. In a traditional setting—comprising hunting and trade versus sago processing and child rearing as the main male and female activities—interdependency and complementarity existed to maintain group equality and cooperation. The introduction of royalties, associated material and technological wealth, and political shifts have alienated groups from each other and alienated males from females.

Fasu group organization illustrates the enduring nature of kin groups and of a utilization of kinship to accommodate capitalist models of landownership within a context in which distinctions between biological and social kinship merge. The idea of a dominant biological relationship emerging within a social arena defined by development values is not necessarily intrinsic to the encounter between the local and the global in Papua New Guinea. As Strathern and Stewart (1998:216) observed, the oil-extractive industry in Southern Highlands Province has engendered a land-based definition of group membership rather than an exchange-based one. Whilst for the Fasu this has been articulated through the tightening of kinship boundaries, the neighboring Onabasulu have responded to the ILG system by developing 17 legally fixed clans based on the cosmogonic and cultural importance of that number (Ernst 1999). Ernst suggests, and I agree with his proposal, that the process of developing corporate landholding groups is based on a move "from practical sociality to discursive practice" (1999:94), suggesting that as people think differently about land, solidarity, in whatever form, becomes more stringent (see also Guddemi 1997; Sillitoe 1999). What I have shown in this article is that the need for social stability and group solidarity in these contexts brings kinship studies into sharper focus.

The Fasu case stands as a paradigm of the impact of "globalization" where the isolated interaction of the local and global reveals a contrast between capitalist economic values and local tradition, and where "globalization" conflicts with the process of so-called resource development (see also Burt 1994; Ferguson 2005; Gilberthorpe n.d.; Robson 1999). In contrast to globalization, communities like the Fasu appear to be victims of progress exploited for their resource wealth without due reward or sustainable economic development (see also Polier 1996 for an Ok Tedi example, and Horowitz 2002 for a New Caledonia example). The question remains as to whether the emerging dogma of Fasu (male) solidarity will successfully accommodate more globalizing processes. Perhaps future involvement by the government and the company vis-à-vis recognition of the shortcomings of resource extraction will allow for such processes to be more broadly integrated.

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### NOTES

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[no]1.<+>See Haley 2004 for an outline of oil extraction in Pastaza Province, eastern Ecuador, and the Colville Delta, Alaska, where local communities enjoy extensive involvement in operations and development programmes.

[no]2.<+>See Hutchinson 2000 for a recent analysis of Nuer relatedness in a global context.

[no]3.<+>In contrast to the ideology of descent acknowledged in classic Highlands' literature, M. J. Meggitt (1965) described the Mae Enga as having a distinct patrilineage system with an agnatic bias that became more stringent as pressure on resources increased.

[no]4.<+>Fieldwork for this article was carried out largely in the Hekari and Yasuku regions. There are some organizational differences with the Uri as a result of significant infiltration from the Huli into northern villages since project inception (see Simpson et al. 1998).

[no]5.<+>As the kepo is representative of the ILG, its splitting to form new groups has been widely perceived as greedy and opportunistic by the operators (Goldman 2004). What the data presented here show, however, is that this is concomitant to the natural cycle and principles of Fasu grouping, intergroup relations, and exchange activity.

[no]6.<+>This means that they have to be both male and literate, which dramatically reduces the number of people able to withdraw actual funds.

[no]7.<+>This converted into approximately US\$19,600 in 2006.

[no]8.<+>Initiation is no longer practiced (see Kurita 1994 for outline).

[no]9.<+>Today, bodies are buried in wooden coffins close to villages.

[no]10.<+>The spirits are said to inhabit the bodies of cassowary, wild pig, and larger fish, and it is through the ability to communicate well with, and have good relations with, ancestral spirits that game is said to be "delivered" to the hunter (cf. Kelly 1993).

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