Locating Mining and Agency in Recent Ethnography of Highlands Papua New Guinea

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ABSTRACT

This thesis explores the way in which ethnographic enquiry can contribute to a broader understanding of the socio-economic effects of mining development in Papua New Guinea (PNG) through a critical literature review of three key recent ethnographies of Highlands societies. This research is positioned within the field of literature known as the anthropology of mining, which focuses on how mining is embedded in social, political, economic and environmental context.

The study shows how ethnography essentially reveals a mine as more than a physical location that extracts raw materials from the ground. Rather, it highlights how a mine is diversely constructed and is embedded within a set of complex social relations and cultural concerns that are not restricted to a particular 'site'.

The importance of this research is that it explores how change is understood by local PNG communities and their experience with the presence of mining development. It examines how not all change is externally imposed from mining, but can be attributed by changes in internal mechanisms of social organization such as gender relations, exchange practices, alliance and warfare. The dispersed effects of mining are not only made apparent through the multiple forms a mine can encompass in various locations and contexts, but also the agency locals embody, and the evaluative processes they apply to their new circumstances. By exploring the dispersed reality of a mine, ethnographic accounts can track the ways that people in a range of different settings are actively responding to and engaging with situations of change. Ethnography is thus useful as it recognizes that locals are not passive recipients of externally imposed forces, but are active and important agents in creatively shaping the process of change.

The study demonstrates how local people use the presence and influence of mining as a platform from which to reformulate their social identities within a variety of cultural, spatial, and political structures. It explores how the formation of new subject positions extends to encompass issues surrounding morality, inequality and feasibility.

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ABBREVIATIONS

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BCL	Bougainville Copper Limited
BHP	Broken Hill Proprietary
CSR	Corporate Social Responsibility
DDR	Disarmament, Demobilization and Reintegration
LNG	Liquefied Natural Gas
NGOs	Non-Governmental Organizations
PJV	Porgera Joint Venture
PNG	Papua New Guinea
SML	Special Mining Lease
UNIFEM	United Nations Development Fund for Women

CHAPTER ONE – INTRODUCTION

Introduction

The primary aim of this thesis is to explore the dispersed effects of mining development on local Papua New Guinea (PNG) communities. The research involves a critical literature review of Melanesian ethnographies in this context. This research is framed within the field of knowledge known as the anthropology of mining and explores the value ethnographic enquiry can contribute to this field.

With mining being the object of anthropological enquiry, ethnographies have the ability to document and elucidate the socially dispersed effects of mining among varying communities and how they are affected differently. By examining three ethnographies that address mining in Highlands PNG, I intend to highlight how they offer insights into the multiple forms a mine can encompass and how this runs parallel with the dispersed effects of mining. This is highlighted through examining a mine as more than a geographical and economic entity, but as an entity that is also encompassed with multiplicitous social and cultural dimensions.

Through this understanding of a mine as beyond a fixed physical entity, this thesis explores how ethnographic enquiry can examine the effects of mining through a broader lens. This research looks at the nature of change in this context. It highlights how mining is not the only determinant of change, by locating the agency of local peoples in shaping processes of change from the introduction of mining. By doing so this research extends into an analysis of how locals use the presence of mining to embody and inhabit new subject positions and the social issues that emerge from this.

Mining in Papua New Guinea

In PNG, mining is the largest and most important industry within the national economy and is seen by many people as a desirable means of improving standards of living and providing both employment and economic changes that people equate with development and modernity (Macintyre 2011). Prior to the establishment of the Panguna copper mine in 1972, PNG's first large scale mining project, the colonial government relied extensively on aid from Australia and other countries for its development purposes. According to Auty (1993), aid from

Australia provided PNG with more than two-fifths of the government revenue and almost half of PNG's foreign exchange throughout the early 1970s. In addition to this, government spending was more than twice that of countries of similar size and level of development to PNG (Auty 1993). In the time leading up to and immediately following national independence in 1975, the PNG government was in need of capital to finance the development of the country, thereby bringing it up to a level comparable to the rest of the developing world and expediting the path to real political autonomy. The PNG government did not want to continue depending heavily on Australia, so began developing its own mineral resources, which provided revenue and the capital base needed for the country's development (Lagisa 1997). However, foreign-owned mining corporations have historically dominated the mining sector and although power in PNG lies within the government, these resource companies, that are not based in PNG, are equally as powerful. Due to their need to 'develop', the PNG government has historically been vulnerable to the interests and demands of multinational resource extractors such that the presence of these projects benefits the companies as much as the government and the people of PNG.

For countries such as PNG that are endowed with an abundance of natural resources, including gold and copper, oil and natural gas, and vast tracts of harvestable timber, mining receives high priority on the national development agenda. This is because mineral resources can provide more investment in the country, greater earnings of foreign exchange and a likely improvement in the country's economic standard. This is the theory at least. However, the National Government in PNG is the policy maker for the mining industry, its regulator, a major financial beneficiary, and also part-owner of all mining projects, being able to acquire up to 30 percent ownership of mining projects (Oxford Business Group 2014). This range of involvement can lead to conflicts of interest, which are often played out through inter-departmental politics. Mining is lucrative to politicians, who invariably seek to maximize personal gains from their operations. The history of such disputes have shown that the government's financial interests have taken priority over local or environmental agendas and, at the national level, individual politicians have played a leading role in initiating new policy directions, pursuing nationalistic or personal agendas (Banks 2001). Mineral resources in PNG provide a major percentage of all exports and foreign exchange earned; for example, PNG

Vision 2050 states that the mining and energy sectors currently contribute 80 percent of total export revenues. Despite an official emphasis on growing manufacturing, services, agriculture, forestry, fisheries and tourism from 2010 to 2050 (Independent State of Papua New Guinea 2009), the extraction of mineral resources continues to be seen by the national government as an economic blessing that can help PNG to develop and prosper. This has led to the development of numerous large-scale mining projects such as Ok Tedi (1984), Misima (1986, later closed in 2004), Porgera (1992), Lihir (1997), Hidden Valley (2009), and Ramu (2013) (Human National Development Programme 2014). The mining and energy industries' dominant position in the political and economic landscape of PNG has been further extended with the recent commencement of the US$20billion Liquified Natural Gas (LNG) project (Human National Development Programme 2014) and the expected development of several large natural gas fields in the Gulf region.

Significance of Land

For local Papua New Guineans, land is not just seen as a commodity. Their relationship with the land is a central component to the creation of their identities. There is a very popular statement relating to land made by three young Bougainvilleans who quoted their people as saying:

> Land is our life. Land is our physical life – food and sustenance. Land is our social life: it is marriage; it is status; it is security; it is politics; in fact it is our only world. When you [the Administration] take our land, you cut away the very heart of our existence. We have little or no experience of social survival detached from the land. For us to be completely landless is a nightmare which no dollar in the pocket or dollar in the bank will allay: we are a threatened people" (Dove et al 1974,182).

This statement makes clear the ways in which strong cultural associations to land are retained. However, as it suggests, this relationship has a strongly pragmatic basis and this is because land provides both the economic and social basis for the society through subsistence agriculture (Banks 2001). However, subsistence

farming also fuels much of the ritual economy through exchange, so land is not a detachable area of life for PNG locals. Cosmology and social identity are also grounded in landscapes, highlighting their sacred character (Rumsey and Weiner 2001). This pragmatic approach taken in negotiation processes can therefore be a problem as it is considered possible to compensate for loss of land. As discussed in the following chapters, in particular with reference to Jacka's (2015) ethnography of the Ipili people living outside of the Special Mining Lease (SML) at Porgera (see Chapter Four), money from mining is not considered the 'right' sort of money for certain exchange activities. This shows how wealth has different meanings and forms. Although land is central to societies, communities have still been willing to negotiate with developers in regards to their access to land on terms they find acceptable (Banks 2001). However, this has led to both the loss of agricultural land and labour to mining development, not to mention an economic dependence on the mining company, with a corresponding neglect to other avenues of development (Applied Geology Associates, as cited in Filer 1990).

'Benefits' of Mining for Local Communities

The 'benefits' that are generated by mining companies and the National Government are often presented with an emphasis on economic opportunity for local communities. However, these 'benefits' can rather be considered as short term gains which cannot be favourably compared with the long term losses locals have been faced with during the mining operations and which they must live with after the mining operations end (Lagisa 1997). Most commonly, the 'benefits' of mining for locals have been through a rapid increase in cash income. This comes in the form of compensation payments for the direct loss of land, gardens, village settlements and trees, and for pollution to the environment; royalty and lease payments; employment and wages; and business contracts (Connell and Howitt 1991). Examples of compensation payments in PNG mining projects include the Panguna project where locals (from 62 villages) were paid a total of K17 million over the period of 1969 to 1988, and K35 million paid to 4000 Ipili people living in the Paiela and Porgera Valleys (Banks 1996; Pintz, as cited in, Lagisa 1997). Also of importance was the K110 million compensation payment made by Broken Hill Propriety (BHP) in 1996 to people living along the Ok Tedi and Fly Rivers

(Kirsch 1996). However, such payments have the frequent consequence of creating and exacerbating inequalities within the local community, with a relatively small group of landowners – those inside the mining lease boundaries – receiving the bulk of direct benefits (Filer 1990). The indigenous people in the locality of mining areas in PNG have received and enjoyed hard cash benefits from compensation and royalty payments. Other benefits have included training opportunities for the younger generation, improved education, health, transportation, and many other infrastructure developments (Gerritsen and Macintyre 1991). The improvements in economic and infrastructural facilities for local people have also contributed to people's increased mobility, employment options and overall standard of living. However, these so-called positive impacts of mining for indigenous people have been inadequate. Many of these 'benefits' simply do not happen, and many people miss out on them altogether.

Negative Impacts

It is important to note that in PNG there is a wide diversity of societies and geographical regions with varied experiences of the colonial and post-colonial periods. The variations in the extent and significance of changes that have resulted from mining and increased participation in the cash economy "are not easily explained, unless it be in such vague terms as cultural resilience" (Gardner and Weiner, as cited in Connell 2005, 126). All changes are historically specific, a reflection of social organization, cultural practices, the extent of influence from contact with missions and government agencies and accessibility. Therefore, a specific mine does not necessarily affect all communities in the same way. It is important to also recognize that components of change are greatly variable within communities too. This is because men, women, children, the young, old, educated and non-educated are all affected differently. There are multiple layers of meanings, and the processes and practices which influence change and stability are different. However, in the context of mining in contemporary PNG, a number of general statements can be made in relation to community issues. One is that any resource development in PNG which deals with land is likely to generate a range of complex issues, many of which do not appear to be amenable to any, let alone simple, resolution (Banks 2001).

The influx of cash has led to devastating social impacts across PNG, leading to what Filer (1990) describes as the process of 'social disintegration' in the local communities. His analysis indicates that particular processes internal to local communities contribute to the self-destruction of local communities and these processes include the uneven distribution of mining royalties, the subsequent stratification of the local population, and the delineation of traditionally collective held land for the purpose of mining leases. One of the most important points Filer makes is that this process results from mining compensation - and other forms of wealth - not the lack of it. This is a key issue that I will address throughout this thesis in regards to the development of inequalities.

There are numerous social ills that have occurred in the context of each major mining site. For example, the human rights abuses at Porgera, where mine security personnel have carried out killings and other violent abuses against local residents and illegal miners. The government has consistently failed to maintain law and order in the face of these security challenges, lacking responsible government regulation. (Human Rights Watch 2010). The government often distributes justice on an expedient and punitive basis through the use of mobile squads who are essentially mercenaries. In the case of the Bougainville mine, local landowners took up arms against Bougainville Copper Limited (BCL) and the government because of environmental degradation, leading to the subsequent decade long civil war (Havini and Johns 2001). In relation to the Ok Tedi mine, local landowners formed a popular ecological movement and sued the mining company for the environmental degradation of the Ok Tedi and Fly River systems (Kirsch 2007). This was one of the biggest environmental disasters in history due to the 2 billion tonnes of untreated tailings into the Ok Tedi/Fly River system. Another environmental disaster has been Hidden Valley's pollution of the Watut River in Morobe Province. With the recent development of the PNG LNG project there has been an increase in alcoholism in villages around the plant site near Port Moresby (Wielders 2011). The experience at these mines is an inherent example of how having abundant resources can create disorder and unsustainable development practices in the absence of strong regulation and accountability. In the case of PNG, those who acquire and extract value out of these resources have tended to do so to benefit themselves at the expense of others and of the environment (Havini and John 2001).

While this section has focused on the social ills and the material consequences of mining development among different PNG communities, this thesis seeks to highlight how ethnography can break down a simplistic correlation between negative things occurring, and change. By this I mean that often physical change, such as environmental damage, is seen as evidence of change. However, this ignores how change can be associated with alterations in internal structures of social organization, rather than as externally imposed by the mine, and also diminishes the role of local agency in processes of change. This is another key issue that runs through this thesis.

Varieties of Knowledge Produced About Mining in PNG

This section provides an overview of the different types of knowledge that have been produced about mining in PNG. It examines how this literature depicts what the mining experience is, and how it plays out within PNG communities. For example, it examines how particular knowledge may focus on the material rather than cultural effects of mining, and how this could be problematic when trying to create an idea of what a mine is. For example, do they construct the mine as an isolable catalyst of change, and as merely a discrete block on the landscape? Do they understand a mine as a socially and culturally embedded entity? Do they recognise local agency in the context of social change? And do they recognise that a mine does not necessarily affect one particular location, and in the same way?

Development-Oriented Knowledge

Development agendas in the context of PNG typically discuss the mining experience in terms of economic opportunity and gender equality, and are, therefore, focused on the material effects of mining on communities. Development agendas produce historically situated knowledge about mining in PNG, without recognizing the cultural context of the situation and how they change too.

In regards to development agendas such as The United Nations Development Fund for Women (UNIFEM) and their focus on women's empowerment and equality in PNG, this issue can be seen throughout a review they conducted for the Bougainville Disarmament, Demobilization and

Reintegration (DDR) initiative in the wake of civil war. This review was developed as it was evident there was a significant imbalance of gender representation in DDR decision-making processes (Douglas et al. 2010). While UNIFEM's report looks at empowering women in post conflict peace-building, its primary focus on the conflict means that changes in gender relations are essentially defined by the conflict or seen as a result of the conflict. The possibility of gender relations being shaped by changes locally, in PNG, or globally before the conflict and the introduction of mining, is ignored. This means changes that preceded the conflict are overlooked; in cases such as these there is a particular view of cause and effect, and conflict becomes an event-centred version of change. This framing can potentially put the blame back on to Bougainvilleans for not recovering from the conflict, although it is not the intent of development agendas to do so. The problems posed by violence against women in PNG require an analytical approach to the cultural configurations of gender relations and the ideologies that sustain them. It is important for development agendas such as this, which focus on gender equality, to recognise gender as an important aspect of social organization and within a broader cultural context. Development agendas focused on gender equality can often recreate gender as 'women', rather than as a concept that orients social action and relations. This can have effects on the production of inequality in the guise of inclusivity. This is because it stops those labelled as part of that category from being considered part of 'mainstream society' and becomes a way of removing considerations of agency from what women did and the types of action they may take. The way in which this development agenda is framed is an example of how mining development can be viewed as a central catalyst for the social ills brought to the Bougainville community. This is because it distinguishes the mine as a discrete, isolatable entity that then has effects which spread outwards. The issue with this is that it denies the agency of affected peoples in shaping the changes brought about in their communities through mining and how they respond to processes of globalization (Biersack 2006a). This is a key issue explored in this thesis. It places agency in the hands of the mine itself through perpetuating the idea that it has all the power to create change, and generalizes the social impacts mining has on different communities. There is no single solution when developing strategies for economic opportunity and gender equality. Any solutions must combine an understanding of the economic, social and cultural dimensions of each

community that is affected by mining and this thesis aims to explore how ethnography conveys this.

Environmental/Ecological Knowledge

In analysing conflicts that are generated by large-scale mining, many studies accentuate the vital role of environmental impacts of mines. For example, Banks argues that Hyndman's (2001) analysis of conflicts surrounding Ok Tedi is grounded in ecological crisis, and frames local responses to this 'ecological crisis' as 'ecological resistance'. The issue with this is that it diminishes any 'economic-based models' of mine-created social conflict discussed by observers such as Filer (1990) and Ballard (1997). As the ethnographies I explore in the following chapters highlight, the division of groups into non-landowning and landowning groups in the context of receiving mining wealth acts as a powerful instrument in social transformation. The material effects of mining on the environment are not the only determinant of change within communities. And the 'environment' is not isolated from social reproduction. This form of environmental knowledge concerning the effects of mining does not recognize that there may be other social, cultural and economic factors involved in local responses to the intrusions of mining development in their communities. In order to understand local responses, it is necessary to distinguish between effects on the physical environment and the broader effects mining development has on people's lives (Banks 2002), for example, changes in social organization. This helps to overcome the idea that the effects of mining takes place on a fixed 'site' and change is a centre/periphery dynamic. Banks (2002) argues that it is, therefore, necessary to look beyond the discourse of ecological crisis, and move towards an alternative view that places local responses in their broader social, political, environmental, cultural and economic contexts (Johnston 1994). This highlights the role ethnographic enquiry can have in exploring how resources are not just material, but also socially constructed elements that communities utilize in order to construct, maintain, and transform their physical, social and cultural lifeworlds (Banks 2002). This approach parallels the growing literature in the anthropology of mining in which political ecologists, such as Bryant and Bailey (1997), incorporate the notion of environment into a framework of human livelihood.

Sustainability Reports by Mining Companies

This variety of knowledge about mining has oriented the response from mining companies who have sought to position themselves, ostensibly, as drivers of sustainable development. A key component of their efforts has been the implementation of social development programmes in their areas of operations. These programmes, as well as other initiatives such as stakeholder engagement work, are often the requirements of lenders that finance these companies as much as they are the well-intentioned objectives of the companies themselves. Strategically, mining companies have turned to a language of social responsibility to legitimize corporate activities with negative human and environmental consequences. They use idioms of ethics, health, environmentalism and corporate responsibility in order to conceal the contradictions of capitalism and promote business as usual. 'Sustainability' on the part of mining companies is part of a larger set of strategies used by corporations to manage or neutralize critique (Benson and Kirsch 2010). In their Responsibility Report 2014, Barrick Gold, stated that, "responsible mining is…a business imperative and defines the way we strive to operate at Barrick" (Barrick Gold Corporation 2014, 2). In their environmental impact statement for the PNG LNG project, ExxonMobil stated that their "social, cultural and economic objective is to deliver a project that has the potential to benefit local and wider communities at minimal impact on the environment" (ExxonMobil 2009, 1).

These sustainability discourses developed by mining companies such as Barrick Gold can provide an insight into the anthropology of capitalism as well as the nature of mining companies. However, while offering promises of sustainability in the future, they lack an understanding of the long-term social impacts environmental damage has caused for local communities. Kirsch (2007) argues that it has instead become common for mining companies to pay huge sums of money as compensation for damage in order to diffuse the local landowner grievances about the negative impacts of mining activity on their environment. De Coverley et al. (as cited in Ekstrom 2014, 166)   sums it up: "to theorize waste as simply a waste management issue or indeed as a marketing or a consumer research issue is problematic in itself. Rather it is a societal problem and one that is culturally embedded." This reveals the problematic issues

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surrounding the lack of care on the part of companies about the consequences of environmental damage on traditional land.

Landowner agreements made within projects in PNG such as Ok Tedi, PNGLNG and Porgera show new commitments and responsibilities to human development in terms of gender equality and sustainability, which move above and beyond the dictates of the law. These comprise a new path for landowner agreements within mining in the PNG context. However, a central issue concerns the often unpredictable and fluid political and social contexts in which these agreements must necessarily be executed. The fusion of corporate responsibility and good intentions of developers, with the reality of social life in Melanesia is what determines the real course of the implementation of landowner agreements within PNG society. As discussed earlier, there continues to be a slippage between written agreements and social reality. The increasing emphasis on sustainability is essentially a way to neutralize critique.

A great deal has been written on the political, economic, social, environmental and development aspects of mineral resource extraction in areas that are inhabited by indigenous people. Rumsey and Weiner (2004) argue that studies that have been produced are valuable in that they provide a very broad and multifaceted view of a complex global process, namely in large-scale mining in the indigenous world. However, from an anthropological perspective, these studies have left unexamined and unanalysed the nature of knowledge systems within local indigenous societies in these contexts. The absence of such understanding of indigenous motivations and cultural frameworks and, most importantly, local experiences, understanding and interpretations of mining, appear to loom much more critically in the current period of extensive mining in indigenously populated areas, especially in PNG (Rumsey and Weiner 2004). The purpose of providing an overview of the types of knowledge that have been produced in the context of mining has been to examine the concerns that are not discussed or perpetuated. This thesis sets out to examine how ethnography can explore these concerns.

The Anthropology of Mining in PNG and Beyond

The anthropology of mining is the field of literature that my thesis most directly contributes to. Mining is a global phenomenon and has recently attracted the

interest of anthropologists who seek to establish a better understanding of extractive practices and their impact on environments and communities around the world. Recent environmental and economic crises, particularly throughout PNG, have made more obvious than ever the risks and limits of mine development for locals. Anthropologists have also highlighted the contentious issues surrounding 'opportunities' for both local people, which are almost never realized, and politicians and capitalists, who habitually misuse public money for their own interest. Mining practices fundamentally shape environments and societies in often problematic ways and subsequently transform the livelihoods of many people. Anthropologists have been particularly interested in examining how mining and raw materials are not simply local products to be extracted and globally commoditized. Any material that is extracted comes from a particular cultural space, embedded in a political and ecological context and is formed and framed in specific histories. Extracted materials are, therefore, socialized products and their extraction is a complex and contested political, economic and social process (Macdonald 2016).

The anthropology of mining, as discussed by Banks and Ballard (2003), is a disciplinary field which focuses on how mining is embedded in social, political, economic and environmental context. It seeks to critically understand and make practical proposals over a wide range of issues such as conflicts over management of resources, indigenous rights over local resources, environmental issues, corporate responsibility of large scale mining, violence, and gender concerns. This field of literature has been transformed by dramatic developments in the global mining industry and the corresponding shifts in the nature and emphasis of related research. Banks and Ballard (2003) discuss how an earlier focus on mining labour and the threat posed by transnational mining capital to the sovereignty of independent nation-states has essentially led to a much broader frame for enquiry. This framework examines the complexity of relationships that converge around mining projects and the range of actors engaged in these projects such as anthropologists, locals, non-governmental organizations (NGOs), mining companies and the state. Also, of relevance is the idea of local 'participation' and how that is defined and enacted through mining initiatives.

With mining having a global scope, many anthropologists have contributed key works within this field of literature. For example Taussig (1980) has examined

the intersection of tradition and modernity in mining communities in South America. This intersection between remote communities and modern work practices led to the integration of mining development within indigenous frameworks for both the comprehension and apprehension of global processes (Banks and Ballard 2003). Emberson-Bain (1994) has examined the patriarchal nature of the mining industry and the way in which its work force fuels a transnational mining labour culture that emphasizes masculinity, violence and alcohol. As part of this frontier culture, prostitution has subsequently increased, and has also assumed a new significance in the AIDS era, particularly throughout South Africa, among migrant labour (Campbell 1997). Ferguson (1999) has conducted research in Zambia, examining how mining towns frequently function as a symbol of promise and modernity for local communities. Despite this, locals often find themselves disconnected from the processes of development that modernity promises.

Welker (2014) is another important contributor to this field and has explored mining companies and mines as entities which age over time, are gendered and enacted through social labour. She explores how mines are embedded in particular times and places, therefore establishing a spatio-temporal dimension of mining. Welker also highlights how mining companies and mines are shaped by their relations with individuals, non-human and other corporate actors (Welker 2016). Against the backdrop of the emergence of the Corporate Social Responsibility (CSR) movement and the changing state dynamics in Indonesia, Welker examines the ways people enact the mining corporation in multiple ways: as an ore producer, employer, promoter of sustainable development, and as an environmental threat. Rather than portraying corporations as monolithic, profit seeking entities, she examines anthropological theories of personhood in order to look at the mining corporation as an unstable collective subject with multiple actors, boundaries and interests as they struggle over their relations and responsibilities to local communities, workers, governments and activists (Welker 2014). This a key concept for the discussions that follow in the subsequent chapters.

This reflects the scope of the anthropology of mining. As Banks and Ballard argue:

> ….the mining company lurks monolithically and often menacingly in the background of many anthropological accounts of communities by mining operations. This simple characterization is unfortunate because the dynamics of the corporations involved in mining are often at least as complex, revealing, and challenging as those of governments or local communities (2003, 290).

Banks and Ballard (2003) argue that in order to pursue an ethnography that adequately captures the nature of large-scale mining, work at multiple sites over a sustained period is required, and that the ethics of engagement will vary between each mining site over time. Banks and Ballard argue that researchers need to pursue a multi-sited ethnography that would sufficiently tackle the full spectrum of geological, economic, social and cultural activities that contribute to mining. Marcus (1995) argues that:

> …if anthropology is to be responsible for its own contexts of meaning and the forging of its own arguments from inside the ethnographic process of research itself, then the full spectrum of activities which contribute to and contextualize mining as a site for research must be addressed, if only at the level of the multi-sited 'imaginary' (12).

This is allied with how anthropology can work to analyse the role of institutions and investors in shaping corporate decisions. Banks and Ballard (2003) argue that "closer attention to the internal structure and politics of mining corporations has the potential to offer rich insight into the anthropology of multinational capital and its global processes and local entanglements more generally" (290). One of the reasons for the enduring opacity of mining corporations is their reluctance to expose themselves directly to ethnographic scrutiny. Benson and Kirsch (2010) suggest that anthropologists are well positioned to analyse and document the paradoxes that underpin the claims and practices of mining corporations. They use ethnographic research to reveal the social, health, economic, political and gender-related concerns, as well as the environmental crises that corporations help to create.

This field of research also engages with ethnographies carried out in PNG by numerous anthropologists such as Rumsey and Weiner (2004) who offer a

unique insight into the effects of mining by examining indigenous cosmologies and how they articulate with development. Bainton (2010) engages with debates regarding how contemporary Melanesians construct models of their identity and culture, while embracing modern practices that have been introduced following mining developments. This is an important issue I discuss in this thesis. Macintyre (2011) has carried out research on the social, cultural and economic changes that are associated with mining development, focusing much of her work on the issue of gender equality. Gilberthorpe (2013) is concerned with how kinship, exchange and social organization interact with mining development. Her work has focused on the environmental, social and economic effects of mining at Ok Tedi and oil extraction in Kutubu.

What Can Ethnography Offer?

The various types of knowledge that have been discussed in the context of mining in PNG can often construct crisis relating to the economy or environment as different or detached from 'social disasters'. The realms of the economy, the environment, land and important aspects of social organization such as gender relations, kinship and exchange are created and demarcated. Ethnography embeds these areas of concern into the cultural context to gain a more holistic understanding of the mining experience.

Ethnographic enquiry is an approach that can provide deeper insights into problematic issues that are not discussed by other literature. By doing so, this approach leads into explanations of the foundational issues that can emerge from looking at mining from a new perspective. For example, it breaks down the 'fatal impact' scenario that has been perpetuated in the past by offering a historical and political context of communities antedating the introduction of mining, in order to explain why certain changes and local responses are occurring. In terms of the 'fatal impact' scenario, this describes the way in which indigenous people are described as passive against an active, imposing western modernity. The critique of this is a key idea informing my discussion of the ethnographies in this thesis. With such developments of modernization, ethnographic accounts can track the ways that people in a range of different settings are actively responding to and

engaging with predicaments of change and how such accounts make a valuable and timely contribution to this area of investigation.

Ethnography can address the spatial and temporal imaginaries that surround mining, in particular the construction of mining as what Bridge (2004) describes as "the alchemic transition of mere dirt into wealth beyond the dreams of avarice, a transformation that propels social, political, economic, and environmental changes, the nature and significance of which are highly contested" (241-242). Therefore, the mine can be seen as embedded into a contested moral landscape. In regards to debates over mining and the environment, the conceptualizations of a mine and the process of mining itself is essentially a cultural currency traded and exchanged among individuals and groups as a way of articulating meanings about development, the environment, and even life itself (Bridge 2004).

This Introduction has delineated this in terms of the kinds of knowledge produced about mining. This thesis goes on to show how ethnography articulates something different. Of central importance is how knowledge produced lacks indigenous understanding through a broader cultural context. These types of knowledge create ideas about what mining is materially, without embedding cultural concerns in their understanding of the mining experience. One major part of this contention over the meaning of mining concerns the physical, topographical nature of the mine itself. Thesing (as cited in Bridge 2004) argues that mines are places in which "day has been abolished and the rhythm of nature broken; artificial lighting, artificial ventilation, and the absence of anything organic render the mine a place apart from the rest of the world" (242). He argues that the underground is also a space without a horizon, "an inner outdoors where night and day coexist and boundaries disappear" (242). The landscapes of mining therefore challenge conventional coordinates of space and time; the physical geography of mining landscapes can create a profound sense of social dislocation (Macdonald 2016).

Ethnography can contribute to a greater understanding of the relationship between the physical mining environment and the formation of individual and collective identity. It can point to the ways in which the physical mine and what it brings into communities in terms of new wealth, can provoke socio-economic changes as well as the formation of new subjectivities and the role local agency plays in this process.

Thesis Overview

The thesis is comprised of six chapters as discussed below.

Following this introduction, Chapter two is a literature view of Alex Golub's ethnography *Leviathans at the Gold mine* (2014), which examines the development of the Porgera gold mine on the homelands of a group of indigenous people on the Ipili people living in Enga Province. This chapter explores how ethnography can critically offer insight into how a mine can be viewed as an actor that essentially gains power and is capable of reforming how people conceptualize themselves, not just as landowners or non-landowners, but also as moral beings. Through this examination, Golub explores the effects this has on Ipili society through the subsequent increase in economic inequality and class formation in the broader national context.

Chapter three is a literature review of Holly Wardlow's ethnography *Wayward Women* (2006), which uses mining development as the backdrop in her analysis of social changes within Huli society, Hela Province. Wardlow uses gender as an analytical tool in order to explore how changes in gender relations have altered the bridewealth system. Highlighting how not all change within communities is externally imposed from the mine, but also through changes in social organization, Wardlow examines the formation of new subject positions and how this is links to the idea of local agency.

Chapter four examines Jerry Jacka's ethnography *Alchemy in the Rainforest* (2015) and the way ethnographic enquiry can highlight the extreme social conflict and environmental degradation mining development has on other Ipili communities living outside of the Special Mining Lease (SML) area. It critically explores the role mining development plays in the creation of new spaces in which locals harness disruptive behaviour and the ongoing effects this has both inside and outside of the community.

Chapter five is an analytical distillation of the main themes to have emerged throughout the discussion of the ethnographies and is a conclusion of the thesis.

CHAPTER TWO – FEASIBILITY AND INEQUALITY "LEVIATHANS AT THE GOLD MINE"

The Mine and the Ipili

Leviathans at the Gold Mine by Alex Golub (2014) is an important contribution to the overall anthropological literature on mining and indigenous lifeworlds in Porgera Valley (see also Banks 1996; Burton 1999; Jacka 2015). Golub's ethnography is based on his research on the Ipili people living at the Porgera gold mine in Enga Province, situated in the highlands of PNG. His ethnography reverts from the argument of 'global' impacts on 'local' people by focusing instead on the agency of Ipili actors, who actively courted mining development on their lands to improve their socioeconomic status. In lieu of depicting Melanesian culture as trapped between tradition and modernity, Golub's ethnography offers a depiction of Melanesian society as innovative and actively seeking change.

Golub argues that past studies on Porgera have created simplistic narratives, which involve only two actors, the mine and the Ipili. The plot is generally based upon obvious heroes and villains. Anthropologists and activists typically tell stories of capitalism destroying cultures and environments, and indigenous people resisting, what Burton (2014) calls an 'avatar narrative'. Mining companies and development agencies on the other hand, speak in terms of progress and development, and the benefits mining brings to developing countries. For example, the mining company Barrick Gold, the largest gold mining company in the world, states that their "vision is the generation of wealth through responsible mining – wealth for our owners, our people, and the countries and communities with which we partner" (Barrick Gold Corporation 2014). Golub argues that these narratives do not fit well with the reality of life in the valley and, in contrast, seeks to describe the morally ambiguous reality of this life by creating a narrative that examines the proliferation of actors in valley politics. This therefore breaks down the notion that the mine is just a physical location. Change is occurring because the mine is more than a fixed, locatable entity. Through his analysis of local agency, Golub also recognizes the way locals harness change and produce it through their own means too.

Golub's ethnography describes how the mine itself gains power as an actor that is capable of reforming how people conceptualize themselves, not just as landowners or non-landowners, but also as moral beings. He examines how the mine has become a legitimate player within a framework of the nation with the ability to reform people's ideas of themselves. Golub's ethnography, therefore, shows how the presence of mining leads into the formation of new subject positions. Ethnographic enquiry works to underscore the complexity of change in the context of mining as more than visible and material. Golub's work highlights this as he discusses changes in social organization, showing how change is occurring in different contexts and in new ways, reinforcing the dispersed effects of mining.

He further showcases the extent that real life social organization has changed as a direct result of the mine's presence in the valley. However, not only has the conceptualization of Ipili identity transformed, but also people's behaviour and movements have changed as a result of either belonging to a clan or not. Golub shows this through the contentious issues brought about due to migration and cash payments into the valley and what this means for the Ipili as they experience increased social dislocation, demographic changes and loss of land. He explores how this has led to heightened tensions between urbaners and grassroots, as power has been established through mining-derived benefits. Golub defines grassroots as "the subsistence farmers living in rural areas who are prototypical Papua New Guineans" (2014, 22).

Predominantly, Golub's ethnography seeks to examine and understand how existing groups of people turn into abstract things such as mining companies and indigenous groups. By abstract, Golub indicates that these entities go beyond just having a physical or concrete existence, therefore allowing them to be seen as also made up of individual agency and actors. Golub's main inquiry thus concerns itself with how humans form social groups and what the implications of these processes are. He does this through analysing the emergence of new subject positions and how this leads to subsequent issues of feasibility and the production of inequality in the broader national context. His approach involves following long-running and complex discussions in an analytical framework through the theme of leviathans. This 'theoretical trope' is applied to explore these processes. Within his ethnography, Golub discusses the two types of leviathans outlined by

Hobbes; the bureaucratic leviathan and the cosmological leviathan. The first involves acting in accordance with predetermined rules, order and regulations and this structuring force is what makes this form of leviathan feasible. Conversely, the cosmological leviathan, refers to the way in which clan groupings have origins in a primordial past when the world was created. In terms of legitimization, becoming a leviathan is determined by the extent to which an individual's actions correspond to a legitimating and invisible order. Golub's ethnography therefore contributes to a comparative study of social order in the context of mining development. By conceptualizing social processes as leviathans, Golub demonstrates how the practices and roles of agentive individuals can both constitute and destabilize states, mining corporations and indigenous groups. This leads beyond the idea of these groups being monolithic entities.

Creation of New Subject Positions in the Context of Legitimization

Golub argues, that the Ipili are regarded by the mining company as not the 'correct' sort of group to participate in mining negotiations. As part of his analysis of this process, Golub argues that collectives cannot be taken for granted, but rather, the conditions that bring them into being must be understood and this involves uncovering the shifts in the acceptable bases of legitimacy that enable some groups to be recognised over others. In order to do so he looks to answer questions such as: "How do individuals come to represent groups? How is action coordinated across time and space?...How do human beings form social totalities…?" (2014, 3). Golub attempts to answer these questions by analysing two topics that are generally treated as separate from one another. Firstly the creation and maintenance of a large corporation – 'the mine', and secondly the creation and maintenance of an indigenous group – 'the Ipili'. Each of these topics has its own extensive body of literature. For example Welker's (2011) work on anthropological engagement with corporations over time; and Carsten's (2000) work on kinship. However, Golub argues studies such as these rarely interact with each other or articulate with studies of the cultural construction of the state. His ethnography thus attempts to integrate these topics through developing a framework that encompasses literature involving government, kinship and indigeneity, and how larger, stable social unities are made through social

processes that extend across time and space. This shows how mining and local agency combine to create new subject positions. This form of change is not as visually evident as those usually highlighted in assessments of the effects of mining.

Drawing on the influential ideology of the 'Melanesian Way', Golub also examines the contentious issues that come to the fore when the state's ideas about tradition enter into policy and its implementation. More specifically, "how the articulation of the ideology of tradition with local practices turns on the twin issues of legibility and recognition, and how this conjunction plays out in the formation of local identities" (Jorgensen 2007, 57) in regards to acquiring mining derived benefits. In *Seeing like a State* (1998) Scott describes how legibility involves state simplifications of social practices through a standardized measure, in which they can be recorded and monitored more clearly. Legibility thus requires the invention of units – in this instance 'clans' that are then rendered visible in the interests of control.

Changes in Ipili Social Organization

An important issue in considering changes in relation to mining for the Ipili is to what extent the everyday social organization has changed as a result not only of people's use of the categories of clans, but also the presence of mining development. This is because it was not just a change in the mode of how people conceptualized their identities, but also in how people behaved, since belonging or not belonging to a clan has had implications for receiving payments. There has been migration of outsiders into the valley due to the mine's reified notion of 'landowner', which attracts people into the area with the opportunity for new economic possibilities in the form of receiving cash payments. This has had an enormous impact on prevalent forms of sociality and alliances.

In the context of legibility, Golub's ethnography thus addresses the question of who essentially defines a group as recognizable. In order to become feasible political actors in negotiations over the mine, the Ipili were compelled by the regime for landowner recognition within the mining company to portray themselves as a 'fixed' group. Flexible kinship and ethnicity that has characterized pre-contact-era social life in Porgera became disambiguated, as 'the

Ipili' was constructed as a corporate ethnic identity and group in relation to the mine. The Ipili not only had to exist as an ethnic group, but also clearly delineated 'traditional' kinship units now had to be assembled from their earlier more fluid kinship practices. These 'clans' had to 'own' land in such a way that certain clans could lay claim to the territory within which the mine operated. Golub explains how "dealing with Porgera's institutions during the course of their stereotypic reproduction required them to be subsumed under the proper categories in order to be processed in the correct way by the valley's institutions" (2014, 116). Ipili used their agency to become 'agents' through the forging of a newly corporate collective subjectivity that valorised their actions as its representatives (Golub 2007). The requirement of defining a group came from outsiders such as colonial and postcolonial government officials who ignored the fluid nature of social relations and practices. Instead they converted the 'Ipili', a linguistic designation, into an ethnonym to refer to a people with a stable set of customs, kinship rules and territory. The mining company used this construct as the basis of determining who had 'legitimate' compensation claims, conferring wealth and power on those constructed as Ipili in contrast to their close neighbours. This demonstrates how mining development has been associated either directly or indirectly with changing group relations and social structures, producing novel social constructions, which differ between communities (Richardson and Weszkalnys 2014).

This shows official preferences for defining land rights through the making of clans and highlights a remarkable power to elicit local responses, which produce landowning clans on demand. However, it is not just the mining company which plays a role in the formation of new clans, but also the state. It could be argued that the state favours an image of clan-based tenure because it combines both the ideological virtues of the Melanesian Way and the desire for clarity when distributing benefits (Jorgensen 2007). What emerges is a link between recognizable collectivity and moral action that is made. This will be discussed further on in relation to the tensions that have arisen between grassroots and elites. With the changes mining has introduced both inside and outside of the valley, people, as well as clans, are being defined as moral and feasible beings or not.

The Mine as a Bureaucratic Leviathan

Golub emphasizes that the Porgera gold mine "is a complex sociotechnical system made up of a variety of human and nonhuman actors – employees, autoclaves, and of course the mountain itself…" (7). Conceptualizing the mine as something abstract, rather than a physical entity, shows how the mine encapsulates the complexity and multiplicity of its forms and features. This allows sites of mining to no longer be positioned as "objectively given relations that look the same from every angle of vision but, rather…they are deeply perspectival constructs, inflected by the historical…and political situatedness of different sorts of actors" (Appadurai 1996, 33) discourses and relations. A mine is not simply an entity that has visible physical boundaries, but is a complex web of conditions and relations that are not immediately visible, yet inscribed in the relationship between space, lived experience as well as power. This allows it to be conceptualized as equally "socio-cultural and discursive processes and practices" (Brambilla 2015, 15) and thus as an entity that has the ability to reform people's ideas of themselves while also influencing group formation.

In Hobbes' (1996 [1651]) sense, the mine is clearly a leviathan, as it is a collection of individuals and spaces that are 'personated' or that 'personate'. In a context where people form but also discard corporate identities with ease, Golub argues that constituting the Ipili as a collective subject is a particularly fragile achievement. Golub concludes that, although the landowners never quite managed to become a leviathan, the mine surely was one…" (2014, 198). Coumans (2014), argues that the Ipili were never good candidates to form as a leviathan, due not to their cultural tendencies, but to a fundamental disadvantage. Their power rests "on a threat of illegal acts likely to result in broad and brutal police actions placing many Ipili at risk…" (2014, 394). Whereas the mine's power rests on bureaucracy and regulations that the company is often able to manipulate to suits its interests. What Coumans means by this is that, as Golub explains, the Ipili's powers are largely based on their ability to disrupt the mine's operations by damaging infrastructure whereas the mine's power was expressed by the rule of law.

Ballard (1975) argues that the issue with the public service in PNG, "is that the whole idea of bureaucracy and the values that are associated with it in terms of hierarchic organisation, specialisation, regulations and impersonality are

all contradictory to the kind of values which Papua New Guinean societies have" (47). For the Ipili, "they are small scale societies and in which impersonality has no meaning…and in which regulations are in the form of customs which can be changed and bent to fit with human values and behaviour at any given time" (47). As Markell (2003) notes, by assuming we have a finished, fixed identity, it suppresses the recognition of our fundamental existential openness. The Ipili have a kinship system that is accommodating and this is why the government and the mine were unable to establish a single, coherent criterion of identity. Golub argues that this was a sign of success, not failure, in how the valley is run. The mine is a bureaucratic leviathan whereas the Ipili 'clan systems' could be a cosmological leviathan. Therefore the mine fails to regulate and order them due to its misrecognition of both Ipili society and how they form collectivities. Their social identity is elicited from an "interplay between cosmology and bureaucracy" (115). Golub argues that the fluidity of Ipili sociality and their pursuit of innovation and novelty make them both 'quintessentially modern' and 'allergic' to bureaucratic leviathans' regulatory efforts. The regulatory efforts are a "misrecognized form of the West's own predilections for organization" (198). Their failing to become leviathan was, therefore, due to both power inequality and the fluidity of their culture. Just as gold that is mined requires a degree of refining to take a suitable form for circulation within both national and international financial markets, Golub argues that the same goes for the identities of landowners. They must be refined and transformed – by Ipili in their own way and on their own terms – especially if they are intended to circulate within national and international contexts of law and policy (Golub 2014).

Flexibility of Ipili Sociality

Anthropologists have long recognized the flexibility of social organization and affiliation that characterize PNG Highland societies. As Golub has observed, the lives of the region's rural majority do not require a fixed subject whose life flows in one direction. This is because the person is understood, rather, as a work in progress whose identity, residence, clan or lineage membership may be revised and reworked (Andersen 2016). Particularly in the contemporary Highlands, individuals cultivate dense networks of social attachments, having plural pairs of

parents and plural homes and homelands. Some villagers move to the city to work, while some urbanities return to their natal ground to die, even a person's place of birth can be revised and reworked. Another important aspect is that customary life cycle exchanges such as bride-price, initiations and name payments are not singular moments but multistage processes, most of which can be reversed, delayed or undone (see also Chapter Three). This is not necessarily permanent change; rather it is a reversal, interruption, or suspension of practices. This is not to suggest that these practices necessarily revert to being the same, but it means that these social issues cannot be constructed as fixed and linear. However, the presence of the mine has created new geographies and socio-spatial identities as a result of its requirement for negotiations between identity and territorial claims. This fundamentally challenges the idea that such boundaries of identity and ownership are static and unable to move across time and space. Boundaries are fluid and shifting, and continuously traversed by a number of bodies, discourses, practices and relationships. Brambilla (2015) argues that this highlights the endless shifts and meanings between inside and outside, citizens, foreigners, and also across regional and symbolic boundaries. The emergence of new geographies and socio-spatial identities show how the presence of mining and negotiations between identity and land claims challenge the "modern geopolitical, territorialist imaginary" (19) of the mine as a location.

Grassroots and Urban Elites – ' The Melanesian Way'

This analysis of spatiality in the context of the mine runs parallel with the fluidity of Ipili identity and the way in which the mine's presence can have implications of this identity in various other locations. The Ipili can mean very different things in different contexts. Landowners exist in Porgera today as a group whose existence has been elicited by Porgera's wider institutional context, even though Ipili sociality does not fit well into the descent-based criteria that the mine and government use. To an extent, Golub argues that the incoherence of Ipili identity often goes unnoticed in the valley, nor is it minded. However, for those at a remove from the valley - in PNG's capital, Port Moresby – it can often harden into stereotypical forms in a way that can have concrete implications. His analysis thus extends to encompass Ipili identity and sociality within the context of

discourses concerning development and modernity. This highlights how changes introduced by mining extend beyond its physical location, challenging the presumed fixedness and locatedness of a mine. Golub's analysis of these changes extends to encompass how the formation of new subjectivities leads into issues of feasibility and inequality.

Since the mine's opening, social alterations have occurred for those connected with the valley. Over the past decade a privileged elite has coalesced out of a previously much more fluid scene by obtaining contract work, compensation and other spin-off benefits from the mine. These young men – Golub notes it was all men – had personal interests that were no longer aligned with the majority of the Ipili. However, this split between landowner elites and local communities did not result in calls for a reform of this system: Ipili in general were not unhappy with the existence of a privileged elite, but more so with the fact that they were not a part of it. This counters the view of 'development' as being in the interests of the majority, or even of the majority wanting it to be in their interests. People will collude in projects that are not in their short-term interests with their eyes on the long term. In this case, what has emerged is a clear social hierarchy dependent upon access to mine revenue streams. The clearest manifestation of this stratification within the landowner community has been the increase in younger men seeking to replace the aging group that negotiated in the Yakatabari agreements in 1989. These young men sought to parlay the political power garnered in valley politics during the Yakatabari waste dump negotiations into influence beyond the valley. This shows how power has been established through compensation and relates to the way in which wealth through mining moves into new spaces wherein people can harness new forms of power. This creates an unequal divide between those who confer wealth into power and those who seek modernity, but feel they are being denied it.

Using Nakarobi's *The Melanesian Way* (1983) as his analytical foil, Golub's ethnography moves into a discussion which explores Ipili desires for development within a national division between rural grassroots and urban elites. An issue with PNG's self-image, Golub argues, is that it is essentialized as stable, unchanging and traditional, with the custodian being the grassroots. As a result, both grassroots people and urban people are caught in a dilemma, wherein the grassroots – such as the landowning Ipili – who seek development, wealth and

modernity, are criticized by urban dwellers for betraying their nation's deepest values (Gewertz and Errington 1999). At the same time, middle-class Papua New Guineans feel that the desire for modernity is leading to PNG's deculturation. Golub points to the deeper roots in Melanesian culture that he believes foreground contemporary ideologies of the grassroots. He examines the strategies that the Ipili must deploy in order to be recognized as feasible development actors, not just in the context of mining negotiations, but within broader contemporary society. In a useful schema, Golub traces the moral imagination of PNG by examining the positive and negative valuations of five themes that are used to evaluate village and town life: Christianity, *wantoks* (social connections), law and order, culture, and development. If grassroots' representation falls on the wrong side of the moral ledger, they are seen as failing to become feasible. This is essentially another collectivity that these Ipili 'fail' at. There is a prevailing idea that people are not being the right sort of group in the landscape of change brought about by mining. The act of becoming a new collective – a 'leviathan' – was seen as acceptable as it was needed in the process of receiving mining money. However, their desire to become a modern collective is seen as immoral and not the correct way for grassroots to live. With the mine's ability to create new kinds of collectivities in the context of compensation distribution, and the elite's desire for grassroots to maintain a 'traditional' identity, what emerges is a relationship between the state and the mine. The mine is seen as more of a legitimate actor than the Ipili within the nation, and through the power it harnesses, it has the ability to change the way in which Ipili conceptualize themselves as moral beings.

In presenting this, Golub takes an approach that argues for a space where indigenous people can move beyond the nation's expectations of primordial subsistence-based indigeneity and, live as urban Papua New Guineans, to embrace modernity. Golub's ethnography asks the question of how to capture the truth that indigenous cultures are innovative and change over time, but that, much of this change is brought about by an entity such as the state, in concert with the mine, which demands that the object of its gaze remains static (Golub 2007).

CHAPTER THREE – GENDER AND AGENCY "WAYWARD WOMEN"

Gender in the Analysis of Social Change

While Banks et al. (2013) have highlighted some of the social issues taking place in Porgera such as in-migration and violence, Golub only briefly discusses these at the end of his ethnography, arguing that Porgera today looks much more like a failure than a success story. Banks et al. (2013) describe that there have been both direct - 'intentional' - changes for which the mine is responsible for, as well as unintentional - 'immanent' - changes throughout the valley. These direct changes include the murder and rape of people by Porgera Joint Venture (PJV) security guards, state violence and the burning of homes by police with the support of the mine. There has also been a subsistence crisis that has come to the fore through the growing population and a rapidly decreasing subsistence base (Banks et al. 2013). These issues emerged particularly during 2006 when the mining company Placer Dome was acquired by Barrick Gold (Golub 2014).

Indirect changes have also created extreme and structural injustice for Ipili people. These include in-migration which has threatened the ability of Ipili to control guests they have been hosting, and generational conflict between parents who received money from the mine and their children who must live with the pollution it has caused. The subsequent increase in violence that has led to a breakdown of law and order, alcoholism and shifts in gender dynamics, leading to a rise of HIV/AIDS and sexual violence (Golub 2015). As Banks et al. (2013) argue, inward migration, is notably one of the most destructive aspects of mining developments for communities, a process driven by people in search of the economic opportunities that the mine creates. These social ills associated with mining that Golub (2014) discusses, are not unconnected to these same processes. Likewise, "materialism and shifts to a cash economy, vigorous entrepreneurism, opportunism and individual ambition are all responses, culturally infused and contextualized, to the economic flows that spill out from the mine operation (Banks et al. 2013, 490).

Research from a development studies perspective, such as Banks et al. (2013), offer an example of the way negative events – in the context of mining -

are portrayed as evidence of broader change. The issue with this is that it diminishes the recognition of indigenous agency in the process of change. It also disregards the evaluative processes that indigenous people apply on to their new circumstances, in terms of what they consider as good and bad, what changes they should keep or discard and if they desire to do certain things differently. Ethnographic enquiry can essentially break down the direct correlation between 'bad things' occurring as a result of mining, and change. It provides a scope to understand what exactly change is, whether or not it is all negative and at what level and context it is occurring in. As Holly Wardlow's ethnography *Wayward Women* (2006) highlights, not all change is externally imposed, and can be attributed to changes brought about through the agency of locals. She shows this through an analysis of gender as a system of social organization, changes to this, and the resultant shifts in action and meaning.

Throughout Golub's (2014) ethnography, absent is the analysis of gender relations, despite this being a focus of much contemporary moral debate in PNG and the important roles gender plays in social organization. Golub introduces his ethnography by explaining his lack of focus on women throughout the book. His focus on men's lives, he claims, is the result of the situation described, namely the male-dominated Yakatabari waste dump negotiations. Any discussion on women or the "pervasive sexual inequality in Porgera" (Golub 2014, 124) is missing. This is not necessarily gender, of course - as it is not just about what men do and what women do - as Golub's focus on men's actions does not constitute ignoring gender. However, it does potentially lead to this if the ways in which gender relations are reformed though men's domination in negotiations is not considered. Gender would have made a great tool of enquiry in his complex discussions on kinship, development and identity. Golub discusses how economic changes have contributed to social changes, namely in the form of the influx of cash and by extension, its use in sexual relationships. It is, therefore, apparent that relations between men and women have been altered by new forms of wealth. Various other authors such as Gilberthorpe (2007), Bainton (2010) and Macintyre (2011) have contextualised gendered inequality in the broader landscape of change introduced through mining development. Gilberthorpe and Bainton in particular have done this while producing ethnographic accounts that foreground masculinity. This analysis is what Golub does not do. While he recognizes the

actions and experiences of Ipili men, he does not link them with shifts in masculinity and how this leads to changes in gender relations. Golub's neglect of gender is thus confusing as it leaves readers wondering why and how practices of representation and the making of leviathans are gendered. They are collective social entities that Golub is describing, and if they are predominantly male, then does this link to a re-gendering of ownership for Ipili? Golub's argument does not use gender as a bridge to understand the link between negotiation processes and social upheaval.

Wardlow takes a step back from Golub's ethnographic focus on Porgera, instead using mining development as the backdrop in discussing the dispersed effects it has had on Huli people. This reinforces how mining is not just about a physical location. While the giant stretch of power lines that extend for miles through people's gardens and threads through mountains are a material example of the dispersed experience of mining, they run parallel with the dispersed socio-economic effects of mining development. Golub discusses changes for the Ipili as externally generated by mining development and attendant negotiation processes. Conversely, in Wardlow's ethnography (2006), she examines the internal mechanisms that have led to change in Huli society, since the introduction of mining. More specifically she uses gender as an analytical tool in order to examine changes in the bridewealth system, and the effect this has had on gendered subject positions and relations. She goes beyond exploring simply what men do and what women do and examines how gender as an organizational category has effects on social structures. This analysis provides evidence of alterations of the bridewealth system that then leads to the emergence of new sorts of agency and contested subjectivities. She therefore addresses the extent of local responses to these changes and how this links into the idea of agency. As the above discussion from Banks et al. (2013) suggests, connections between 'response' and 'agency' are not always investigated in accounts of mining-related change. An ethnographic approach allows for an understanding of it as much more complex; agency is concerned with the reasons behind the response.

Introduction of Mining for the Huli

The Huli are neighbours of the Ipili, living roughly 40km to the south of Porgera in Hela Province, within the Highlands of PNG. In Wardlow's ethnography, firstly she makes sure to mention that the Huli had already experienced change before the introduction of mining. Citing Ballard (2002) she notes that there was a gradual but dramatic change in the structure of Huli society and this was associated with the adoption of sweet potato during the seventeenth century, known as the 'Ipomean revolution'. Over time, as increases in food production began, leadership among the Huli shifted from being ascribed to being achieved. This meant a move away from hereditary/inherited leadership roles to competitive acquisition of status, often based on access to economic resources that could be used to solidify support amongst kin and wider social groups. Success in warfare and oratory are key indicators of status in highlands societies too (see Chapter Four). This highlights the significance of economic resource acquisition in kinship ties and that, similarly to the present situation, the changes experienced in the past also had an economic component. Her ethnography is thus useful, as she does not try to show the changes brought about through economic change as separate from indigenous understanding and expressions of change. This shows that change is a pre-existing factor of Huli life and thus breaks down the fatal impact narrative.

Fundamental to the contemporary changes for the Huli has been the development of Tari town, as it has become the dominant motivation for people's mobility. Compared to the past, Huli men, in particular, were mobile for ritual purposes and extensive trade (Ballard 1994). With the increasing presence of the cash economy in the provincial capital of Tari, men are increasingly compelled to seek salaried employment and establish ties with more developed regions, rather than cultivate their own farmland. This has led to a destabilization in gender roles and expectations.

Gender and the Organization of Social Space

The Huli people tend to have a fairly rigid and dichotomous understanding of gender, in terms of what constitutes proper male and female behaviour and how girls should be socialized differently from boys. Cultural knowledge about gender is taught from a young age and is reinforced by daily discourse, practice, and

disciplinary measures. Wardlow explains that this is shown in the ways children can recite, "women are for bridewealth" or "women raise pigs, make gardens, and have babies" (Wardlow 2006, 10). This is not an assumption that gendered expectations are never contested; however, it confirms that, as McNay explains (2000), "gender identities are not free-floating: they involve deep-rooted investments on the part of individuals and historically sedimented practices which severely limit their…transformability" (18). For women in particular, "the bridewealth system, for all its current permutations and ambiguities, is central to the construction of female identity and the reproduction of society" (Wardlow 2006, 133) and is what essentially makes women *wali ore* (good women). Wardlow argues that, to an extent, men have the capacity and the responsibility to make women act as *wali ore.* While women do have the ability to exercise their own agency, according to dominant Huli discourse, male agency should shape the space in which women can exert their own agency, or as Huli say, women should be 'fenced in by men'. This will be discussed further in relation to the way *pasinja meri* - a Tok Pisin expression meaning 'passenger women' who have sex for money - highlight mobility through space, as the Huli gender complementarity no longer aligns with the bridewealth system**.** Given this expectation that men are expected to 'fence in' and control the actions of women, it is not surprising that the absence of males in the modern context has become a compelling issue for the relations between men and women (see Maclean 1994 for an analysis of freedom and autonomy).

With the changing pattern of mobility for men there has been a destabilization of traditional/existing conceptions of gender and responsibility. Wardlow argues that becoming *pasinja meri* is causally connected to individualizing processes wherein women feel they are no longer securely positioned 'in between' their natal relations and their affinal relations. Strathern (1995) describes that this 'in between' refers to the way in which important social, political and economic links between men are forged through the ties of marriage. In the contemporary context, however, this role and its associated power is eroding as men become more dependent on ties forged through school, work and other modern institutions rather than through affinal relationships. Additionally, desire for wealth has become a way for rural, unemployed locals to access wealth, evidently reforming the meaning behind the bridewealth system. Huli women's

lives have become enmeshed in both a traditional system of intergenerational social exchange that is based on bridewealth and the commutation of women's reproductive capacities into productive power; and a rapidly modernizing society in which the bridewealth system is increasingly portrayed as the commodification of women's reproductive capacities and the commodification of women themselves.

Wardlow's analysis of gender allows her to look at how practices of *pasinja meri* both emerge and are a response to structural contradictions within the organization of gender, in the context of commoditization. Women have been led to feel merely valued for their monetary worth in bridewealth and generally abandoned, and not cared for. It is precisely this growing sense of "declining dividuality" (Wardlow 2006, 23) that spurs some women to take steps in denying their kin the possibility of bridewealth or denying husbands their 'services' by withdrawing their sexual capacities from the relational economy by exchanging sex for money.

Women's Agency in the Process of Change

While mining serves as a factor in the transformation of social organization, it is precisely the transformation of relations between men and women that have reshaped the meanings and value behind the bridewealth system. Often gender as a form of social organization is diminished in relation to mining. Gender commonly is constructed as men hurting women and this dichotomous creation does not reflect the different relationships that can occur. This is the kind of tension Wardlow's ethnography explores, by recognizing that gender subjectivities and behaviours are changing. This is an example of how mining is embedded in social relations but is not the only agent of change. Impacts of mining are not simply a case of cause and effect and this is because Huli responses to change and women's agency within these responses have played a role in the transformation of the bridewealth system.

Wardlow's analysis of change is therefore informed by Bourdieu's (1977) concept of 'practice theory'. As Karp (1986) observes, this "provides an analytic frame which allows ethnographers to describe the complex relations among the agents' strategies, the symbolic forms they invoke in their actions, and the

distribution of power in society" (132). Practice theory constructs a dialectic between social structure and human agency working back and forth in a dynamic relationship. In Ortner's (1984) explanation, it "seeks to explain the relationship(s) that obtain between human action, on the one hand, and some global entity which we may call "the system," on the other" (148). Such an approach helps to describe the complex relations among agents and seeks to theorize how social systems are shaped by the actions and intentions of persons who are also shaped by these systems.

Huli women's agency is not a seamless reproduction or performance of objective social structures. This is because their agency essentially responds to these social structures and enacts ideologies which define women as having the ability to influence social structures through their own bodily disorder and movement. This shows how women's transgressive acts can greatly disrupt social reproduction and organization, while highlighting the connection between response and agency. Since bridewealth marriage is the means through which normative gender roles, clan-based sociality and genealogical temporality are reproduced, their refusal of marriage denies their own contribution to social reproduction and exhibits the agency to act partially beyond the constraints of normative social structures in which they are 'fenced in' by men.

The Emergence of New and Contested Subjectivities

The socio-economic changes linked to the presence of mining development has, therefore, created new subjectivities for Huli, which are fundamentally gendered and in this process, sexuality plays a conceptually significant role. This is because sex and sexuality emerge as one way to negotiate and take action within the altered structural contexts of gender roles and the political economy. The formation of new subject positions in Golub (2014) and Jacka's (2015) ethnographies could be considered in the context of economic gain, namely by men. However, Wardlow shows how new subjectivities for *pasinja meri* have emerged because of an erosion of a gender complementarity ideal, wherein men leave obligations for wealth and women act in this way as revenge. This highlights how Wardlow uses gender as a tool of enquiry in her discussion on identity in the context of resource development. In terms of the role sexuality plays, while it is not owned by Huli women's kin, it

is understood as socially constituted and encompassed. In this context, a woman belongs to her clan as she is an aspect of them. Therefore, using their sexuality autonomously - engaging in premarital or extramarital sex - is seen to be perversely removing their relational potential from kin and this extends into theft of clan potency and potential clan wealth (Merlan 2016).

This shows the tensions that arise between men and women as they are aware that their refusal to be 'for' marriage will humiliate and materially injure their kin or potential affines. In regards to the idea that this form of agency is masculine, their transgression and disruptions defy aspects of normative femininity. Wardlow argues that, in a way, women are trying to move beyond gender identity by overthrowing kinship in a partial way. They take aim at their kin - specifically male kin - by acquiring behaviours that contravene proper femininity, associating their actions - mobility and the openly displayed practice of power - with masculinity (Rubin 1975).

An important theme which runs through Wardlow's ethnography is movement and the way in which *pasinja meri* highlight mobility and movement through space. What emerges are the ways in which spatial relations can have ramifications on both economic and gender relations. Gender thus has a role in spatial arrangements, which enact a rigid duality of gender, and a gender hierarchy is represented in both spatial arrangements and bodily comportment (Bourdieu 1977). Spatial demarcation is a way for men to control women and is maintained through the organization of Huli houses. Within the household there is a gendered demarcation and this is a way to manage desire and danger, with the intent of protecting men from undue exposure to female substances. These gendered spatial relations are therefore tied to the idea of 'fencing women in' and is an example of men's attempt to control desire through controlling women as *wali ore*. In this context, desire is tied to the visible and according to Huli *mana* (traditional custom), desire is expected to be managed through both self-control and socially by making potentially coveted items less visible. Women's agency enacted through movement influences changes in the social organization of space as their movement within this space has changed.

Dominant Huli discourses concerning masculinity emphasize men's *hongo* (moral fortitude, strength) and the ability to control desires. While western discourse depicts desire as active and agentive, and being desirable as passive,

Huli regard being desirable as potentially efficacious. Wardlow explains that, for the Huli "…nothing feels more agentive than removing someone else's self-determination from them by putting them at the mercy of desires that you yourself have inspired" (180). Thus, while dominant western assumptions involve the notion that a person who has money to pay - in the context of the commoditization of female sexuality - holds the power; passenger women's perspective is that men's willingness to pay is a sign of weakness. This both enhances and indicates the 'sellers' power. Huli men lose their moral strength and self-control that is a defining characteristic of masculinity. Women's acts are, therefore, a way to sustain a sense that they are in a position of power. This understanding of normative Huli gender expectations means that passenger women act, not from a position of weakness defined on economic terms, but that "weakness is defined more in terms of a gendered politics of desire in which men are the losers" (182). This reveals how agency emerges in the context of gender. Through their response to changing gender roles and expectations, *pasinja meri* gain agency through challenging male masculinity and their own role in social reproduction. Bridewealth has therefore become the key site in which altered gender relations are reflected in.

Possessive Individualism

Wardlow analyses the bridewealth system as a discourse, not only as a social and material practice but also in relation to ideas about how people and societies reproduce and develop. This relates to practice theory, as bridewealth ultimately shapes and constrains women's actions and choices they make for themselves and how they see themselves as individuals, but it also forms relations and reproduces collectivities. Wardlow contrasts bridewealth against consumption practices and wage labour in order to analyse how they each influence and change one another, and how these in turn affect social roles. By understanding bridewealth through ideas of corporeality and connectivity, it stands to reason that increasing individualism owing to modernity would change the structures and processes of society.

Wardlow's analysis of Huli passenger women contributes to the theorization of possessive individualism in Melanesia by demonstrating another,

highly gendered, means through which people become the "proprietors of their own capacities…by deliberately removing these capacities from the social body through acts of resistance or negative agency" (22). This is an example of the way Wardlow highlights how economic changes and gender engage to produce new and contested subject positions. What has emerged is the co-existence of individual and relational orientations - they are shifting emphases rather than either/or options for Melanesian persons. In regards to *pasinja meri,* although there is reference to the self acting as an individual, there is also a wider, relational effect of these acts. The 'individual' is not a bounded unit but is rather an object of influence and agency in relation to others and to groups. This is because, through the negative agency women demonstrate, there is also recognition or harm to others. However, this is also linked to the individual vs. collective tension that is brought to the fore by the new economic context that mining has brought about. This tension has been an area of concern in the context of Melanesian ethnographies and will be investigated more broadly in Chapter Five with reference to all of the ethnographies explored throughout this thesis.

Wardlow's ethnography suggests that negative responses are not necessarily only emanating from the mine and then affecting people's lives. She breaks down the notion that negativity is a response to mining and analyses how it is much more complex than this, examining responses through an analysis of gender and the formation of agency through these responses. Wardlow highlights that it is essential to recognize the role people play in the landscape of change. For *pasinja meri,* they reclaim their agency by moving beyond customary spatial arrangements into a new space in which they are not symbolically 'under the legs of men' and can 'break' the spatial rule in which they should never be higher than men. Wardlow argues that engaging in sex outside of the bridewealth system means they have "evaded the physico-moral 'fences' meant to enclose, discipline, and sustain women" (142). *Pasinja meri* are a powerful symbol of people's desires, not only do they create a new space for themselves, which joins sexuality and transformation, but so too does the mine, offering all the desires and anxieties of modernity. In the following chapter, Jacka (2015) also explores this through an analysis of the creation of new spaces which represent both a place of desirable modernity and contemporary social disruption. Through ethnographic enquiry, Jacka provides further evidence that change in the context of mining is not all

externally imposed, but also occurs through internal mechanisms of social organization such as exchange, alliance and warfare.

CHAPTER FOUR – WEALTH, CONFLICT AND NEW SUBJECT POSITIONS "ALCHEMY IN THE RAINFOREST"

Introduction

Jerry Jacka's ethnography '*Alchemy in the Rainforest*' (2015) is the most recent in a series of publications that consider Ipili engagements with mining and modernity (see also Biersack 1995, 2006a, Golub 2014). While Golub worked with the SML landowners in Porgera, Jacka focuses specifically on the impacts the large-scale Porgera mine has had on ecology and social relations of the Ipili who live outside of the Special Mining Lease (SML) area, namely through their experiences of extreme social conflict and environmental degradation. While these Ipili are regarded as 'non-landowners', their lives are still very much oriented towards the mine. This is because they live directly adjacent to the Porgera mine, and hence are impacted along multiple dimensions socially and ecologically. Jacka's ethnography is thus an important contribution to understanding the dispersed effects mining has on PNG communities and examines how social tensions can arise from the mining company creating boundaries between those who are eligible to receive mining-derived benefits and those who are not. Like Golub and Wardlow (2006), Jacka's work illuminates how the mine can create new spaces in which new subject positions are formed, and how this runs parallel with the notion of 'being feasible' as locals embrace disruptive behaviour in the landscape of change that mining brings about. Jacka's work also encompasses the notion of negative agency in order to describe 'destructive' courses of action locals take. This reveals evidence of the interrupted and fragmented nature of sociality.

Like Golub and Wardlow, Jacka makes the point that in the absence of identifiable clans, the mining company will inevitably manufacture them. However, Ipili sociality, both within Porgera and outside of the valley, reveals that bounded clan units were not a method of social organization pre-existing the mine (Golub 2007). As Biersack observes, the Ipili are "centered not on themselves as geographical isolates but on culturally diverse fields in which their mythology, trade routes, and marriage practices embedded them" (1995, 7). The

'fixed' clear cut method of deciding who are landowners reflects the way in which a mine is generally constructed as a bounded, locatable entity. The issue with this is that it does not take into account how mining development can be experienced across dispersed places and contexts and affect people outside of the SML and the valley.

Jacka's ethnography adopts the rights of indigenous people as well as social and environmental justice as a framework in order to explain the contemporary political struggles over natural resource development (Jacka 2015). He studies how debates over mining and the environment can be understood as a displacement onto resource extraction of a much broader set of anxieties in terms of the scale of human intervention in the environment, what the social and ecological costs of mining developments are, and also the capacity of communities for self-determination (Bridge 2004). As discussed in the Introduction, mining development is often portrayed and examined as a set of technological, economic and political relationships, and discussions of mining and the environment conventionally stop at this point, without considering how mining also has a significant cultural power. In order to understand contemporary debates over mining and the environment, it is important to understand how mineral development is unavoidably situated within a moral and cosmological landscape. Williams (2008) argues that the mining environment "is a technological one – but it is also a mental landscape, a social terrain, and an ideological map" (21). Jacka frames his ethnography through this dual understanding of mineral extraction by examining the complexity and interconnectedness of land, indigenous knowledge, and the global economy in Porgera. This helps to better understand how diverse cultures, environments and social relations shape and are shaped by global processes. Through Jacka's consciously globalized analysis, he is re-emplacing mining in space, by going beyond viewing it as a physical entity that in the landscape extracts raw materials, and instead as an entity that is embedded in social and cultural concerns. Of relevance here is Bourdieu's (1977) notion of practice theory, which Wardlow also uses throughout her analysis of agency in the reformation of the bridewealth system. By understanding the social effects of mining through this framework, it helps to overcome a cadastral model of mining, which takes agency away from locals and instead places it within the mine. Jacka conveys this throughout his

ethnography by examining social changes through both the presence of the mine and also local responses to mining. Like Golub and Wardlow, Jacka's work among the non-landowning Ipili and their relationship with the Porgera mine, therefore, does not underscore social breakdown and violence as entirely due to mining development. He identifies how agency among the Ipili plays a key role in the formation of power relations, conflict and new forms of inequalities.

Expectations of Development

One central theme of Jacka's ethnography is to document the making of a resource frontier in Porgera from the perspective of the Ipili who receive little to no benefits from mining. Anthropologist Tsing (2005) describes resource frontiers as spaces where global capital and multinational extractive corporations interact, often on the lands of indigenous populations. At the centre of global discourses on biodiversity conservation and economic development, although often hidden from view (Dove 2011, Tsing 2005), are local cultures and livelihoods that engage with these development projects. In the making of these resource frontiers, it is not just multinationals and national elites who have offered up Porgera's land and resources for capitalism - but also Porgerans who have been actively engaged in and involved in the frontier-making project. This frontier is also a new kind of space that the mine is being located in. This is a different sort of spatiality from that discussed or used by the other ethnographers.

Jacka emphasizes the long tradition of migration in this area and also discusses the ways in which migration into the valley has put stress on social order. New development ideologies in this region have had consequences on a larger scale for those Ipili who have limited access to the economic benefits. Jacka's ethnography highlights how mining wealth has created a new language of membership and connectivity, which undermines longstanding obligations that have been established over generations. This has generated new inequalities into local livelihoods. Jacka emphasizes that Ipili want 'development', but also contend with changing gender roles, consumption patterns, and the influence of money. Despite the mine's detrimental impacts on the land, frequent inter-clan violence and widespread pollution, the main concern of these Ipili has been that there is not enough development. This has been due to hopes that development

would radically transform the valley's social life. Within the community, development is essentially underpinned by discourses and expectations of modernity (Ferguson 1999) and conceptions of progress articulate with the kinds of benefits mining is expected to bring. However, there is not enough development because the costs of mining are borne by many more people than those who enjoy its benefits. As Golub (2014) discusses, central to mining-related conflicts are the struggles over people's relationships and claims to land and resources, with the majority of Ipili receiving few benefits despite their long-term kinship and exchange ties to landowners. Jacka argues that these tensions over enfranchisement and disenfranchisement do not just take place in a local context, but also emerge at provincial, national and international scales (Golub 2014, 28). A key focus in Jacka's work is, therefore, to examine local social and environmental systems that bear the brunt of these larger-scale processes (Ferguson 1999; Tsing 2005). Like Golub (2015) he explores how mining wealth can be transformed into political power and what this means in terms of the production of inequalities.

New Forms of Wealth and the Change of Meanings Behind Practices

Central to these social pressures are concerns about what constitutes a quality of life in an era of resource development. What are wealth, work and money according to the Ipili? What kinds of new social forms do they entail for them? This leads to looking at Ipili understanding of mining at Porgera and how the overall mining experience has resulted in considerations of PNG's place in the world and its experience of economic and structural inequality. What is interesting is the idea of wealth and the various ways it is understood across cultural contexts. Unlike customary forms of wealth, wealth that comes from gold is not contained within the usual social and economic boundaries (Dundon 2002). Money that comes from mining is often considered to be useful only in terms of immediate, conspicuous consumption. Of course, as Wardlow's (2006) ethnography shows, wealth from mining is used for other purposes such as bridewealth payments and business ventures; however, Jacka contends that "…wealth that comes from mining carries a considerable taint that wealth earned in other ways does not" (2015, 200). Among the Huli who mined at Mt. Kare, Clark (1993) argues that

money that had been derived from gold was "destined to be 'wasted'" (744) and used in consumption practices only. For locals, money from mining is 'free' from certain kinds of labour and village modes of wealth generation. Hence it has no local value as no form of indigenous concept of labour is tied to its production (Munn 1986). This cultural variation in the way money is symbolized is fundamentally connected to culturally constructed notions of exchange, consumption, circulation and production within Ipili society (Parry and Bloch 1989).

Parry and Bloch (1989) discuss how the meaning of money and exchange is determined not by its function but by how it features within a particular way of life, and argue for the need to uncover the diversity of meanings which can be attached to both gifts and commodities (see also Akin and Robbins 1999). Clark (1993) argues that Porgeran's critique of mining wealth is more than economic, as it is seen to undermine the Ipili's social, spiritual, ecological, political, and economic worlds. Wealth is understood in different contexts and has many different meanings and forms. Subsistence farming also fuels much of the ritual economy through exchange, therefore it is important to recognize that these are not discrete areas of life but are relational. There is no single understanding of the value of land: it not only supports subsistence living but also sustains relationships locals have with one another. Land is, therefore, an embedded and productive aspect of social organization for the Ipili. This shows how mining-derived benefits in the form of wealth can overwhelm, or simply fail to enter into, the traditional exchange mechanisms that are central to maintaining and reproducing social relations over time.

This is important in terms of how space is imagined from the perspective of the mine and the perspective of indigenous social action. Space, from the perspective of the mine, is imagined as a purely economic space, which seeks to make profit, rather than as being embedded in a highly socialized and cultural context. For locals, however, generating wealth comes in the form of creating and maintaining social ties for purposes of marriage, compensation and forming alliances. Places, according to Basso, are "cultural constructions of geographical realities" (1996, 53). Cultural understandings of places are examples of this creative space at the interface of cultural and natural systems, where human systems of meaning engage with biophysical realities (Escobar 1999). Yet, as

Rodman (1992) emphasizes, places are "politicized, culturally relative, historically specific, local and multiple constructions" (641). By discussing the idea of place-making, Jacka's ethnography helps to overcome the demarcation between societies and nature, and this leads into the ways in which mining within a particular space has effects that extend into various other social contexts. Rodman's (1992) description of places as multiple constructions allows an understanding of how local responses to mining in these spaces differ, depending on factors such as their historical grounding, cultural significance and physical location. Human engagement within these spaces creates subjectivities, and when mining is introduced within these spaces, it will ultimately shape new forms of personhood. This will be discussed further in relation to the Enga Highway and how locals come to inhabit alternative subject positions as a response to the unequal distribution of mining wealth and the desire to engage in consumption practices.

Jacka discusses how Porgeran society has become highly factionalized as a result of the mining developments and how the uneven distribution of benefits has created new prospects for a warfare economy in Porgera (Jacka 2015). Jacka discusses how, within the boundaries of the SML, there were a total of twenty-three sub-clans in seven different clans who owned lands. In the Valley, only ten percent out of approximately seventy named clans were designated as SML landowners. The amount of land held by each sub-clan varied significantly, therefore only a few received the bulk of the mining proceeds. These were given to agents from the sub-clans who were then expected to distribute the money to each individual. However, according to Golub (2014), it is reported that many big men retained most of the cash. Therefore, at one extreme are the 'super big men' with their multiple wives, new cars and business holdings, and at the other extreme are the non-landowners. Jacka (2015) argues there have been numerous attempts by the government to reduce the factionalization of Porgeran society. Mining officials assumed that mining money would easily move throughout the kinship networks, viewing Ipili society as essentially based on exchange. Yet given the different meanings of wealth in various contexts, it can be seen that money does not flow with the same ease throughout Ipili kinship networks with which people, pigs and shell wealth previously did. Thus money from mining royalties and compensation has not been shared widely and equally (Jacka 2015,

210). This reveals how the uneven distribution of mining benefits has generated extensive social pressures, which are often relieved through warfare, and as a result, violent conflicts have become the norm. Jacka argues that there is a strong association between warfare and economics throughout Porgera and this is commonly expressed through the Ipili phrase *yanda takeme,* which means 'war is wealth' (Jacka 2015, 220). Strathern's (1985) work among the Melpa supports this as she writes "either exchange or warfare can indeed turn into its alternative" (124). For the Ipili, short term conflict was bad as it could result in death. However, in the long term it was good as compensations would flow back and forth between combatant groups and over time, due to these compensations, groups would begin to intermarry. Jacka discusses how fighting is no longer about generating long-term benefits of exchange and alliance, rather, it is generated from dissatisfaction with uneven development and oriented towards short-term monetary gains. This shows how the quality of wealth associated with modernity is different and incompatible with the pathways that wealth usually follows.

Emergence of the Life Market and the Fragmented Nature of Sociality

These pathways can also relate to the construction of roads due to mining development, and the ways in which they create new pathways to alternative subject positions, group formations and social relations in the context of wealth acquisition. Jacka's discussion of the Enga Highway and people's migration to this area is an important example of how the construction of roads relates to changes in spatial relationships and also represents a major source of change that is related to mining. The idea of road construction also highlights the dispersed effects of mining, as its effects are not bounded to one locatable space. Roads influence contemporary lives in ways that ethnography can highlight. For example, Dalakoglou and Harvey (2010) argue that ethnographic enquiry can reveal how roads elicit powerful temporal imaginaries and also hold both the promise and threat of future connectivity. Roads also assert that political and material histories can often render these spaces, that are thought to be mundane, so controversial, holding both material and symbolic meaning. Such controversies exist due to the way in which the construction of roads involves accommodating the many competing interests and expectations. Beyond this moral complexity of

developing new roads, the development of roads involves "financial, regulatory and technical relations that often fold international, national and local regimes into a single and specific location" (Dalakoglou and Harvey 2010, 2). However, ethnography can explore how roads are materially embedded in local particularities, and also correspond with notions of connectivity, modernization, displacement and circulation (Dalakoglou and Harvey 2010). Roads hold meaning in the dispersed effects of mining development outside of its immediate physical location. For example, Gilberthorpe (2009) discusses how the formation of roads, for the Fasu people of PNG's fringe highlands, has not just created a physical space to provide access to other locations, but also represents extended identities. This is because roads have created pathways between clans and other individuals. Interconnections between identities and pathways hold symbolic and historical meaning for the people who travel along them, and this connection is reformed by the presence of resource development. Roads also further symbolize pathways that extend beyond the region. They represent new paths of regional connectivity, acting as a medium for creating relations on a much broader national scale, as well as exchange paths along which wealth, power and knowledge travel (Gilberthorpe 2007).

This relates to Giddens's (1985) articulation of time and space, where he argues that "time-space relations are…constitutive features of social systems" (30). However, the situated practices, which Giddens argues make up these systems; themselves also construct different formations of space and time. Munn (1983) elaborates on this, arguing that sociocultural practices "do not simply go in or through time and space, but [they also]…constitute (create) the spacetime…" (280). In this sense, actors are fundamentally creating their own spacetime. Places, as previously discussed by Jacka, dispel the distinctions made between the local and the global by recognizing how places are both material and imaginative constructions that are engendered by global forces and indigenous agents (Biersack 1999). For example, Wardlow's (2006) ethnography highlights how global forces – such as mining – and the agency of Huli women has produced a new space for them to symbolically no longer be 'under the legs of men.' The creation of this imagined space has inherently disrupted Huli social organization while also constructing the idea of these women being 'out of place'.

Drawing on Giddens's (1991) argument, mining development can be seen, through Jacka's analysis, to have produced a "time-space distanciation" in that "local contexts of interaction" are characterized by the disembedding of social relations across indefinite spans (Giddens 1991, 14, 21). As people have shifted their settlement patterns in order to be closer to the Enga Highway to share in mine-derived wealth and participate in commodity consumption, there have not only been ecological vulnerabilities present in this internal migration, but considerable social pressures that often find their outlet in violent conflict. Just as there are different perspectives on money and work, there are also complex attitudes about highway life. It can be seen as both a source of contemporary social disruptions and also a place which represents development that people desire, socially and economically. The highway is regarded as a place of illicit sexuality and immoral behaviour and is a place where *pasinja meri*, as discussed by Wardlow (2006), go to engage in illicit sex for money. This term also refers to "the short-term aspect of sex for money rather than the long-term associations of marriage and bridewealth payments that define conjugal responsibility" (Jacka 2015, 204). The Enga Highway is also a place characterized by alcohol consumption, gambling and people watching, where people slip into a form of cosmopolitanism which highway life demands. Ferguson (1999) defines cosmopolitanism as "a set of localizing social pressures…[that] must inevitably appear, in a localist perspective, as rule-breaking, as a practice of establishing distance from, or even a social rupture with, the 'home folk' who might make claims on an urban worker" (211-212). The highway is thus, according to Jacka, a place where people can "make manifest their desires for an individualism that is unconstrained by social obligations" (204). An important set of discourses that depict the emerging highway life is the behaviours of dwellers in this area compared to non-highway dwellers. For those living in areas not located on the highway, sharing and reciprocity is normal behaviour; in contrast, people along the highway are said to be selfish and unwilling to share their money or food with others. What emerges is a relationship between reciprocity and development, and social and ecological decline (206). What also emerges is further evidence of the interrupted and fragmented nature of sociality. The highway itself is not really disconnected, but it is constructed as a space in which other forms of personhood can be enacted. Changes in economic relations, wherein people seek money in the

short term, create a new space in which Ipili can break away from their obligations to kin members. What can be seen is that the mine itself is given legitimacy to encompass its own space to create change; however, Ipili non-landowners are being denied a space to create their own modernity and for themselves to change, thus, they change their movements within this space in order to be 'visible' to the opportunities brought about through the presence of mining. This runs parallel to the way Wardlow (2006) describes how Huli people's desire for cash has led people, particularly men, to change their movements within space in order to access cash. And consequently, this has led women to create a new space for themselves, encompassing a new subject position to symbolically 'break' the relational hold their kin has on them, not simply for economic purposes but also as revenge.

This is where Jacka discusses the development of the 'life market' as a way to characterize the increase in violence and show how mining has fundamentally transformed what used to be opportunity to participate in the new modern market, into a new context where participation could be potentially life-threatening, due to unequal mining compensation. Jacka describes the life market as "a local term that is used to describe the act of engaging in armed conflict against relatively wealthier social groups in the valley in the hopes of extracting mining money in the form of compensation" (2). For young men who decide to work in the life market, exchange is not an opportunity; instead attaining benefit streams from mining is the notable way to become big men, so for them, fighting other groups is the only option. Gun-based warfare has provided many benefits for men who seek fortunes in the life market. Guns have become easily accessible on the black market, although ownership of them is illegal throughout PNG. However, they are still expensive and often bought by MPs and businessmen, sometimes stolen, and often they are homemade. The expense of guns means few individuals or clans can afford them so those that do own them are trained in their use and are then hired out to other clans as assassins – who are called *rambo* in Tok Pisin. The life market is envisioned as an individual struggle and also showcases the transformation of in-group conflict from being a collective endeavour to one that shows the alienating effects of individuals who are struggling to make do in a monetized economy (226). This highlights how the life market is tied to alternative subject positions and conveys how the presence of

mining has played a role in this through the introduction of new forms of wealth. Warfare has, therefore, become the new economy, as it is the only dependable alternative scheme for men to generate income in the valley (Jacka 2015). Strathern (1985), in discussing the traditional venues of male accomplishment for the Hagen, writes that the intertwining of war and exchange "can be attributed to men's desire to be seen as effective in a public arena" (124). Through their exclusion from mining benefits, no longer working in the gardens and selling produce at the local market, these men are now offering their bodies in a new market that is based on demands from other clans who receive compensation and royalty payments. What appears is the relational and the individual as co-existent possibilities, which is tied to material objects such as wealth. Labour for the Ipili is connected to the relational economy. As discussed earlier, mining money has no local value attached to it as unlike wealth via exchange, it is not an essential means of regulating and reproducing relationships. This new form of wealth, therefore, has individual potential, and like *pasinja meri* (see Chapter Three), who remove their reproductive labour from the relational economy, Ipili men are removing their own labour; with both groups, to an extent, positioning themselves as individuals.

While Jacka discusses that this money is 'free', this does not imply that it is only free of monetary value, but also social values. This money enables freedom in a way that would not be given if labour were to be produced and redirected into the relational economy. Therefore, the idea of free also encompasses the idea of being free from constraint. This is supported by Maclean's (1994) discussion of freedom and autonomy as alternative subjectivities in Melanesia, where freedom is the unbinding from constraint that could be realized through wage labour, autonomy is grounded in particular ties to places and people and is therefore a negation of the modern conception of freedom. The sort of individualism that is based in freedom is specifically oriented towards breaking the relational hold that others might have over your body and labour. With warfare becoming an individual endeavour - "a one-man war" (Jacka 2015, 225) - it has become unbounded from the potential for the establishment of new relationships, and directed towards conflict over resources, which ends in fragmentation rather than alliance. Therefore, Maclean's analysis of autonomy helps explain the way in which the values and practices behind

traditional exchange systems have changed as people break ties to certain places and people, both physically through movement to the highway, and socially in order to access wealth. This, again, highlights the co-existence of the relational/individual. As discussed in Wardlow (2006), while aspects of modernity are mapped on to Melanesian society through the process of individuality, Ipili still have relatives demanding money and having to pay school fees and such, therefore it is more of a nascent individuality, rather than the kind understood stereotypically to exist in the West.

Indigenization of Modernity

Like Golub, Jacka also draws on Sahlins (2000) in order to recognise that so-called cultural traditions are dynamic and always changing. Jacka argues that people are not refusing the commodities and relations of the world system but rather desire to indigenize them and make them their own. Simply because change is culturally mediated does not mean that it is culturally inhibited, as people may actually desire radical change. Sahlins argues that in this view, economic globalization diversifies the world through "indigenous adaptations to the global juggernaut" (ix) and this allows people to transform their own culture on a much greater scale than they ever had previously. This supports the argument that changes among communities are not entirely due to mining developments. As Sahlins (2000) argues, people have the capacity to "indigenize the forces of global modernity and turn them into their own ends" (5). Cultural change is a given and not to be lamented and misconstrued as externally imposed cultural loss. Jacka's material supports this idea in that Ipili culture mediates and amplifies – rather than inhibits – change. This reiterates that there is no fundamental or inalterable tradition/modernity dichotomy.

CHAPTER FIVE – CONCLUSION

This thesis offers a study of the dispersed socio-economic effects of mining for local PNG communities. Through an in-depth analysis of Melanesian ethnographies, this thesis has explored the value of ethnographic enquiry into the nature of change that is occurring both externally and internally for communities. This chapter presents the conclusion to the research through assessing three key themes that have emerged. They are: the idea that a mine is more than a physical location; the role of local agency in the process of social change; and the creation of new subject positions and how this leads into the idea of feasibility, morality, and the formation of new inequalities.

The Mine as a Dispersed Entity

An emergent theme has been how ethnographic enquiry in the context of mining can reveal a mine as more than a physical location. The ethnographies I have analysed have highlighted how the effects of any mine are not limited to the immediate space in which it operates. Rather, they have explored how a mine is diversely constructed and is embedded into a set of complex social relations and cultural concerns that are not restricted to a particular 'site'.

Insights into the multifaceted social and cultural dimensions of extractive practices have increasingly challenged traditional perceptions of extractive processes as 'natural' and purely economic. The mine as an object of ethnographic investigation has been transformed by the way that extractive processes and their potentialities are being reconceptualized. Referring to the mine as a multifarious construction allows for an understanding of a mine as beyond a static space; as a mobile and relational space (Appadurai 1996). Ethnographic enquiry examines the question of 'where' the mine is by exploring the plurality of processes that result in its multiplication at different points within a society in which it is made visible in new and diverse ways (Brambilla 2015).

Spatiality has thus been an important notion in relation to mining. Spaces, Brenner (1999) argues, are subject to shifting and are constantly traversed by new practices, discourses and people, rather than being a self-enclosed geographical

container. These ethnographies show how the mine encompasses a place where different ideas of space, territoriality, identity and otherness are formulated, negotiated and 'acted' on and how this extends into broader issues concerning inequality, feasibility and morality. Therefore a mine could rather be portrayed as a 'perspectival' construction. Brambilla (2015) discusses this in the sense of a mine as a set of relations and experiences that are not uniform, but rather vary in accordance with the point of view adopted in interpreting them, which changes depending on the context in which interpretation takes place. Spaces where mining takes place are also spaces that are encompassed with different socio-cultural, political, economic, environmental and historical settings, as well as the perspectives of varied actors, discourses and practices. This idea of the fluidity of space serves to underscore the dispersed nature of a mine.

As discussed in the Introduction, other knowledge produced in the context of mining can imply that resource extraction can be a 'catalyst' for a range of socio-cultural change; however, the mine is not discrete in this sense. A mine is not an isolatable catalyst with effects which spread outwards. Instead it has dispersed effects in parallel with its dispersed presence in people's lives. An ethnographic approach draws attention to the complexity of change occurring in the context of mining. For example, what is the nature of change being experienced? Why is this change occurring? What are the meanings behind the actions that enforce these changes? The value ethnography brings to the anthropology of mining, is that it does not focus just on 'bad things' occurring as evidence of broader change, nor does it assume that all change is manifested in the same way, at the same level. It looks at how change is also occurring internally through social organization and how local agency is applied to changing circumstances, bringing about broader change too. Local people are not passive recipients of change but are active and important agents in the operations of mining. This could be in multiple ways such as employees or protestors. For example, the Huli people have shut down the natural gas plant at Hides, Hela Province several times. The Porgera mine depends on this plant that is located in Huli territory. Mining development is therefore a co-operative endeavor, as the mining company relies on the co-operation of the locals to run a successful operation. Golub (2014) argues that while the mine is powerful and influential, it is also highly vulnerable, as like the Huli, the Ipili also have the power to disrupt

mining operations. This highlights how locals play an active role in mining development and the outcomes that ensue from it.

Golub's ethnography makes apparent the multiple forms the mine can encompass and by conceptualizing it as beyond a physical entity, explores the effects of mining through a new lens. Golub articulates how the mine's effects are not all visible, as his ethnography offers valuable insight into the socialized role of the mine as it harnesses power to reform Ipili identities in decisions concerning who receives mining payments. For the Ipili, there is much flexibility within their fluid, cognatic kinship system in how they define themselves as a group. However, being 'feasible' for mining wealth requires a form of indigenous sociality made up of clearly delineated and fixed groups that have clear ties to separate areas of land. With the mine's power resting on bureaucracy and regulations and its ability to control these to suit its own interests, it is apparent how the mine has the power to compel the Ipili to represent their identities in a way that fits within a regulatory framework. This is because belonging or not belonging to a clan determines who does and does not receive payments (see also Jorgensen 2001 for a discussion of similar issues surrounding the Frieda mine). Golub's (2014) use of 'leviathans' as an analytical tool to describe the multiple forms of the mine highlights how it establishes itself as an actor in multiple contexts and locations. His ethnography, therefore, makes it apparent how the mine becomes a legitimate player in the framework of the nation. This is because it is equally appearing as an actor in parliament or local government office, while also participating in decisions concerning services, contracts, allowable amounts of disruption and environmental degradation. This reinforces how the mine is more than a physical entity as it highlights its power and influence within bureaucratic and political contexts. Banks and Ballard (2003) argue that closer attention to this internal structuring and politics of mining companies offers great insight into the anthropology of multinational capital, global processes and its engagement with local communities. Further fragmentation of the monolithic image of the mine can be seen through the interactions between the local and national contexts, which span cultural, spatial, and temporal divides (Banks and Ballard 2003). This is made apparent through the creation of new subject positions and the way locals are seen as 'out of time and place' for modernity, which will be discussed further on in relation to new forms of inequality in the national context.

Jacka's ethnography highlights this dispersed reality of the mine as it explores how the mine is embedded in social and cultural concerns due to the significance of the land to Ipili identity. Jacka argues that "while the Ipili desire the benefits that are associated with development and actively court resource exploration on their own lands, they simultaneously describe these changes as undermining the very foundations of their universe" (2). Through examining the interconnectedness of the environment and its relationship with human affairs for the Ipili, Jacka's ethnography explores the contradictory tension between the active demand for socioeconomic development and the subsequent damage of the environment that this development introduces. By examining the Ipili's connection with the land and how this articulates with global processes, Jacka essentially re-emplaces the mine in space, going beyond viewing mining development as an economic phenomenon that involves the extraction of raw materials from the land, but as embedded within a moral and cosmological landscape. For the Ipili, gold is a cosmological resource as gold deposits are the products of their ancestors. In regards to the mine "gold is the shed skin of a python spirit that their ancestors made sacrifices to in the recent past (2, 3). This is a clear example of the dispersed reality of a mine as it highlights how extracted materials are socialized products and their extraction is embedded within complex social and economic processes. Material change in the land runs parallel socio-economic changes for the non-landowning Ipili. This emphasizes the complex and uneven ways that development can occur for local communities and the unexpected outcomes that it creates (Smith 2008). However, as will be discussed further, these outcomes are also determined by the agency harnessed by locals in these changing circumstances.

Wardlow's ethnography (see Chapter Three) uses mining development as a point of entrance into her discussion of gender and the changes that occur within this important aspect of Huli social organization. Using the mine as a backdrop in her analysis of change in Huli society reinforces the dispersed reality of the mine. This is because it reverts away from the idea that change is only occurring within the space in which the mine operates, but that the mine is also generating changes to the internal organization of groups living at a distance to it. This highlights how ethnographic enquiry explores where the mine physically is and where change can be seen. While the mine provides the context in which changes in gender relations

occur, the reshaping of the bridewealth system is elicited by the agency of *pasinja meri*.

Local Agency in the Process of Social Change

The mine can therefore be seen as a necessary, but not the only condition to account for the nature and also the extent of the social changes different communities have experienced. Through this exploration of the mine as more than a discrete physical entity and what this means in terms of change, it allows for an understanding that while the mine may be central to change, change is not simply a centre/periphery or an active/passive dynamic, in that it is not radiating from a single source. Impacts of mining are not a case of unidirectional cause and effect. This highlights the value of ethnographic enquiry as it examines how communities creatively respond to change and incorporate and embrace modern practices in terms of their own identity and culture. By understanding mining and change in this context, these ethnographies avoid reiterating a fatal impact scenario discussed in the Introduction. This is because they reinforce that change is an ongoing process for communities whose cultures and way of life are not stable or fixed and who actively interpret and evaluate the changes happening in their lives. This can be further understood by looking at how these ethnographies portray indigenous people and their responses to change and economic engagement.

The value of ethnography is that it brings together both context and culture in discussing change. By this I mean that it combines culturally constituted aspects of a situation in order to describe the nature of change and the context it is occurring in. For example in Jacka's ethnography, change that is occurring is not all externally imposed. While it can be seen that mining is the context in which it is occurring, change can also be attributed to local agency and the evaluative processes individuals apply to new circumstances. This can be seen through people moving closer to the highway in order to partake in modern consumption practices. More broadly, this extends into the emergence of the 'life market' as those who are being denied wealth by the mining company seek it by raiding other clans. Change can therefore be seen in internal structures of social organization concerning exchange, alliance and warfare and the proceeding effects this may

have on producing and reproducing relationships. This highlights the actions of locals in the process of change as non-landowning Ipili play a key role in the emergence of conflict and new forms of inequality. Ethnographic enquiry in this context is thus valuable as it emphasizes that, despite the dominant position the mine occupies in the region, the impacts and influences that it has on people's lives are always worked out locally and never determined by the mine itself.

Golub's ethnography reverts away from the common argument of 'global' impacts on 'local' people. Instead he focuses on the agency of Ipili locals who actively courted mining development on their lands in the hopes of improving their socio-economic statuses. This highlights the agency of locals in the early stages of mining development. In his analysis of feasibility, Golub examines four dimensions: "the authorization of spokespeople, the disambiguation of kinship and ethnicity, pacification, and political agency" (19). While I have already discussed feasibility through the creation of landowner identities in the context of land registration, I want to focus on how this connects to political agency and the creation of the Ipili as feasible political actors at the national level. This is because of the role the mine has played in the creation of social change outside of the valley. The shutdown of the Bougainville copper mine in the development of the Porgera mine, Golub argues, left the national government in desperate need for money. At the same time it also demonstrated the inability of the government's use of military forces to coerce landowners into accepting a mine (Golub 2014). Due to these circumstances, the Ipili were in a strong position and seized at the opportunity to become political actors. In order for the mine to successfully open, the government and the mining company required they negotiate not just with the Ipili people, but with 'the Ipili' as a collectivity. As mentioned in Chapter Two, the Ipili used their agency to forge a corporate collective subjectivity that enhanced their actions as its representatives during the Yakatabari negotiations in 1989. However, how does the agency of these Ipili during these negotiations connect to the ongoing issues of identity outside of the valley? As I discussed in Chapter Two, many young landowning Ipili men sought to harness the political power that older men garnered during these Yakatabari negotiations and use it in the broader national context. This led to the formation of elites and highlights how power is established through acts of local agency as well as new forms of wealth.

This will be discussed further in relation to the stratification between grassroots Ipili and elites, and the emergence of inequality and concerns around feasibility.

The role of local agency in social change is also highlighted in Wardlow's ethnography, as changes to the Huli bridewealth system cannot be understood simply as an effect of the mine's presence. Rather, these changes need to be understood as a result of women's response to changing gender relations and the agency they exercised in these altered circumstances. Wardlow's analysis of *pasinja meri* and the agency they embrace shows, like in Jacka's, how the mine is not the sole determinant of change. Through the introduction of mining wealth and wage labor, the ideal of gender complementarity has been disrupted. Huli men are increasingly compelled to seek wage labour outside of the community, thus failing to carry out kin obligations. As previously discussed, Wardlow's ethnography does not focus on the simplistic idea of what men do and what women do, but rather the changes that are occurring within the category of gender insofar as it is an important component of social organization. This change has subsequently led women to feel abandoned and not cared for in line with previous cultural expectations. The link between gender relations and economic relations assists our understanding of how these structures are altered, not only through the introduction of mining, but also the role of local agency. As a response to changes in gender relations, women have exercised their agency through harnessing sexual autonomy and changing their movements through space, consequently leading to changes in the bridewealth system. As discussed in Chapter Three, women's agency is exercised in relation to changes in social structures, and they have the ability to influence the social field through bodily disorder and movement. In the following section I will discuss how Huli women 'move into a new space' in which they embody new and contested subjectivities and how this extends to encompass the issue of morality.

Creation of New Subject Positions and How This Links to Feasibility, Morality and Inequality

The ethnographies I have discussed have been shown to explore how local people use the presence and influence of mining as a platform from which to reformulate their social identities within a variety of cultural, spatial, and political structures.

Tensions between individual and collective sociality has been a broad area of interest in Melanesian ethnography and has been brought to the fore particularly in the way the new economic context engages with gender, social organization, exchange practices and the reproduction of society. Christianity has also had a significant impact on this tension within communities and I will discuss this further on in relation to Robbins' (2004) work among the Urapmin people. The introduction of money, commoditization, and Christianity have had a profound effect on Melanesian moral consciousness, generally in terms of developing a nascent individualism within a relational social context. Ethnography can contribute to this, as these ethnographies reveal, in terms of examining how changes can inform the shaping and reshaping of personhood. Ethnographic observation illuminates how the notion of the 'dividual' can be disrupted by the introduction of mining and that its presence strengthens individualistic tendencies against dividual sociality.

In Melanesia, individuals exist, however, they are an achievement rather than the baseline of subjectivity. The individual is not a bounded unit but more of an object of influence in relation to others and to groups. Strathern's analysis of the 'dividual' reflects this idea as she argues personhood arises from relations between others and the continuing relations that each person engages in. The dividual aspect of personhood stresses that each person is a composite of the substances and actions of others. The dividual person is composed of components from the entire community, as Strathern notes, "persons are frequently constructed as the plural and composite site of the relationships that produced them" (1988, 13). The model of kinship that Strathern (1988) discusses is very fluid, cognatic, and open to new connections with each other. However, as Golub and Jacka's ethnographies have highlighted, the mine demands bounded, fixed groups. This is another key way in which mining transforms the dividual person. Wardlow highlights this disruption too. For Huli women, using their body in a resistant way by becoming *pasinja meri* is a way for them to refuse to use their bodily energies for the wider social sphere, severing themselves from the social body and relationality so that they can no longer be transacted as an aspect of clan potency and the reproduction of Huli society.

In Melanesia, possessive individualism, that is, the proprietorship of one's own capacities, or being the owner of one's self, has been contrasted with more

relational notions such as dividuality and partible personhood (Sykes 2007). The capitalist mode of production creates a certain type of relationship between people and the things they produce, thereby making people think of themselves as separate individuals. Strathern (1988) argues that capitalist wage labor also promotes individualism by changing the meaning of labor. She argues that labor in the Melanesian relational economy is embedded in social reproduction, so is therefore always for others. Consequently, the wage an individual receives facilitates removing one's self from, or transcending, the relational economy by allowing them access to commodities and services they are unable to obtain through the relational economy (LiPuma 1998). However, this argument ignores processes of indigenization and the way in which aspects of modernity are mapped on to Melanesian sociality. Therefore earning a wage is not removed from the relational economy because people have relatives demanding money from them. Individualism thus does not replace, but is absorbed within and transforms, the existing relational context.

This can be seen throughout Jacka's ethnography. While highway life may be a place for Ipili to fulfil their desires for an individualism without the constraints of social obligations, they still have kin members who make constant demands on their monetary resources. In this context, individualism is not the sort imputed by the West, but is rather a nascent individualism tempered by a relational cultural background. While the formation of new subject positions explored in the ethnographies have individualistic potential, they co-exist with a relational element. This counters LiPuma's (1998) suggestion of the confrontation between the binding of sociality of community and the unhinged freedom of modern lifeways. Therefore, these ethnographies highlight that what has emerged rather is the co-existence of individual and relational orientations, particularly throughout Wardlow and Jacka's ethnographies. It also underscores the importance of recognizing the evaluative processes that indigenous people apply to their new circumstances in the new economic context. This reinforces how the presence of mining and local agency creates new subject positions and how this extends to morality, inequality and feasibility.

Morality plays an important role in Melanesian societies, not just in terms of the rules for behaviour but also the anticipation of consequences of keeping to, or breaking, these rules (Barker 2007). Robbins' (2004) ethnography *Becoming*

Sinners is an important contribution to the anthropology of morality in the region. His ethnography provides an example of how change extends to encompass issues of morality in the broader context of Urapmin society. Like Wardlow, Robbins uses mining development as the backdrop to his discussion of change and is thus an example of how change in this context is not manifest in the same way, at the same level. As discussed in the other ethnographies, locals play an important role in shaping outcomes of change and the meanings that are assigned to them. Robbins' ethnography also speaks to this idea, as he highlights the values that are foregrounded in times of change. He offers an analysis of change without talking about people having lots of cash and commodities from the introduction of mining or the direct effects of mining. Rather he discusses the processes of social and cultural change through competing moral orders between Christianity and traditional Urapmin religious beliefs.

As Robbins puts it, "the Urapmin now construct themselves as ethical subjects under a Christian moral system that condemns the will while at the same time they continue to live in a world that demands they create their social life through wilful action" (2004, 225-226). While Christian culture rapidly assumed centrality in Urapmin life by replacing many traditional religious beliefs and practices, it has not necessarily changed the way people live and relate to one another. They recognise the individualist nature of Christian personal salvation, however, they also view their communal daily activities in traditional, relational terms. He examines how, in the context of Urapmin morality and sociality, traditional moral thinking and social practices make achieving Christian ideals impossible. At the same time, Christianity condemns many traditional acts as sinful, highlighting the Urapmin's struggles with living with the counterposed values of two different cultures and how this makes their experience of cultural change much more difficult. Like Robbins, the idea of competing moral orders fits in with Golub and Jacka's ethnographies. While Robbins uses Christianity and change as his focus, Golub and Jacka highlight moral differences in relation to inequality and notions of feasibility. As I have discussed in Golub's chapter, grassroots fail to be seen as feasible actors in contemporary society, particularly if they fall on the wrong side of the moral ledger between town and village life. This highlights the competing ideals that are created both between elites and grassroots

in the context of morality and how issues of feasibility and inequality emerge both between these separate groups and within them too, in the local context.

Both Golub and Jacka's ethnographies highlight how the formation of new subject positions, has led to the emergence of inequalities at the local level between those landowners who control mining wealth that become an elite, and the vast majority who receive next to nothing. Banks et al (2013) argue that, "the layering of spatially and socially uneven access to resources from mine operations onto these already diverse communities produces complex patterns of inclusion and exclusion" (490). This new form of wealth introduced by mining development, has therefore led to the emergence of class distinction and economic inequality between locals, as consumption has demarcated incipient divisions (Connell and Lea 1994). This highlights the dispersed reality of the mine as the process of resource extraction has the capacity to re-form not only the physical terrain but also the socio-cultural and political context upon which it makes it mark. Golub and Jacka examine and problematize the ways in which extractive projects are interwoven within their sites of operation in powerful political and socio-economic ways (Ey and Sherval, 2015), and how this leads to the alteration of place-based identities and relationships.

The growth of inequality from the presence of mining can be conceived in terms of the intersection between geography and hierarchy (Banks 2009). In terms of geography, Banks argues that those living within the SML have received large compensation payments and have been at the centre of the economic relationship with the mining company. This geographic inequality creates tensions throughout the Ipili community, as many groups outside of the SML have been vastly, if not more, impacted by the mine's presence. Jacka's ethnography demonstrates the existence of this geographical inequality as he highlights how the division of groups into landowners and non-landowners acts as a powerful instrument in social transformation. Much of the source of conflict around the Porgera mine in the region, as Jacka explores, is driven as much by the marginalization of certain groups in terms of development, as it is by the distribution of benefits to the insider groups. This division and the marginalization that accompanies it sets the scene for the development of both migration and inequalities (Banks 2009). As Biersack (2006b) explains, people who were previously kin are now referred to as enemies because of their unwillingness to distribute cash widely. This unequal distribution,

therefore, must be understood as both historically and culturally situated, as this geographic inequality is closely linked with the new meanings and value of land that has been produced, through the formation of landowning and non-landowning groups. For the Ipili, conflict between SML relatives and those living outside of the SML, downstream, traditionally are bonded traditionally through descent and affinity, as well as the ethic of resource sharing within a "sociomorally benign ecology of life" (Biersack 2006b, 265). This means that pollution of the lower Porgera by relatives living within the SML produces moral outrage, as they do not share their proceeds of mining (Biersack 2006b). Jacka discusses how formerly powerful and wealthy landowners in lower Porgera found their wealth being transferred to the upper SML landowners. This leads to the issue of the formation of hierarchy, which continues to be a powerful process at work within Ipili society. Banks (1999) provides an example of the influence of existing hierarchical structures within Porgeran society where two recognized big-men received 75 percent of the largest compensation made in 1992, K520,000. Jacka's ethnography highlights how there has been a reversal of the big man model, as wealth has become about attaining and possessing it, rather than gaining power through its redistribution (see Chapter Four).

As a response to the unequal distribution of mining wealth, many non-landowning Ipili have reformulated their social identities in new spatial contexts by moving closer to the highway, in order to engage in consumption practices. This reinforces the fluid nature of Ipili sociality. The life market serves as an important example of how change in social organization such as warfare, alliance and exchange has been due to the active response by locals from economic inequality in the local context. In order to access this wealth, men harness disruptive power through ambushing relatively wealthier social groups in surprise attacks, in the hopes of extorting mining money in the form of compensation.

The social breakdown that has become apparent through economic inequality and the role locals play in changing circumstances, reinforces the mine as being a dispersed entity. This is because its effects are made present in new ways, namely through highway life and the life market. Reiterating the mine's multiplicity at different points within a society, it can be perceived that while it may not be physically visible in times of change, it still remains present as people 'embody' the values it has introduced, such as desire for wealth. This 'embodiment'

is made through the way in which the Ipili that Jacka discusses, encompass new subject positions in order to accommodate for these changing circumstances.

Local inequalities have extended into the broader national context as elites have used their access to mining wealth as a platform to reformulate their social identities in the political sphere. This has led to issues surrounding the notion of feasibility, where a concern with the preservation of 'original culture' has become central to national identity. Golub argues that rural, usually poorer, Ipili are expected to maintain the nation's image as 'traditional', and are expected to fulfil this image as they are not seen as fit for urban life. Elites in Port Moresby romanticize a traditional 'Melanesian Way' and feel betrayed by rural people who fail to conform to their expectations (Golub 2006). The Ipili are also not necessarily living an isolated, traditional life but are thoroughly 'modern' people engaged with the same factors that influence life in urban centres, however, in different ways. As previously discussed, the Ipili have shown to be innovative in their relations with the mine and cope with changing circumstances in their own novel ways. However, they are critiqued by elites for not living as grassroots in the 'right' way. As discussed in Chapter Two, much of the tension that lies here is through the fact that cultures are innovative and change over time, however, much of this change is elicited by the state and the mine, who demand that the object of its gaze remains static (Golub 2007) and are essentially fixated on the view that landowners are timeless and unchanging. This highlights how 'the mine' is seen as more of a legitimate actor than 'the Ipili' within the nation, and this is because, through the power it harnesses, it has the ability to change the way in which the Ipili conceptualize themselves as moral beings. The consequences for this, is that the Ipili, are seen as 'out of place' and 'out of time' for modernity. It has become apparent how the landscape of change in the emergence of the new economic context has led to a prevailing idea that the Ipili are not being the 'correct' sort of people. Both through PNG's moral imagination and the five themes used to evaluate village and town life (see Chapter Two), and the mine's ability to reform local identity. For *pasinja meri,* the creation of an 'imagined space' in which they move into, has both disrupted Huli social organization while constructing the idea that these women are also 'out of place'. The multiple processes that constitute economic globalization inhabit and shape various structures of the economic, the political, the cultural and the subjective. Among the most crucial of these effects is

the production of new imaginings of space and time. This highlights the multiple forms the mine embodies as the mine creates new spaces in which people occupy new subject positions.

Final remarks

This thesis has contributed directly to the literature in PNG concerning the anthropology of mining. By examining Melanesian ethnography in this context, I have analysed its value in examining the dispersed effects of mining on local PNG communities. My research has critically explored how ethnography highlights the occurrence of change through depicting a mine as a dispersed reality and how it articulates with local agency. As this thesis has shown, not all change is visible and externally imposed, but can also be associated with alterations in internal structures of social organization. This enabled me to explore ethnography in terms of how it combines culturally constituted aspects of changing circumstances and how they are altered too. This thesis has critically examined mining and agency and how they engage with changes in personhood, exchange practices, hierarchies, warfare, gender relations, inequalities, and ideas of feasibility and morality. This thesis has therefore highlighted how a broader understanding into the mining experience of diverse local communities requires going beyond viewing a mine by its geographical and economic dimensions, but as encompassed within social and cultural dimensions too.

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