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**THE POLITICAL ECOLOGY OF ROAD
CONSTRUCTION IN LADAKH**

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¹ “Thank you” in Ladakhi.

UNIVERSITY OF SUSSEX

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DPHIL IN DEVELOPMENT STUDIES

**THE POLITICAL ECOLOGY OF ROAD
CONSTRUCTION IN LADAKH****Summary**

This thesis explores the politics and consequences of road construction for local populations and migrant road workers in Ladakh. Through a political ecology framework, I consider road construction as the transformation of an environment in which different agents act through specific socio-political arrangements and for purposes that are socially and culturally mediated. Based on ethnographic fieldwork conducted in remote villages and among groups of Nepali and Jharkhandi road workers in Ladakh, the thesis documents the case of the Zaskar Highway, a 292 km long trans-Himalayan road that has been under construction since the 1970s. It analyses the reasons why states build roads, nationally and more specifically in the contested landscape of Ladakh; why people want roads; how people negotiate roads and their trajectory; and what the consequences of roads and road construction are in terms of mobility, isolation, resource use, livelihoods and well-being.

In the thesis, I question the roads-development nexus, and argue that the reasons why states build roads are extremely diverse and have changed over time. I argue that road construction is a highly political process determined by conflicting motivations and perceptions. I also argue that the consequences of roads are complex, often ambiguous and region-specific, and that gains and losses that occur because of roads and their construction are unequally distributed, within and between local and migrant populations.

The research makes an original contribution to road studies by studying the political, socio-economic and symbolic consequences of both roads *and* the process of their construction for the populations that live near new roads and those who build them. It also links ex-ante with ex-post road studies by looking at what happens during the process of construction. Finally, it contributes to Ladakh studies by documenting the history of road construction in the region and providing the first study of migrants in Ladakh.

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Chapter 1. Introduction

“You’ve come to Lingshed to study roads? Then here it is!” said Karma ironically (10 August 2007). It seemed surreal to find this unconnected portion of dirt track here in Lingshed, a three-day walk, several passes, and 92 km¹ from where the last road ended. It was the most remote (or “backward” as they say here) village in the district. It would take years to connect this portion of road to the network or before a single vehicle could drive on it. By that time, it would probably have to be rebuilt, as the slim dirt track would have been erased by wind, snow, and rain. But it was there, flanked by a remote side of the valley outside the village in such an undesirable place that it seemed unlikely anybody would ever use it.

One afternoon, I decided to follow the road and see where it led. It started near the *photang* (a seminar hall used by the monastery for teaching) and after the helipad at an elevation of 3,972 m. From there, it wound down an unstable slope. The road zigzagged through fields of boulders, either going around or halting when completely obstructed by very large rocks; sometimes, it was barely visible. In four places, the track was non-existent over a few hundred metres: first, it stopped before a barley field; then it stopped at the wall of the nunnery, starting again after the spring at the end of the nunnery’s land; it was then interrupted by a tree plantation so that I had to climb two walls to find it on the other side; finally, it was interrupted again by a barren barley field before ending abruptly at Tillingpa. After covering 3.42 km, it ended at the last house on that side of the village in front of cliffs high above the river at an elevation of 3,785 m.

If the landscape represents the physical distribution of social and political processes in space (Redclift and Benton 1994) or “the social world of people as expressed in their use of nature” (Sauer 1925 in Robbins 2004: 30), then this road has a story to tell. The presence and topography of the road raise several questions. Why is it there in such an incongruous place, kilometres away from the nearest road connection? What is the purpose of a road that leads nowhere? If this road challenges our assumptions about the

¹ According to the Village Amenities Directory 2006-2007.

rationale for road construction, then why are roads built, with what material, and what are their symbolic consequences? What do interruptions have to say about people's relationship with the environment, power relations, and social and political processes in the village? Who builds these roads? What are the effects of roads on local populations and on road builders? Finally, how are people-environment relationships transformed by roads and road construction?

This thesis explores the politics of road construction in Ladakh and the consequences of roads for local populations and construction migrants. It takes a broad perspective of the issue by (1) documenting the role of different agents involved in the transformation of the environment, (2) looking at the effects of both roads and road construction, and (3) investigating the link between the politics of roads and their consequences for populations, or between road negotiations and the unequal distribution of gains and losses as a result of roads.

Questions and arguments

Through a political ecology framework, this dissertation seeks to explore *the political processes of road construction* and assess *the nature and consequences of changes that roads bring about for local and migrant populations in Ladakh*. Specifically, I focus on the following questions. **(1) What can be learnt about the political economy of roads from the experience of road construction in a 'remote' border region?** In Chapter 2, I review the history of development of the road network in India and Ladakh, and demonstrate how road construction is driven by different and changing sets of priorities and by particular political and strategic considerations. **(2) What expectations and processes of change are set in motion by road construction in 'isolated' villages in a mountainous region?** Building on the experience of unconnected villages in Ladakh, I attempt to understand how isolation and mobility are experienced, why people want the road (Chapter 3), how they mobilize for it (Chapter 4), and how – depending on expected gains and losses, the use of different strategies, and their relative power within village institutions – they negotiate the trajectory of the road through the village (Chapter 5). In Chapter 6, I look at the role of road workers in the construction process. In Ladakh, and on the Zaskar Highway in particular, the immense majority of road workers are migrants. Therefore, I ask: **(3) how and why are migrant workers**

involved in the ‘micro’-economy of road construction, in what capacity, and under what conditions? Finally, I deal with the consequences of roads on the Ladakhi villagers (Chapter 7) for whom they were built in the first place, asking: **(4) *what are the consequences of roads and road construction in terms of resource use, mobility, isolation, livelihoods, and well-being?***

In this thesis, I argue that road construction is an eminently political process. Politics take place at the macro-level, where states and other large entities pursue specific goals and policies through large-scale construction programmes. At the same time, politics also take place at a more local scale, where the construction process is put in motion, steered, and constrained by diverging priorities and interests that determine to a large extent the distribution and nature of the effects of roads on local populations and migrant workers.

In Chapter 2, I focus on the role of the state and the history of road construction in India and Ladakh. I argue that, while road construction has long been justified in terms of development, the theories and discourses used to link roads to development have been largely debated and criticized. Theories have evolved to adapt to new development discourses, although the effects of roads remain difficult to assess, are contested, and widely misunderstood. Yet, as I suggest, judging roads’ effects exclusively in terms of economic development is necessarily limiting. States build roads to serve several purposes – socioeconomic development; employment generation; and administrative, political, and strategic purposes – and it is against these multiple purposes that the consequences of roads must be judged. Historically, the development of the roadscape in India follows distinct phases determined by different national policies. In Ladakh, the development of the roadscape has depended largely on geopolitical considerations and the perception of emerging threats from China and Pakistan. Lately, roads have been justified in terms of socioeconomic development. Hence, roads are very adaptive: theories and state priorities can change but, in the end, roads – sometimes the same roads – continue to be built to serve these changing priorities.

In the following chapters, I show that roads are not imposed on people but that people actively participate in the selection and development of road projects. In Chapter 3, I attempt to understand why people want roads: I reflect on notions of mobility,

remoteness, and isolation, based on people's perceptions and experience in Lingshed, a village situated three days' walk from the nearest road. 'Isolation' is often taken as the main justification to build roads but it is a social construct: it has both experienced and manufactured aspects, and the way it is experienced often differs from its manufactured aspects. Also, 'isolation' is rarely physical but has different dimensions – physical, cultural, economic, and political – that are unevenly, contingently, and seasonally experienced. Based on ethnographic observations, I argue that the condition of unconnected villages cannot simply be reduced to one of 'isolation' as this leads to several misconceptions about the situation and problems of off-road villages and the consequences of roads.

In Chapter 4, I focus on how off-road populations fight to have a road built to their village. I show how manufactured isolation differs from the way it is experienced in villages in Ladakh. I argue that, because Lingshed is constructed as an object of knowledge – a remote, isolated, poor, and backward village – *in fine*, this necessitates the construction of the road. The history of road construction in Lingshed shows that it is an erratic process marked by changing priorities, uncertain sources of funding, and interventions by officials and diverse groups of people. In this process, the road discourse is appropriated, reworked, and refracted for the road to be built. The way in which the landscape is perceived also determines how it is transformed, so that the struggle for a road often becomes a struggle about how the landscape should be socially constructed. In this process, people play a fundamental role: they have to remain united and their active involvement keeps road construction going and determines the development of the roadscape.

However, when confronted with road construction inside the village, this initial unity tends to break up and give way to divisions. Road construction through a village involves gains and losses for villagers, and the distribution of these gains and losses depends on the trajectory of the road. Chapter 5 deals with how people and engineers negotiate this trajectory. At the village level, road construction is a contentious matter that involves intense negotiations embedded within sociocultural practices; institutions and power relations; and the use of different means such as persuasion, individual negotiations, trickery, and force. Although the trajectory of the road is said to reflect "the willingness of the village", negotiation processes tend to create consensus based on

existing power relations. Evidence further indicates that engineers and contractors rely on the same internal mechanisms to suppress dissent and create consensus around a single road trajectory. Because such mechanisms tend to reinforce existing power relations, broader observations suggest that the gains and losses of road construction are unequally distributed and that vulnerable individuals and households are more at risk of losing out.

In Chapter 6, I deal with another aspect of road politics: through an ethnography of migrant road workers, I document the experiences of those who live and work on the Zaskar Highway, and the mechanisms through which workers deal with hardship and danger on a daily basis. I argue that, in road construction in such an environment, danger cannot be avoided, so that workers tend to tame it. The chapter uncovers a large contradiction: roads are built partly to provide employment and generate livelihoods but in reality exploitative conditions are created that maintain workers in a situation of dependence. I argue that the agency of workers is severely constrained by structural factors that, in many cases, prevent them from benefiting from the redistributive effects of road construction. At the same time, I show that migrants have agency on the road as they participate fully in the transformation of the Ladakhi environment and shape the trajectory of the road.

Chapter 7 looks at the nature and consequences of changes happening in villages that are situated on the road. I criticize the simplistic idea that roads increase mobility and act on people's livelihoods simply by connecting them to markets. Evidence shows that roads affect people's consumption, production, and use of resources, and that roads have significant consequences for people's livelihoods. Yet roads intervene in people's livelihoods in many different ways, and people's ability to grasp new opportunities depends on other factors as well. Road-linked transformations also increase inequalities. In Ladakh, roads fail to increase mobility, disconnect at the same as they connect, and fail to reform some aspects of isolation, especially those that are experienced seasonally. As I argue in this chapter, the consequences of roads are complex, often contradictory, and differentiated. They work through complicated inter-reactions, interplays, and adjustments. Also, road transformations happen within a continuum of change: roads are not responsible for every single transformation but often act in combination with

other factors, affecting the magnitude and rapidity of transformations. Hence, roads are better understood as facilitators rather than initiators of change.

1. Situating Ladakh and the road

This thesis focuses on road construction in Ladakh, a mountainous region situated in the state of Jammu and Kashmir (J&K) in northern India. Ladakh is situated north of the Himalayan range and bordered by Pakistan in the west and Tibet (China) in the east (see Map 1.1 below).² The region is characterized by high ranges, a semi-Arctic climate, and scattered villages that rely to a large extent on agriculture and pastoralism. Once an important Central Asian trading place located on one of the feeders of the Silk Route (Rizvi 1996, 1999), Ladakh saw this flourishing trade end with the closing of its borders towards the end of the 1940s at the time of India's partition and the Chinese invasion of Tibet. Since then, Ladakh has been a remote and 'isolated' border region of India, and Ladakhis have been depicted as a society of subsistence farmers and the last bastion of Tibetan Buddhism (although half the population is Muslim). Ladakh is also contested territory that has seen four wars with Pakistan (1947, 1965, 1971, and 1999) and one with China (1962). Parts of Ladakh are controlled by Pakistan and China, and its borders remain disputed. As recently as 1960, Ladakh was still unconnected by roads and today some villages remain several days' walk from where the last road stops, while road access to the entire region is restricted for nearly half the year. For Ladakhi villagers, road construction is accompanied by significant socioeconomic transformations and is embedded in wider political processes. Equally, because roads in Ladakh are built and maintained by thousands of migrant workers from Nepal and the plains of India, roads are linked directly to their economic livelihoods. Moreover, as

² Since AD 950 and for most of its existence as a separate entity, Ladakh was an independent kingdom until the Dogra invasion of 1834 (Rizvi 1996). In 1846, Ladakh was integrated into the princely state of J&K and became part of India with the accession of J&K to India in October 1947 (I deal with this aspect of Ladakh's tumultuous political history in more detail in Chapter 2). Administratively, since 1979 Ladakh has consisted of two districts – Leh and Kargil – of roughly equal population (117,000 and 119,000, respectively, according to the 2001 census). Instead of devoting a large section to Ladakh in the introductory chapter, I introduce it in more detail in subsequent chapters where the information is most relevant. Hence, the history and politics of Ladakh are discussed in Chapter 2; the agro-ecological system and recent social transformations in Chapter 3; issues of communalism and the tribalization of politics in Chapter 4; Ladakh's institutions, decision making, and conflict resolution institutions in Chapter 5; its sacred landscapes in Chapter 6; and recent socioeconomic transformations in Chapter 7.

roads must be negotiated through landscapes that people inhabit, use, and imagine, both Ladakhi villagers and road migrants influence the process of road construction.



1.1. Map of Ladakh³

In this thesis, I look specifically at the case of the Zaskar Highway, a road that has been under construction since 1971 and will ultimately link the Indus Valley in the north to the region of Zaskar and the state of Himachal Pradesh in the south. Once the Zaskar Highway is opened, the region will be accessible overland all year round for the first time. The 292-kilometre-long road – whose trajectory follows the steep and narrow gorges of the Zaskar River and crosses the 5,060-metre-high Shingo La⁴ – is wanted by the people of Ladakh, the state, the army, and the populations of unconnected villages such as Lingshed who see in it a way of breaking out of their isolation. Yet different agents want the road for different purposes and with distinct trajectories. The

³ Original map: <http://www.leh-ladakh.com/kashmir-india/jammu-kashmir-map.html>

⁴ I later found out that the construction of a tunnel under the Shingo La is under consideration, although this has never been mentioned by engineers in the field and is almost never mentioned in the press (Lohumi 2007). Note that the suffix *la* in Ladakh designates a pass.

Zanskar Highway, under construction on four different sections, also provides employment to more than 1,200 seasonal and permanent road builders and their families. These workers – who originate from Nepal, Jharkhand, Bihar, and West Bengal – live and work in incredibly difficult conditions, moving with the road as it slowly progresses into inhospitable territory. Although they seem to have so little agency over their own lives, they also influence the trajectory and pace of construction of the future road. The experiences of these men and women from remote villages in Ladakh and groups of Nepali and Jharkhandi road workers provide first-hand material that helps us understand the rationale behind road construction, how people negotiate roads and their trajectories, and what the consequences of roads and road construction are for people in terms of human-environment relationships, livelihoods, and well-being.

2. Approach and contributions of the thesis

Contributions of the study

This thesis builds on the political ecology literature, which provides the theoretical framework that informs this work. Besides this, the thesis draws mainly on Ladakh studies and an eclectic body of road literature;⁵ it is to these two bodies of scholarly research that the thesis aims to contribute. In the road literature, road construction has long been construed as a technical and socially neutral intervention (Bryceson et al. 2008; Edmonds and Howe 1980; Edmonds 1998; Njenga and Davis 2003).⁶ roads are built to increase mobility and connect people to markets, and are envisioned as part of a wider development and modernization project (Ferguson 1994; Masquelier 2002) whose benefits are difficult to evaluate (deGrassi 2005; Molesworth 2001; van de Walle 2002) and are therefore listed rather than discussed (Wilson 2004: 525). Although there are

⁵ The road literature consists of a large body of work that draws on diverse disciplines such as ecology, economy, political science, political economy, history, planning, law, geography, and anthropology, as well as feasibility studies, managerial reports, and impact studies of specific road construction projects.

⁶ “Traditionally, transport investments are seen as a technical process through which the cost of physical movement is reduced, resulting in increased economic efficiency. However, conventional transport planning does not primarily preoccupy itself with the social outcomes of the economic benefits that it promotes. The flow of benefits to the poor is assumed to occur through a ‘trickle-down’ process” (Njenga and Davis 2003).

many other rationales for road construction – notably political, administrative, strategic, and symbolic – these are rarely mentioned. In contrast to apolitical road studies, this thesis focuses on the politics and political economy of road construction at different scales.⁷ At the macro-level, the thesis pays close attention to the wider sociopolitical context, processes, and debates within which roads and their construction are embedded. At the local level, the thesis focuses on the micropolitics of road construction and the unequal distributions of gains and losses for local populations and workers. The politics and consequences of roads are considered here as two interdependent issues, since the former explains how the socioeconomic consequences of roads are distributed while the latter enables us to understand the underlying political dynamics that govern road construction. Together, road politics and changes in livelihoods explain how and why roads are built, and determine the way in which the environment is used, perceived, and transformed. This thesis contributes to political ecology by introducing the concept of ‘roadscape’, i.e. the part of the landscape made up by roads: a discontinuous, uneven, fluctuating and always incomplete physical network which is used, imagined and given meaning by different agents. The roadscape is part of the landscape, but also influences the way the landscape is transformed and perceived. The thesis looks at roads as “fully part of social life” (Nyerges 1997a: 12), examines their social and cultural biography, and links particular individual practices and socio-political processes to the development of the roadscape.

Moreover, although roads are built to generate incomes and employment,⁸ road studies generally separate the effects of roads from those of their construction. Studies that deal with the impact of roads tend to negate road construction while those that focus on the redistributive effects of road construction ignore the broader socioeconomic and symbolic outcomes of roads – this leads to a partial understanding of the range of outcomes.⁹ This thesis bridges the gap by considering the effects of roads in their

⁷ Following the precedent set by Perz et al., this thesis takes “a multi-faceted theoretical approach” that accounts for the roles and perceptions of a plurality of agents whose motivations and understanding differ (2007: 250-3). Following the path traced by Blaikie et al., the thesis uses “a theory and methodology [that] can transcend the limited appraisal of roads per se, and considers the total context within which roads are planned, built and used” (1979b: 3).

⁸ This is especially the case when labour-intensive methods are employed. See, for instance, Edmonds and Howe 1980; Klatzel 2000; Lebo and Schelling 2001; Bryceson et al. 2003; SSATP 2007; 2009a; 2009b.

⁹ As Bryceson et al. write, transport has a dual role: as a construction industry and service industry, and both “can be a direct source of livelihood (employment) or, acting together, can support the conduct of livelihood activities” (2003: 3).

entirety and by dealing with the consequences of both roads and road construction. It also considers the wide spectrum of socioeconomic and symbolic outcomes of roads, and pays due attention to the dynamic nature of environment-society relationships. Using ethnographic methods and qualitative tools, it focuses on the “here and now” (Das 1995: 2) and on the bottom-up experiences and perceptions of different and socially stratified groups of actors, such as local villagers and migrant workers. In a literature dominated by *ex ante* assessments of roads’ potential effects and *ex post* studies of roads’ consequences that are often based on assumptions regarding pre-road conditions, the thesis focuses on what happens during the construction of a road both in villages that the road will cross as well as at the construction site. This offers an original perspective on road negotiations and power struggles.

The thesis also contributes to Ladakh studies. Despite having been identified as one of the main factors of change in the region, roads have received scant scholarly attention in the literature on Ladakh.¹⁰ The only exception is the road from Kargil to Padum in Zaskar, which was completed in 1980 and is the object of two short academic articles (Crowden 1995, 1996) and one short but beautifully illustrated travelogue (Ducoin 2000). The three studies present an interesting account of transformations attributed to the construction of the road, based on a blend of *emic* and *etic* perspectives, but they remain largely factual and do not really do justice to the complex and interesting phenomenon of road construction or to the participation of Ladakhi populations in the process.

Finally, the thesis offers the first study of migrants in Ladakh, a field of studies from which migrants have been conspicuously absent. Migrants in Ladakh are doubly absent: both in reality as well as in the literature. The migrant workers I followed can rightly be described as living ‘in the shadows’: literally, as they constantly live, move, and work in the shadow cast by the Zaskar gorge; but also figuratively, ecologically, and economically speaking, as migrants fill the less desirable “niches” of the economy (Demenge 2009). Yet, despite their being agents and builders of Ladakhi development, building roads that are not for their use, migrants remain largely absent from local

¹⁰ For Norberg-Hodge, “The building of a road connecting the town with the outside world has hooked Ladakh up to the global macroeconomy and concentrated local economic activity in the capital” (2000: 116).

histories and consciousnesses. Migrant workers die because of the snow in early autumn (as in Padum in 1987: see Crowden 1996), they die in rock falls and landslides,¹¹ but most deaths are quickly forgotten or ignored. In Ladakh, road workers are mostly feared: the first time I encountered some road workers moving and working in a black cloud of flames and burning tar on the Leh-Manali road in 2001, they were presented to me as “convicts sentenced to road building”, as if one had to be a criminal to deserve such hardship. There are often unconfirmed rumours about Bihari road workers stealing goats, being quick to brandish their knives, or throwing burning tar at passing cars and buses, but there is no serious knowledge about them.

Migrants are also absent from the scholarly literature on Ladakh.¹² Bray mentions in *Ladakh Histories* how Urdu, Hindi, English, Ladakhi, Tibetan, Kashmiri, Punjabi, Nepali, and the mother tongues of many visitors can be heard in Ladakh (2005). Van Beek and Pirie write that “the days when one could imagine Ladakh as having a single culture, economy, ecology and political system are long gone”, pointing to the complexities of Ladakhi societies and environment (2008: 8). Ladakh is not a homogenous whole. Earlier, Aggarwal also called for an anthropology of Ladakh that would rightly grasp this complexity and free itself from the “prison-like modes of thought which academic territorialism and imagination have defined and concretised” and in which “inhabitants or ‘natives’ living in these areas are then ‘incarcerated’ and quarantined” (1993: 21-2). Yet, one is forced to observe that, barring western missionaries and explorers and a few remarkable studies in which migrants are mentioned (Aggarwal 2004: 82-3; Crowden 1996: 57; Gutschow 2004: 43), populations other than ‘native’ Ladakhis remain largely unresearched, and the wide complexity mentioned above, unexplored. Therefore, by looking at migrant road workers, this thesis aims at contributing to an unresearched aspect of the Ladakhi “ethnoscape” (Appadurai 1996) and doing justice to them by documenting their contribution to the development of Ladakh.¹³

¹¹ In Chilling, seven workers died in four distinct accidents between August 2006 and October 2008.

¹² However, any visitor to Leh, Khaltse, or Padum will inevitably notice Kashmiri traders and bakers, Punjabi cooks in *dhabas*; gangs of Bihari agricultural coolies; Himachali hairdressers; Nepalis involved in construction, hotels, and restaurants; “shoeshine boys” from Jaipur; and beggars, road workers, and soldiers from all over India, not forgetting the hordes of Indian and foreign tourists.

¹³ This aspect might also be of interest to migration studies as it displays a peculiar case of rural-to-rural migration and provides information on the recruitment, organization, and living and working conditions of seasonal and permanent migrants to Ladakh. However, I do not venture here into the field of migration studies.

Political ecology and the constitution of society

This study is informed by an eclectic and multidisciplinary framework that draws on several contributions to the field of political ecology. Political ecology aims to bridge the gap between the study of society and environment (Swyngedouw 2003).¹⁴ This thesis adopts a sociocentric approach to human ecology by considering how humans exploit and transform the environment through social and political arrangements and for purposes that are socially and culturally mediated (Nyerges 1997a).

Road construction transforms the environment. The political ecology approach takes as its theoretical point of departure the fact that environmental transformations often have social, political, and economic causes, and that environmental change has sociopolitical consequences (Blaikie 1989). Yet stakes in environmental change and its consequences are not undifferentiated among people and are socially mediated (Zimmerer and Bassett 2003). As defined by Blaikie and Brookfield, political ecology “combines the concerns of ecology and a broadly defined political economy” and “encompasses the constantly shifting dialectic between society and land-based resources, and also within classes and groups within society itself” (1987: 17; Forsyth 2005; see also Peet and Watts 1996; Robbins 2004; Walker 2005).¹⁵ Through this approach, I aim to capture the dynamic relations between the environment and the socially differentiated groups and individuals

¹⁴ Following Lefebvre, some authors speak of “socationature” to mean that society cannot be separated from nature and that all things are “a ‘hybrid’, part social, part natural (but without discrete boundaries)” (Swyngedouw 2003: 96; see also Harvey 1996; Escobar 1996). Boundaries between what is “social” and what is “natural” are often difficult to draw: in every phenomenon and every object, both the social and natural are nearly always intertwined. Yet rejecting any sort of dualism is impossible, as in the definition of “socationature” itself. Although an interesting philosophical question, such a position is of limited use in an empirical and heuristic process, and is confusing if one wants to understand the relationship between society and its milieu. This thesis does not seek to avoid any form of dualism between what is “human” or “social” on the one hand and what is perceived, including by participants, as the “environment” or “nature” on the other. Having said that, it acknowledges that the distinction is blurred, that both concepts are socially constructed, and that natural phenomena are often partly social or at least their effects are socially mediated.

¹⁵ The term “ecology” in “political ecology” is subject to controversy (see Walker 2005). Forsyth (2005: 2-4) identifies six different interpretations of the term in the “political ecology” literature: (1) the study of the “interaction of biophysical processes, human needs, and wider political systems” with a focus on the social causes of environmental issues; (2) “the politics of ecology” in the sense of political activism in favor of [...] environmentalism”; (3) the study of the interconnectedness and interdependence between sociopolitical units and their physical environment; (4) a “Marxist debate[] about materialism, justice, and nature in capitalist societies”; (5) “the politics of environmental problems without specific discussion of ‘ecology’”; and finally (6) what his work consists of: a study of “the political forces behind different accounts of ‘ecology’ as a representation of biophysical reality”. Although they differ in terms of focus and degree of trans- and inter-disciplinarity, what all approaches have in common is that they deal with society-environment interactions and how environmental issues and perceptions are political in nature.

who use and transform this environment. The study unveils conflicting interests among villagers and road builders and shows how apparent consensus often breaks down when people are faced with real losses and benefits associated with road construction.

Furthermore, if human use of the environment is mediated through social and political arrangements, then conceptualizing the nature of these sociopolitical arrangements – and how they change – is a priority. The approach adopted here focuses on agency while integrating the wider role of institutions in structuring behaviours. People negotiate the road and its trajectory through institutions: in doing this, they reproduce and enforce them. Giddens's structuration theory is taken as a fundamental point of departure (1984): social structure is seen as both enabling and constraining individual agency while individual agency reproduces or changes the social order. Hence, the structure is both the medium and the outcome of agency.¹⁶ This theoretical view provides us with an understanding of social institutions seen in a dynamic and processual way as the product of regularized social practices (Mearns et al. 1998; Mehta et al. 1999). However, institutions can also be contested. Institutions and structural principles, which “express forms of domination and power”, can be understood and perceived as rules, but such rules are “characteristically subject to a [...] variety of contestations” (Giddens 1984: 18). Institutions can be maintained by people's behaviour but also changed as people might alter their behaviour and choose to negotiate outside of institutions, therefore contesting them and producing institutional change.¹⁷ In Ladakh, road politics among villagers and migrants end up both reproducing and changing institutions. Migration and road construction are sites of the expression of power struggles and provide further momentum for change and resistance to change in access to resources and livelihoods. The decision to abide by or contest institutions is

¹⁶ Giddens describes how social systems are “reproduced social practices”, which therefore have “structural properties”; among them, ‘institutions’ are a particularly persistent embedded social practice that orients the conduct of action and is involved in the reproduction of ‘societal totalities’ (1984: 16-7). Therefore, institutions are what people do but they also structure action: they are both structured and structuring. This is what he calls “the duality of structure”: “The structural properties of social systems are both medium and outcomes of the practices they recursively organize. [...] Structure is not to be equated with constraint but is both constraining and enabling” (Giddens 1984: 25). In the Ladakhi context, the idea is well illustrated by the concept of *trims*. Pirie (2002) mentions how *trims*, or village customs regarding weddings, family structure, and succession, are respected and accepted by all but can also be changed by practices. Although, in theory, *trims* are fixed rules, she writes, they are negotiable. Building on different examples, she shows that “*trims* are [...] customs that have developed rather than rules decided upon in village meetings. They are seen as subject to gradual change but they cannot be altered at will by the villagers.” (Pirie 2002: 177).

¹⁷ However, challenging institutions can also lead to re-enforcing institutions as breaking the rule offers the opportunity to reaffirm the rule. See Chapter 5 on institutions in Ladakh.

very much linked to people's interest and relative power within institutions. This behaviour is better understood through Benda-Beckmann's concept of "forum shopping" (1981) in which people chose from different institutions to settle their disputes, depending on expected outcomes.¹⁸

This approach, as Long and Long write, aims at "reconciling structure and actor perspectives": it "emphasizes the interplay and mutual determination of 'internal' and 'external' factors and relationships, and [...] provides accounts of the life-worlds, strategies, and rationalities of actors in different social arenas" (1992: 4). People are agents but, in some cases, "The power of the individual is confined by a range of specifiable circumstances": "Action depends upon the capability of the individual to 'make a difference' to a pre-existing state of affairs or course of events. An agent ceases to be such if he or she loses the capability to 'make a difference', that is, to exercise some sort of power" (Giddens 1984: 14-5). In some cases, the weight of structural factors can deeply affect people's lives. This is especially the case for migrants in Ladakh and is why I use the concept of "structural violence" (Farmer 1997, 2004; Galtung 1969) in Chapter 6 to try and shed light on the wider sociopolitical forces at work in migrants' lives.¹⁹ I try to explain why migrants come to work and risk their lives on roads in Ladakh, and why they see no benefit in their well-being as a consequence of roads and road construction. Closed to a situation of social injustice, structural violence does not deny migrants agency but it certainly curbs it and puts some people at more risk of suffering and death than others.

Structuration theory is not exclusively reserved to the understanding of society, it is also used to understand society-environment relationships (Blaikie 1989). This work is guided by the perspective that the environment should be understood "as both the

¹⁸ Benda-Beckmann studies a dispute over the construction of a fishpond in a Minangkabau village in central Sumatra. She shows that the Minangkabau have a variety of institutions to deal with dispute settlement, institutions whose fields of jurisdiction overlap. Consequently, disputants choose from different institutions to settle their disputes, depending on expected outcomes – what she calls 'forum shopping'. Similar patterns are documented in Berry's historical work on colonial and postcolonial Africa, where increased competition led people to explore every available option to gain access to resources: community and descent-based groups, state-, judicial-, class-, and party-based affiliations (1989).

¹⁹ Structural violence was first used by Galtung to differentiate it from personal violence. Structural violence is not the violence that a particular person commits but that which is "built into structure" (1969: 171). Similar to Bourdieu's idea of 'habitus', it is both "structured and structuring", or "stricturing" in Farmer's own words (2004: 315).

product of and the setting for human interactions” (see also Coppard 2005; Scoones 1999: 490). The environment partially shapes/enables society. In an environment such as Ladakh, ‘mountain specificities’ (Jodha 1992) play a role in providing both opportunities and constraints for society. Societies in turn shape the environment, providing new possibilities and constraints that give rise to new societal choices and different social organizations.

Such a structuration approach to society and to society-environment relationships also allows us to break through homogenous and static conceptions of ‘communities’ (Barlett 1980; Orlove 1980). By paying attention to “conflict and power relations among groups and individuals of different statuses in society” (Nyerges 1997a: 2), it documents unequal access to resources and the differential consequences of road construction on groups and individuals, as well as the extent to which road construction gives momentum to the contestation of existing power relations.²⁰ The study also attempts to move “beyond the ‘gender blindness’” (Rocheleau et al. 1996) by documenting the differential aspect of development and road construction for men and women in terms of access to resources, drudgery of work, and responsibilities.

Political economy and the politics of roads

This study attempts to connect the question of roads to the political economy/ecology of the region and village politics in Ladakh. Why are roads built in this border region? How do diverging conceptions of the landscape lead to or prevent road construction? How do these different views confront each other and with what results, from the micro-level to that of national and regional politics? Road construction is surrounded by and intertwined with power and politics at every level; “progressive contextualization” allows the “placing [of human actions] within progressively wider or denser contexts” (Vayda 1983 in Robbins 2004: 38) and looking at road politics through different “scales of social and ecological processes” (Zimmerer and Bassett 2003), from the local to the regional and from the micro- to the macro-level.

²⁰ DeGrassi also notes that the participatory approaches used in transport planning “suffer from assumptions of relatively homogeneous communities and harmonious deliberations” (2005: 53).

If political ecology and structuration theory shed light on social arrangements and political bargaining within villages and among migrants, the role of the state and the interface between people and the state – and between states – deserve more specific concepts. Roads are often built in the name of socioeconomic development and sold as poverty alleviation schemes but their consequences (intended or unintended) should be assessed in terms of power and control (Blaikie et al. 1980; deGrassi 2005; Ferguson 1994). Wilson attempts to present “an approach that situates mobility and movement, routes and roads, within relations of power and political economy” (2004: 526). She brings in the notion of ‘territorializing regime’: “a term that incorporates ideas of social space [...], political field [...], hegemonic authority [...] and geo-political re-ordering of spatial scale” (2004: 529). The term ‘regime’ signifies the presence of a centralized political organization and the interaction of opposing agents, dominant and oppositional, with a common understanding of the rules of the game being played. ‘Territorializing’ means that territory – a land both imagined and materialized – is taken as the defined space over which political control is exercised. Hence, as she writes, roads are “a vital element in a state’s territorializing project, enabling sovereignty to be extended up to the frontier” and making, in Scott’s words, provinces and populations “legible” (1998).²¹ Roads are also linked to military needs, as in the views of military strategists and planners they are essential for the movement of armies and facilitate central control (ibid.).²² Understanding the development of the roadscape requires a close look at how a place is perceived, as well as geopolitical and strategic considerations.

What do routes and roads tell us about the political economy of the past and present state? In India as well as Ladakh, diverse narratives and priorities have guided the construction of roads. But why have roads become priorities and why has there been

²¹ Note that the notion of territorializing regime is not limited to the state but extends to a wide range of agents: “Territoriality is often a key element in the exercise of authority [...] By making and enforcing boundaries, by creating a turf, a quarter, a parish, a soke, a homeland etc., different socio-political institutions invoke a territorial dimension to their claim of authority and jurisdiction” (Sikor and Lund 2009: 14).

²² Scott examines the centralization of traffic patterns in eighteenth- and nineteenth-century France: on a pre-existing and relatively uncentralized network resembling “a dense concentration of capillaries” (1998: 73-4), planners and modernizers such as Colbert and later Legrand superimposed “a carefully planned grid of administrative centralization” (ibid.: 75), aligning communication and transport infrastructure to radiate around Paris “like the spokes of a wheel”. This followed aesthetic lines and aimed to maximize access and facilitate central control, allowing deploying more efficiently. It also constrained movement, empowered Paris by linking it to the provinces, and thus marginalizing provinces.

such a surge in road construction in Ladakh? As Foucault writes, “Territory is no doubt a geographical notion, but it’s first of all a juridico-political one: the area controlled by a certain kind of power” (in Crampton and Elden 2007: 177). How are roads linked to questions of power and contested borders? Echoing Ispahani (1989: 515), this study shows that “roads are both a geographical and a political idea, both an end and a means”, and they help define the state’s territorial reach. This is especially the case in Ladakh, a border and contested region that has seen five wars between 1947 and 1999. I deal further with these concepts and the case of Ladakh in Chapter 2.

There are many reasons why states want to build roads, and the theoretical framework used in this thesis accounts for this plurality of reasons. However, road development projects are not imposed on people: moving back from macro- to micropolitics, schemes are renegotiated as people actively participate in and fight for or against roads. “All forms of external intervention necessarily enter the life-worlds of the individuals and social groups affected, and in this way are mediated and transformed by these same actors and structures” (Long and Long 1992: 20). Development interventions and discourses are “refracted, reworked and sometimes subverted in particular localities” through micropolitics (Moore 1999: 655). To understand how this happens, one has to look at power relations, social inequalities, and the cultural, understood not as something fixed but as a site of contestations. It is through this “crucible of cultural politics” (ibid.) that the road, and with it access to new and existing resources, must be negotiated by different agents – villagers, engineers, contractors, workers – within different existing but flexible sets of rules and institutions. Through the process identified previously with regard to society and institutions, the rules that regulate access to resources and road construction are reworked while new configurations can reinforce or, on the contrary, provide the momentum to reinterpret and change existing rules and institutions (see Chapter 4). The case of road negotiations shows that people use different strategies to gain access to resources (Nyborg 2002) but that negotiations are embedded in Ladakhi conflict resolution and decision patterns (Pirie 2002).

Whether at a micro- or macro-level, the uses and transformations of the environment are often determined by particular constructions of the landscape, so that conflicting views of road building can often be traced back to these differing mental constructions. The

concept of ‘landscape’ is central to society-environment relationships.²³ The landscape represents the physical distribution of social and political processes in space (Redclift and Benton 1994). Hence, the environment is physical but it is also imbued with meaning and thus has social, cultural, and political dimensions. The landscape refers to this discursive nature, both ontological and ideological (Wolmer 2001: 7). The concept of landscape is relevant when applied to the whole region of Ladakh as a natural barrier and buffer against invasions or a vulnerable and strategically important region to be protected (as perceptions of Ladakh changed over the last century; see Chapter 2); as the crossroad of Central Asia or a “god-forsaken land of rock and snow” (Pandit 1997: 50), a marginal and backward district that had to be integrated and developed (Prime Minister Nehru in Pirie 2002: 259). The concept is also relevant when applied to specific places, mountains, valleys, and villages, which are alternately perceived as terrains of wilderness and adventure, traditional and untouched by modernity, or isolated and backward places to be connected; sacred mountains charged with religious symbols and inhabited by spirits, places to be preserved, or wild mountains to be tamed (see Chapters 4 and 6). These mental (and social) constructions of the landscape determine whether roads should be built, so that when people are fighting for or against roads, they are also fighting for different conceptions of the landscape. The landscape is material but also imagined; given cultural, social, and political meaning; and “bound up with regimes of power and knowledge” (Wolmer 2001: 7).

Thus, people’s conceptions of the landscape shape its use and transformation but the relationship is dual. It is also through interacting with the landscape and transforming it that it becomes charged with meaning and ideologically constructed: “Ways of acting in the environment are also ways of perceiving it” (Ingold 2000: 9). Cultural knowledge of the landscape is constituted through practice. As Ingold writes, “The world continually comes into being around the inhabitant, and its manifold constituents take on significance through their incorporation into a regular pattern of life activity” (2000: 153) – connecting at the same time landscape construction with livelihood activities. Ingold uses the concept of “taskscape” to designate the ensemble of tasks and activities performed by individuals, which gives birth to the landscape. The taskscape is the process whereas the landscape is the result. It is through the taskscape that the landscape

²³ The concept of “landscape” was coined and defined by Sauer in 1925 as geography was defined as the ‘interpretation of the landscape’ (1996 [1925]).

is transformed but also known and mentally constructed. This is true for Ladakhis (see Chapter 4) and also for migrant workers who have no pre-existing knowledge of the place: their reading of the landscape is shaped through their work as they transform the environment in which they live (Chapter 6). By performing different tasks, workers come to see the landscape in different ways, from engineers talking in front of a blank map and saying that “everything is possible” (anonymous, Khaltse, 27 July 2007) to the Border Roads Organisation (BRO), which describes its role as that of “mountain tamers” (see Illustration 1.2), to migrant workers who perceive mountains as dangerous and describe themselves as “puppets in the hands of nature” (Manmohan, Chilling, 14 June 2007). It is also by travelling through the landscape that people construct it (Ingold 2000: 193) and time and space are perceived (Harvey 1996: 210). Therefore, roads can be said to modify the landscape in two ways. Roads affect livelihoods and dwelling activities, and roads also shape movement: how people move, which places are crossed and known, and which places become marginalized and unknown (Chapter 7).



1.2. The Border Roads Organisation: the “Mountain Tamers”

Continuity, modernity, and change

Roads and road construction are linked to the ‘modernization’ project of society (see Dalvi and Verma 1984; deGrassi 2005; Ispahani 1989; Kreutzman 1993; Masquelier 2002). Njenga and Davis observe how “transport planning in developing countries is deeply rooted in the modernization paradigm” (2003: 219). Yet, beyond the common assumption that roads improve access, increase movement, connect to markets, and are conducive to development, what are their consequences? How do they contribute to wider transformations in society?

If the theoretical lens through which perceptions of change and ‘modernity’ are perceived informs the whole thesis, it applies particularly to this question. Road construction opens the debate on “modernity” (Masquelier 2002): the idea of rupture between tradition and modernity, as well as the nature and perception of change.²⁴ The study shows that road construction and its effects should not be seen in isolation as a “single moment [...] that by its appearance creates a dramatic and unprecedented break between past and present” (Appadurai 1996: 3). This theoretical approach means rejecting the notion of fixity in society – as emphasized previously – or in the landscape – as the environmental history of Ladakh shows a “nature” in evolution (Fairhead and Leach 1996). Transformations that are observed happen in a continuum of change. Furthermore, as Appadurai (1996: 3) puts it, “modernity is definitely at large, irregularly self-conscious, and unevenly experienced.” There is no “homogeneity of experiences” as “agents produce many different meanings even out of the same experiences” (Sivaramakrishnan and Agrawal 2003: 11-2). For Ladakhis and migrants, road construction, migration, and socioenvironmental change are unevenly lived and gendered, producing different experiences, and are parts of larger and more complex transformative processes that are underway. This has methodological implications since researching the consequences of roads implies researching this multiplicity of experiences and the wider social, political, economic, and ecological contexts (which are also changing) in which road transformations take place; how these transformations

²⁴ Based on Appadurai and others, Masquelier defines “modernity” as “a worldview through which people assess their and other people’s degree of ‘progress’ or ‘backwardness’ through an evolutionary idiom.” She further adds: “Modernity is a problematic, but nonetheless conceptually useful, category that often becomes a means of constructing otherness” (ibid.: 847).

interact with each other; and how they vary among people at different places and different stages in their lives.

The consequences of roads in terms of isolation and mobility are also complex and ambivalent. Rather than being ontologically given, isolation is a relative and subjective concept, generally negatively connoted but positively connoted when understood as “autonomy” (Wilson 2004). Like other social constructs such as ‘scarcity’ (Mehta 2005) or ‘land degradation’ (Bassett and Zuéli 2003; See also Forsyth 2005 on “environmental orthodoxies”), isolation can be both manufactured and experienced. I show in this thesis that isolation is rarely physical, has several dimensions – political, social, and economic – and is historically contingent (see Chapter 3). Therefore, the effects of roads on isolation are not determined. Also, it is often assumed that the absence of roads leads to a lack of mobility. For instance, in a study on rural transport in sub-Saharan Africa, Barwell writes: “In the more typical rural areas, people lack mobility [...] because they depend primarily on travel on foot” (1996: 20). In Ladakh, the link is not straightforward. Examining practices of mobility in unconnected villages shows that people are extremely mobile, practices of mobility are integrated into wider social and cultural practices, and there is a real culture of mobility. It is against this background that the complex, heterogeneous, and differentiated effects of roads must be evaluated.

Livelihoods

Finally, this thesis is concerned with the effects of roads on people’s livelihoods and well-being. Livelihoods are an integral part of people-environment relationships: as the environment changes, so do livelihoods.²⁵ Livelihoods are about people’s ways and means of making a living. The livelihoods approach looks at how, in a vulnerability context framed by shocks, trends, and seasonality as well as by policies and processes, people use and combine assets and activities to follow different strategies leading to varying livelihood outcomes with consequences for people’s well-being (Bebbington 1999; Carney 1998; de Haan and Zoomers 2005; Ellis 2003; Scoones 1998).

²⁵ As noted by Fouracre, “the application of the livelihoods approach in the transport sector has been very limited” and “additional knowledge is required to help in understanding the impacts and interactions of transport and livelihoods” (2001: 11).

‘Well-being’ is a multidimensional and subjective concept.²⁶ People’s well-being can be understood as consisting of different fluctuating parameters – income, health, food, physical assets, financial security, education, social relations, status, or their surrounding physical environment – which they value subjectively. Following Sen, one could add that these parameters are not only a means of reaching a higher degree of well-being but also constituents of it (1999).²⁷

The links between transport (or mobility) and livelihoods have been explored in the literature (Fouracre 2001), studied in specific contexts (Bryceson et al. 2003; Davis 2000; Porter et al. 2007), and comprehensively explored and summed up by Booth et al. (2000). The road adds to people’s physical capital (Scoones 1998); it changes the vulnerability context they face, as well as policies and social processes through increased state interventions, market integration, and better access to decision centres (deGrassi 2005; Mehta 1998). The road might increase access to some resources but destroy existing ones, such as agricultural land, pastures, water, etc., giving way to important adaptations. Both the road and its construction modify the livelihood strategies available to certain groups of individuals and, hence, livelihood outcomes and well-being (Bryceson et al. 2003). For those building roads in Ladakh, migration and construction work are also a livelihood, included in a wider livelihood strategy (de Haan 1999; de Haan 2002). Analysing livelihoods within such a framework leads to a better understanding of the many consequences that roads and road construction have for people’s livelihoods. The effect on livelihoods also plays a role in understanding the stakes of road construction and hence its politics (see Chapter 5).

²⁶ ‘Well-being’ seems to be one of those basic concepts that is very much in use but too obvious to be defined. For Aristotle, well-being was the aim of human existence. Frequently used in economic theory (such as in the concept of ‘well-being curves’), it is sometimes defined as ‘standard of living’ or ‘quality of life’ and reduced to a material, quantitative, and measurable notion. For Sen (1999), it is much more immaterial and subjective as well-being is defined as ‘freedom’: the freedom to live a life one has reason to value. It includes real opportunities and freedom from constraints and interference as well as the capacity to achieve certain ‘functionings’. Similarly, the WeD (Well-being in Developing Countries Research Group, University of Bath) defines well-being as “what people have and do not have (material); what people do or cannot do with it (relational); what people think or feel” (<http://www.welldev.org.uk/wed-new/index.html>; retrieved 10 December 2010).

²⁷ For instance, good health or a good education are essential for work, getting a job, and earning an income but they are also things that can be valued for themselves (Sen 1999). The way in which one’s well-being varies is also largely subjective and unquantifiable because one event can affect well-being dimensions in a contradictory way and the value of the final outcome is person-specific. For instance, the birth of a son or daughter leads to unquantifiable joy, moral satisfaction, and higher status but also to higher expenditures and lower ability to work.

This study intends to provide more than a static picture of livelihoods: it aims to document in a dynamic way the relations between roads and livelihoods. It looks at how people change their livelihoods because of the road, and how roads and road construction influence people's livelihoods seasonally and over lifetimes. This dynamic relation is documented in the form of life histories and well-being graphs (Davis 2006), and by drawing seasonal calendars and mapping activities over a one-year period.²⁸ Not only do these two techniques allow us to understand how adaptation takes place and how livelihoods are combined in time due to roads and road construction, they also enable us to measure the year- or lifelong consequences of roads and road construction in terms of people's well-being, as interpreted by participants according to dimensions that matter to them (whether income, savings, health, food availability, absence of risk, or climate).

3. Methodology and research methods

Why roads in Ladakh?

In Ladakh – a contested, so-called ‘backward’, and mountainous region in the heart of the mighty Himalayas – any attempt to expand a merely dendritic road network through narrow valleys and high passes immediately takes on highly symbolic overtones: it is a Promethean mission, Herculean work, and a Sisyphean challenge all at once. It might seem an obvious choice for someone interested in roads but admittedly it was my fascination with Ladakh that first fuelled my interest in road construction rather than the other way round. Like many other things we take for granted, I had never questioned the *raison d'être* of roads, their need to be constantly built and rebuilt, their links to a wider sociopolitical and economic system, how they structure the way we move and perceive

²⁸ Well-being graphs are physical representations of people's life histories and the evolution of their well-being over a lifetime (see the section on methodology in this chapter). Seasonal calendars represent people's activities and the evolution of different dimensions that constitute people's well-being over a one-year period. Both were drawn and discussed with participants following long and sometimes repeated interviews. Well-being graphs made it possible to identify the influence of particular events in people's lives whereas seasonal calendars allowed one to identify seasonal patterns and recurrent hardships and people's coping mechanisms. Both techniques were useful in understanding the short- and long-term consequences of roads, and the particular situation of seasonal and permanent working migrants.

the world around us, or their deeply symbolic character. Roads brought to my mind notions of freedom, like those travelled by Kerouac in *On the Road* (1991). Alternatively, when trekking, roads were features to be avoided, even loathed, for they appeared to permanently destroy the beauty of the landscape while bringing hordes of undeserving and undesired tourists into pristine places hitherto reserved for a handful of initiates. Ladakh changed my perception of roads.

When I first visited Ladakh in 2001, I was attracted by its high snowy summits and desolated landscapes, and its passes ornate with prayer flags. Ladakh was adventurous terrain for trekking and mountaineering. Having seen pictures of smiling, seemingly centenarian, men and women; monks in red robes in front of whitewashed monasteries atop rocky hills; and people leading yaks along intensely green barley fields under a dark blue sky, my image was one of an isolated Himalayan kingdom. This was more or less what I found as I first went down the Tanglang La and entered Ladakh after several days' journey in August 2001 (waiting days for the road to reopen). I had dreamt of going to Ladakh before, but this trip was triggered by a small notice posted on the walls of my university by a traveller who had just come back from Ladakh: "Rinchen, a schoolteacher in a small village along the Indus River, is looking for volunteers to teach English to his students to enable them to become mountain guides." My partner and I left for Alchi: we spent our summer in the village, stayed with Rinchen's family, and worked at the government school, teaching girls who wanted to become teacher or doctors, and boys who did not want to become mountain guides but soldiers.

I returned to Ladakh in 2004, this time to conduct fieldwork for an MPhil in development studies. I wanted to measure Ladakhis' Ecological Footprint (EF) and the effects that different choices in terms of development had on the environment. This is when I became aware of the importance of the road. In environmental terms, the EF of on-road villagers was nearly double that of off-road villagers. Not only that, the road seemed to alter people's consumption and production, the demography of villages and family structure, and the use of local and imported resources. People blamed the road for changing their culture. In Lingshed and other neighbouring villages, the road under construction was at the centre of people's expectations. The difference between on-road and off-road locations was visible in the geography of villages and the shape and type of houses. As I trekked alone through Ladakh and Zaskar, and as roads under

construction disappeared and reappeared several times along the way, I wondered what consequences they would have on the remote villages I had crossed. As I walked into the Zaskar gorge or crossed the Shingo La, I wondered why one would want a road here and how people would ever manage to build it. As I approached Darcha, I walked through camps of aligned white parachute tents blackened by soot: I saw road builders breaking stones and toppling huge blocks over the edge of abysmal cliffs, and wondered who they were, how they could live here, and how many had already died. As I left Darcha in the cabin of an oil tanker after several hours' wait in a cloud of burning tar, the last and enduring image of Ladakh I carried with me was that of these men and women working, moving, and living in an inferno of fire and smoke – people about whom nobody seemed to know anything.

How I conducted fieldwork

Situated within the interdisciplinary field of development studies, this study draws mainly on an ethnography that is not only multi-sited (Marcus 1995) but itinerant. My work is concerned with the politics and consequences of road construction for two groups – local populations and migrant workers – and deals with two types of locations: on-road and off-road. This is based on the assumption that the experiences of people living on-road are indicative of the potential changes that might take place in off-road villages when they become connected by roads. In off-road locations, I observed what life was like in the absence of roads and how people prepared for the road. As Wilson writes, roads “should be visualised as stretched-out places where intersecting social relations cluster and adhere” (2004: 529). I conducted fieldwork at different places all along the 292 km of the future Zaskar axis where the road is still non-existent (see Map 1.3). Studying life and mobility in off-road locations also led me to many different places and following a crew of migrant workers drove me 2,000 km away from Ladakh to Jharkhand. Moreover, if I were to understand the politics of roads at every level, I had to interview engineers, politicians, officials, and key informants in different places, mainly in the administrative centres of Leh, Khaltse, and Dumka (Jharkhand).

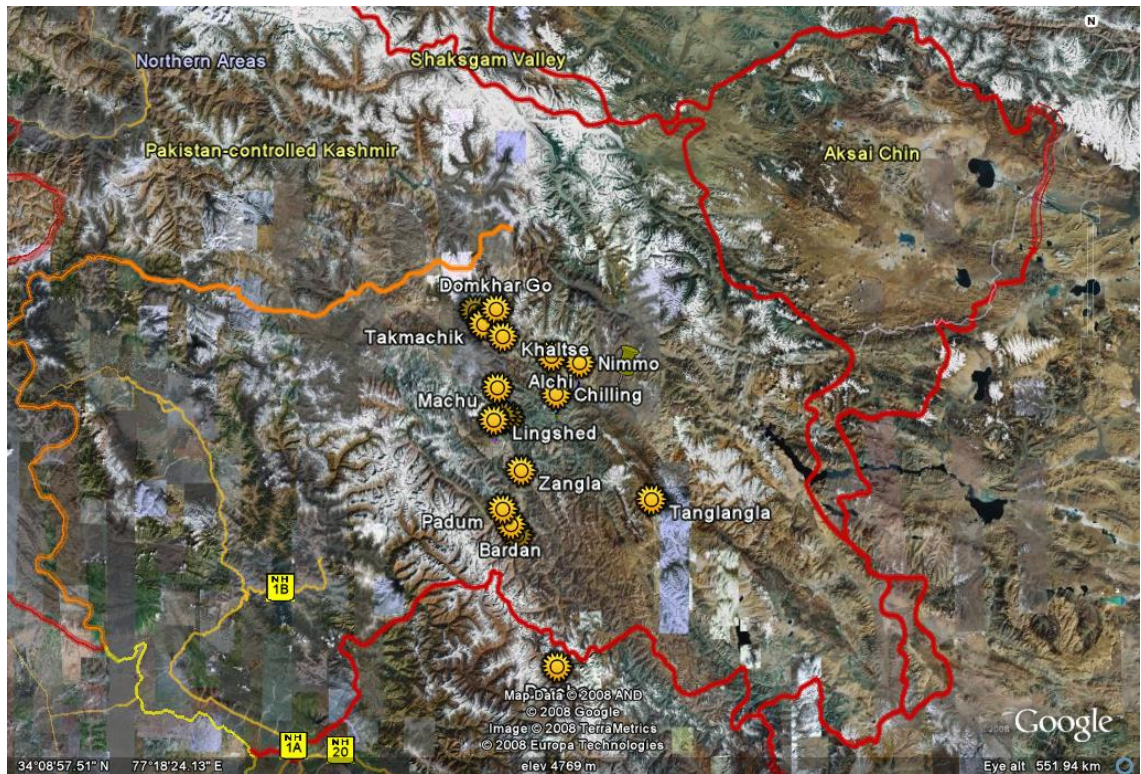
My interest in the consequences of road construction in Ladakh led me to look at the construction of the Zaskar axis, which, once built, will connect Nimmu on the river Indus to Padum (the capital of Zaskar)²⁹ to Darcha and Manali in Himachal Pradesh. There are many reasons why I chose this road: it is an extremely difficult road to build as it is being carved through the nearly 100-kilometre-long Zaskar gorge and over the 5,060-metre-high Shingo La, necessitating consequent human and technical means. The reasons for its construction are eminently political and strategic: (1) the road will alter the situation of the remote and still unconnected regions of Ladakh; (2) it will replace the Chadar (the name given to the Zaskar River when it freezes over in winter) as a winter access route to Zaskar and change patterns of movement in the region; (3) it will greatly change the situation of the whole region by providing all-year-round access to Ladakh and Zaskar; and (4) it could potentially result in the redesigning of the administrative map of Ladakh if the province of Zaskar is detached from Kargil district and linked to Leh district. What I later discovered about Ladakh's tumultuous history, the sacred landscape, and the politics surrounding the construction of the road further informed my choice.

On this road, I selected Chilling as my main site of investigation. First, as the most accessible of the four construction sites on the Zaskar axis, it offered me a vantage point from which to observe the world of road workers in Ladakh.³⁰ Second, it enabled me to study the consequences of the road in a village that had been connected by a road since the late 1980s. Then, I chose Lingshed as an unconnected place, 'soon to be' linked to the Zaskar axis. Lingshed was the most 'remote' place I could find, three days' walk from the nearest road. It offered a good 'laboratory' in which to experience isolation/autonomy and to better understand what "living in a walking world" meant (Porter 2002). I had lived and conducted research there in the past and thought it would be a convenient place to study any transformation that might occur during road construction. Having adopted an inductive approach, I was prepared to add more sites to my study if they could provide interesting stories and new elements. My research

²⁹ Zaskar (also written *Zangskar*) designates the valley south of Ladakh, part of the Kargil district. Although geographically separated from the Indus Valley by the Zaskar range, it is administratively, historically, and culturally a part of Ladakh (see Chapter 4).

³⁰ The other construction sites are Zangla and Raru in Zaskar, and Darcha in Himachal. One could also add the site of construction of a tunnel under the Rothang La, where work started in June 2010. Once completed, the tunnel will benefit both the Zaskar Highway and the Manali-Leh road, making both roads passable in winter. Chilling is the only site on the Zaskar axis where construction continues in winter as there is relatively less snowfall and labour is available.

agenda was planned making the best of climatic constraints, working seasons for migrants, and administrative and security conditions.



1.3. Sites of fieldwork in Ladakh

My first attempt to conduct fieldwork in August 2006 was cut short in an episode that gave me first-hand experience of the vulnerability of Himalayan roads.³¹ That year, I could only do a short reconnaissance of Chilling and prepare for the real fieldwork I would undertake six months later. As a result, most of my fieldwork was conducted between April 2007 and February 2008. During that period, I divided my time among (1) road construction sites, (2) off-road locations, and (3) villages connected by roads.

³¹ Our jeep was stuck on the Manali-Leh road over three days of incessant rain and multiple landslides in what was remembered at the time as one of the worst climatic events in decades. By a twist of fate, we were rescued several times by road workers and were offered a place to stay for the night by a crew of road workers from Kashmir. My father was injured in an accident and when we finally reached Leh, it was only to take the first flight to the closest operating theatre in Delhi, hoping for the sky to clear and the plane to land. The violence of the climatic events of 2006 was only surpassed by the terrible cloudbursts and landslides of August 2010 that made more than 300 victims and destroyed countless houses all over Ladakh but mainly in lower Leh, Saboo, and Choglamsar.

1. Road construction sites

The study of road workers led me to follow the journey of seasonal road workers through Jammu, Nagrota (BRO's recruitment centre in J&K), Srinagar, Kargil, Nimmu, and finally Chilling. Three-hundred workers were stationed there for the summer and lived in three different camps on that portion of the road. With the help of my interpreter, we focused on two groups of workers. The first group was a crew of Nepali workers (mainly Sherpas) living and working there on a long-term basis (for up to six years). They were casual paid labour (CPL), employed for a long period but whose contracts were renewed every six months.³² Most of them lived there with their families (wives and children) and provided the vanguard of drillers and blasters. The second group was a crew of 45 seasonal workers – or imported casual paid labour (ICPL) in BRO jargon – recruited in Nagrota to work in Chilling for four months (June to September). Like most road builders in Ladakh, they came from the district of Dumka in the state of Jharkhand. Although I also engaged with workers from other crews in and outside Chilling (Zangla, Padum, Bardan, Darcha, Reru, Leh) (see Illustration 1.4), most ethnographic fieldwork was conducted with these two groups. Interactions with road workers took place mostly in September 2006; April, June, July, and September 2007; and January and February 2008 (when I visited them in Jharkhand).

³² As I explain in Chapter 6, their conditions are extremely precarious: their contracts can be terminated at any time and workers are not allowed to be unionized, making it difficult for them to claim their rights.



1.4. Milestone along the river Indus at the intersection of the Srinagar-Leh Highway (NH1) and future Zaskar Highway³³

2. Off-road locations

For the reasons discussed above, I chose Lingshed and its surrounding areas as the main site for exploring life in the absence of roads. For several weeks, my ethnographic fieldwork was also conducted while walking to and from Lingshed (see Illustration 1.5) and all the way to Padum (Zaskar) and Darcha (Himachal). I wanted to experience ‘isolation’ in a situation where snow had covered the passes and cut off the village from the outside world, and to travel on the Chadar, which becomes the winter access route to Lingshed and the valley of Zaskar. Due to abnormally ‘warm’ conditions, the Chadar formed late and only partially, and I had to walk across the passes just before the snow ‘closed’ them until spring. I had previously conducted research in Lingshed during July and August 2004. This time, I carried out my research there between July and August 2007, and from November 2007 to January 2008.

³³ At that time, the road stopped just after Chilling. In 2007/08, about 60 km of the road was tarred, another 70 km was more or less motorable, and the remaining 160 km remained non-existent.



1.5. On the way to Lingshed: Yulchung and Nierak seen from the Singge La (alt: 4,973 m). Between the two villages flows the Zanskar River.

3. On-road locations

My first on-road location was Chilling. Although stories of road construction in Chilling were truly fascinating, I needed more on-road locations to understand the politics of roads and the consequences of roads for people's livelihoods and their relationship with the environment.³⁴ During fieldwork, I built up my network, met engineers and key informants, and heard interesting stories on road construction in Ladakh. One story led me to Skurbuchan where a road had just been built in a narrow valley, destroying fields, trees, and houses in the process, provoking fury among its inhabitants. This was my first introduction to the village politics of road construction. As every village had a different story to tell, I included more villages in my study: from Khaltse, where the road had arrived in 1960, to Domkhar Do (1967), Alchi (around 1970), Padum (1980) and

³⁴ Especially since Chilling is a small village with a unique population structure, i.e., the six families there are all goldsmiths (*sergar*).

Domkhar Gongma, where the road started 20 years ago had just reached the village in 2007.

Research methods and tools

My approach was essentially qualitative, “multimethod”, and “interpretive” (Denzin and Lincoln 1998: 3).³⁵ The study is based largely on ethnographic material, understood as “a mode of knowing that privileges experience” (Das and Poole 2004: 4). Although I was to collect ‘facts’ about people’s changing lives and livelihoods in connection with roads, the focus was on emic perspectives. I was interested in people’s perspectives of change and well-being, and their changing and conflicting views of the road and landscape. The approach attempted to deal with “the ‘multiple realities’ and diverse social practices of various actors”, and their “different and often incompatible social worlds” (Long and Long 1992: 5-6). My interest in the politics of road construction led me to look for “‘interface’ situations where the different life-worlds interact and interpenetrate” (ibid.). This involved, above all, **participant observation**. On the road construction site, I spent several weeks interacting with workers, engineers, and families, observing and asking questions, going to work with them in the mornings,³⁶ witnessing drilling and blasting operations, returning home in the evenings, taking part in rituals and going to ‘town’ in Nimmu on Sundays. I stayed with workers’ families in their tents in winter. In Lingshed, I stayed first at the local school with its teachers and then with a family of four in the lower part of the village in winter. I worked as a teacher, giving winter tuition in the mornings, and participated in religious ceremonies, village celebrations, and activities such as fetching wood or bringing the yaks back from the pastures, which would take me away from the village for several days at a time. I practised participant observation when trekking to and from Lingshed with my travelling companions, including children coming back to Lingshed for the holidays, and nuns, villagers, and teachers going to work. Much depended on serendipity and

³⁵ I did not completely discard quantitative methods, particularly in Chapter 7, but their use is very limited. Even when I looked at the consequences of road construction, the existence of complex and ambiguous causative mechanisms made the use of qualitative methods more appropriate than quantitative ones. Note that Chapter 7 is built on a combination of qualitative and quantitative methods, which should be considered “as the two poles of a continuum” (Obermeyer 1997: 814).

³⁶ My request to work voluntarily on road construction was politely evaded by the mate (the recruiter and supervisor of the crew).

fortuity. At other times, I simply recorded events as they happened, which often helped me make sense of subsequent observations and relate them to my wider concerns.

My approach was inductive. I had specific questions to ask and themes to explore but the importance of these themes would be made relevant through interactions with people and additional themes would emerge from the research process. My study looked at different perceptions of the environment and different views of the road. I wanted to understand how and why people moved in the absence or presence of roads, and how the road and working on it influenced people's livelihoods and well-being over a lifetime but also seasonally.

At the same time as exploratory methods allowed me to incorporate more pieces of the road construction puzzle, I attempted to answer specific questions and test preliminary findings through more targeted methods. Observation of group dynamics and who seemed to gain and lose from roads and road construction helped me sample people accordingly. Individuals from different occupations, sexes, age groups, and castes, or people representing a particular situation were targeted and interviewed and their own perspectives and understandings taken into account. **Focus group discussions** and **semi-structured** and **in-depth interviews** were crucial tools in getting to know different and diverging perspectives and the "personal meanings of lived experience" (Perks and Thomson 1998: ix), and in tracing the histories of individuals, the village, and the group. **Unstructured interviews** were also conducted with key agents of road-construction – engineers, contractors, and people who had opposed roads or lost out because of road construction – and key political and religious representatives. In total, 91 interviews were carried out, not taking into account the numerous long conversations contained in countless pages of notes and observations as well as the in-depth interviews collected when gathering life histories (see below). Interviews with officers and engineers were generally conducted in English; interviews with Ladakhi villagers were conducted in Ladakhi; and those with road workers in Nepali, Hindi, and Bhojpuri with the help of a translator.

My work needed to account for the complexity and heterogeneity of lived experiences. It looked at the effects of the road among other changing factors on people's portfolio of livelihood activities. **Life histories**, **well-being graphs** (Davis 2006), and **cyclical**

calendars built together with participants were essential techniques in researching the influence of roads on people's livelihoods and well-being both over a lifespan and seasonally. These tools documented in a dynamic way the diversity of activities that constituted people's livelihoods – specifically agriculture, paid labour, trade, craftwork, off-farm work, and remittances – as well as the relative importance of these activities, which provided assets enabling people to benefit from new and existing opportunities. Using these research tools – in which participants displayed a great deal of interest – helped establish and discuss causality links between the road and people's livelihoods and well-being.³⁷ In total, 30 life histories (12 road builders, 12 villagers in on-road locations, and 6 in off-road locations), and 10 cyclical calendars were gathered.

Capturing people's perspectives was also improved through the use of **participatory field inquiries**. Four such exercises were organized (two in on-road locations and two in Lingshed). Participants built daily and yearly activity profiles, food matrixes, and institutions and movement maps. We drew road maps and improvised a drama re-enacting road construction bargaining between engineers and villagers. Conclusions were drawn together, giving space to vibrant focus group discussions from which emerged heterogeneous and conflicting views of the road and landscape. Another advantage of using participatory methods was that they could be adapted and improved from session to session. However, one downside was that changes in methods limited the ability to compare between results obtained in different sessions.

³⁷ An advantage of **life histories** and **well-being graphs** is that they tend to reduce “the sense of objectification which can be experienced by interviewees” (Davis 2006: 3). Most of the time, only the participant, the translator, and I were present, so that personal and intimate details could be freely discussed. A typed and anonymous well-being graph was briefly presented and explained to the participant to show what the aim of the interview was. Interviews and life histories were conducted in a thematic rather than chronological order (on the practicality of conducting life histories and drawing well-being graphs, see Davis 2006). Important benchmarks (such as Indian independence and wars with Pakistan) were used, as well as major life events (approximate dates of birth, death, marriage, disease, work, etc.), followed by other events such as crises and periods of opportunity. Dates of road construction, migration, and work history were mapped. At the end, a chronology was built and presented to the participant. Well-being was translated as “condition” (*haal* or *haal chaal* in Hindi) but defined in people's own terms according to parameters that mattered to them. Participants were asked to explain how their well-being varied in relation to events in the chronology, e.g., if it was higher or lower than at a specific time, how quickly they recovered after a shock, etc. As participants actively assisted in the drawing, corrections could be made until they were fully satisfied with the outcome. When building the graph, the effects and mechanisms through which events affected people's well-being were thoroughly discussed and explained, and new events or additional information added. **Seasonal calendars** consisted of a similar exercise but focused on recurrent events in a typical year. Different parameters that mattered to people's well-being were mapped separately, first identifying minimum and maximum levels, and then repeating the whole exercise for well-being.

Other techniques used included **GPS/GIS mapping**, **photography**, and the recording of songs that were used as ethnographic evidence of lived experiences, often deepened by individual interviews. A **mobility survey** was later completed among 30 people in Alchi with the help of Dr Padma Dolma.³⁸ In order to understand different interpretations of the landscape through time, I collected secondary literature and published missionaries' and early administrators' tracts. Since I left the field, I have further compiled a considerable volume of written documents: newspaper articles and official administrative documents regarding road construction in India, specifically in J&K and Ladakh, as well as documents issued by donors and road construction companies. The majority of these documents are available online. My contacts in Ladakh have kept me apprised of the further development of roads and new stories from the construction site. I revisited Leh and Chilling in July 2009 and conducted a few more interviews. In order to check the validity of the results, I used **triangulation** to check and crosscheck each source against another.

4. Research issues

Methodological issues

Inevitably, methodological, practical, and ethical issues arose during fieldwork. One epistemological issue of concern in ethnographic fieldwork is the status of the researcher as the "medium, as well as the recorder and interpreter of his/her research" (Tonkin 1984: 221), and hence as "an active agent influencing specific events and the construction of both the social and ethnographic text" (Blaikie and Brookfield 1987: 6). A partial response to this fact is being conscious that "observation of the world [...] is inevitably intervention in the world" (Harvey 1996: 55-6). Such an observation imposes a reflexive approach on the account produced, the relationship between the researcher and researched, and the data.

³⁸ In Alchi, 31 villagers (14 men and 17 women) were individually asked to remember all the journeys they had undertaken during the last 12 months, including their destination, mode of transport, and purpose of travel. The results were then aggregated and compared to those obtained through participatory methods in Lingshed.

Bourdieu (2000 [1972]) suggests that one should understand the social through a “theory of practice that constitutes practice as practice” and not as an object or a “lived experience that can be grasped by a reflective return” (ibid.: 161). If the social is to be viewed through the theory of practice, so is the research process: hence his invitation to submit all epistemological means to reflexivity and a theory of practice. One has to be aware that the relation between the anthropologist and his/her object is also a theoretical distortion that “tends to reduce all social relations to relations of communication and all interactions to symbolic exchanges” (ibid.: 159). In my case, the focus on the politics of roads and “interface situations” may have led me to overemphasize the conflicting dimensions of social relations. As Bourdieu writes, “the anthropologist must not only break from the experience”(i.e., the objectification of experience) but also “put into perspective the presuppositions inherent in his position of external observer, who, preoccupied with interpreting practices, tends to import within the object the principles that define his relation to the object” (ibid.: 160). This sets the need to adopt the praxeological mode of theoretical knowledge when conducting research and reflecting on research material.

There were also methodological issues linked to the use of interpreters. Most interviews (except those conducted in English or those held towards the end of the fieldwork period in Ladakhi/Hindi) were conducted with the help of an interpreter.³⁹ Inevitably, this limited my ability to enter people’s worlds of meanings and introduced an additional subjective bias. However, preliminary training and discussion of ethnographic methods, a high degree of cooperation between translators and myself in the field, daily debriefings and discussion of material and techniques, my increasing command of the language and re-listening to recorded material helped me overcome most of these difficulties. Moreover, the use of interpreters was generally a huge advantage. Interpreters could often be useful informants, providing crucial information that allowed me to reframe things within their cultural context, make sense of recorded events, and share hypotheses and interpretations. During interviews, having an interpreter gave me the time and distance to reflect on what had been said, hypothesize,

³⁹ Over the entire duration of fieldwork (2006-08), I relied on the services of eight different interpreters who helped me conduct interviews and participatory field enquiries. My command of Hindi, Nepali, and Ladakhi (whose pronunciation, vocabulary, and grammar varies from one region to the next) was useful in interacting with people and following conversations but it was never sufficient to conduct in-depth interviews.

explore new avenues, and sharpen my next questions. The identity of my interpreter could sometimes influence what participants chose to say or not to say. What my interpreter knew about participants, but also sometimes what he/she chose to translate or not to translate, had its advantages and disadvantages.⁴⁰ Overall, working with interpreters – which was made necessary by the multilingual research context – turned out to be an incommensurable asset to my work.

Finally, methodological issues arose regarding the use of data to draw comparisons. Observations made in off- and on-road locations were informative in terms of people's situations at a specific time and place but when put in perspective with the situation in off-road locations, changes observed in on-road villages also led to hypotheses on the potential consequences of road construction.⁴¹ However, as van de Walle writes, "simple comparisons of outcome indicators in villages with roads versus without them can be very deceptive" (2002: 580). 'After the road' does not necessarily mean 'because of the road';⁴² the effects of roads may only materialize after a long time and one has to account for other material changes and socioeconomic explanatory factors as well as "the process by which the road came to be built" in the first place (ibid.). Therefore, before the cause of a phenomenon can be attributed (totally or partially) to the road, a causality link must be established and critically assessed. The consequences of roads are often complex and ambiguous: if a direct or indirect causality link cannot be established, then the phenomenon should not be considered a consequence of the road. For instance, an increase in income or out-migration cannot be attributed to the road unless one can explain how the road played a role in people's livelihoods or their decision/ability to migrate. These observations called for a research design based on qualitative methods, the use of emic perspectives, and both latitudinal and longitudinal data to allow for a wide variety of subjective experiences and understand the complex mechanisms through which the road acts on people's lives.

⁴⁰ For instance, socially condemned practices such as selling family land or illegal practices such as reselling government kerosene and rations are not things that participants easily talked about. I sometimes learnt about such practices through my interpreters. Also, where conflicts within the village were normally hidden from outsiders (see Pirie 2002), having an interpreter from the village or valley helped one become aware of them. In one case, however, my interpreter changed the translation to present all village relations as harmonious. As the translation did not correspond to what I had understood, I had to have the tape retranslated. The event was very informative as far as Ladakhis' attitudes to conflicts were concerned.

⁴¹ See Chapter 7, where observations collected in on-road villages are put into perspective with those collected in Lingshed.

⁴² For an example of this, see Rawat and Sharma (1997).

Practical issues

I was also confronted with practical issues that influenced my ability to conduct research. Access to the field had to be negotiated. Generally, both workers and BRO officers welcomed my presence on construction sites. However, after a few months, my presence became suspicious and led to an investigation by the Indo-Tibetan Border Force (ITBF).⁴³ When this happened, I avoided inner-line areas and had my field notes repatriated. This was also the period during which I had planned to visit Lingshed for the winter and I expected this would help remove any suspicions concerning the nature and purpose of my activities. There was no sensitive information to be collected in Lingshed, only ethnographic material and the chance to genuinely experience the harshness of a Ladakhi winter.

Practically, the distance of villages (three days' walk) and the prospect of carrying all my materials on my back and facing harsh climatic conditions required careful planning; I could only take the strict minimum (including a foldable photovoltaic panel to recharge my electronic equipment, a light, GPS, MD-recorder, and camera). Comfort was greatly reduced. Communication with the outside was also extremely limited.⁴⁴ At times, I felt lonely and suffered from the cold, especially at night when the temperature in my room dropped far below zero and I had to bury myself inside my sleeping bag and two blankets while wearing nine layers of clothing and a plastic bag around my feet to stop the cold wind from penetrating. I fell sick three times during my stay in winter and had to rely on the combined remedies of the *amchi* (traditional doctor) and the antibiotics of the health worker. As we ventured deeper into the winter, I felt tempted more than once to leave the village, but knowing that I was living a unique and privileged experience, and the warmth, joy, and positive attitude of my fellow

⁴³ Most researchers in Ladakh were suspected of being spies and had to face this issue at some point (see Norberg-Hodge 2000; Aggarwal 2004). I later learnt from an ITBF officer that it was routine procedure to monitor any foreigner staying in Ladakh for extended periods of time. At that time, I ignored it and found the experience quite destabilizing. I learnt about the investigation through friends but did not know whether the ITBF wanted me to be aware of it or how closely they monitored me. This somehow changed my experience of fieldwork, notably because I avoided contact with officials who I did not know personally and cancelled my plans to interview high-level officers from the BRO.

⁴⁴ There was one satellite phone in Lingshed – the only one in the region – but Dorje the operator was often away (for up to five weeks) and the connection only worked intermittently. Also, the cost of using it was relatively high by local standards and it would have been very insensitive and inappropriate to spend such huge sums of money in front of my fellow villagers.

Lingshedpas⁴⁵ made me stay.⁴⁶ I had planned to wait until the route across the passes was closed by snowfall and walk back to Leh across the Chadar. That winter, the Zaskar did not freeze past Nierak until late in the season. When a group of Lingshedpas left across the passes in the beginning of January,⁴⁷ I left with them. During the walk, we slept in a roofless shelter before the Singge La and the following night in a cave, as it snowed continuously for three days. That year, we were probably the last ones to cross the Singge La until early spring (see Illustration 1.6).



1.6. Crossing the Singge La in January 2008

⁴⁵ The suffix *pa* designates an inhabitant from a particular place. Hence, *Lingshedpa* designates an inhabitant of Lingshed, and *Ladagspa* a Ladakhi.

⁴⁶ People in the village often inquired “*Sunameta?*” (“Aren’t you feeling bored or lonely?”). However, as I soon learnt, in Lingshed one does not complain about the cold. As we gathered at people’s places for *Losar* (new year) celebrations, often outside or on rooftops, sharing frozen raw meat and *tagi* (chapattis) and looking at the ice quickly forming on our cups of *chang* (fermented barley beer), somebody would start singing and others would join in; by drinking *chang* and dancing, one would keep warm.

⁴⁷ My visa expired on 2 February. When in Leh, my flight was further postponed by two days because of snowfall.

5. Ethics

Ethical issues arose because of my position as a researcher and because I had to find my place in hierarchically constituted social groups. Research is a power relation. Imbalances of power stemmed from my own identity: I was a white, male, educated westerner. Being “educated” was not really an issue as I was mostly in a position to learn from participants. Being a westerner was more difficult as I was constantly reminded of it: no matter who I was or what I was doing, I was referred firstly to as *videshi*, *angres*, *angrespa*, or “tourist”. Making an effort to speak participants’ language, sharing their life on a daily basis, and trying to understand their world differentiated me from other tourists whose only interaction is usually visual and often mediated through the window of a jeep or the lens of a camera; but in the end I remained a foreigner. Because I was a foreigner, I was “rich”. I did not need to work on a daily basis. There were frequent questions regarding the cost of my equipment or the price of my flight ticket from Europe to Ladakh. I had nothing fancy by western standards, but even my camera, recorder, cracked boots, or old backpack were worth several months’ wages by local standards. I was also from a country where people were relatively free to go wherever they wanted without any serious administrative constraints; my participants were not. Faced by the question, “Can I also come to Europe, to England, or to Switzerland?” I always felt uncomfortable. No matter how hard I tried to minimize differences or how simply I tried to behave, in many ways I was extremely privileged.

My presence in a region often travelled by rich tourists and non-government organisation (NGO) workers could have aroused expectations to which I would not be able to respond, or which could affect my relations with participants and therefore the quality of my research. Being very clear on the reasons for my presence and as to my intentions dissipated most doubts, and as a result I rarely had to face such situations.⁴⁸ I

⁴⁸ I was sometimes approached by Ladakhi parents who asked if I would finance a scholarship for their children; two participants in Alchi left in the middle of a participatory session when it became clear that I was not working for an NGO and that I was “one of these foreigners who come for nothing”. In Domkhar Gongma, I was asked if I would finance the restoration of the old *choskor* (temple). I normally passed on people’s requests to NGOs, officials, or foreigners who asked me how they could help. In the case of road workers, the situation of deprivation I met pushed me into becoming more involved. In a few cases, I had to reject the requests of intoxicated men for food, drink, or money, but otherwise I was rarely asked for anything. I offered collective gifts to the group of workers. When I stayed with a family of road workers,

explained that I was writing a doctoral thesis or, if people could not make sense of this, that I was writing “a book” for university. If people asked me how this would help them, I told them that this book might help them indirectly as a whole by making their voices heard and their problems known and better understood. People were glad to explain their situation and have their history recorded: sometimes, they would sit by me of their own accord and start telling me their story. In Lingshed, the fact that an anthropologist had stayed here between 1993 and 1995 helped them make sense of my presence: I was doing “like Martin” (Mills 2000; Mills 2003). Wherever I stayed, I compensated for the costs incurred by my presence. I also worked as a teacher so that my fieldwork worked more as an exchange than a purely extractive process.

To be able to conduct research, I had to project myself as non-threatening. I always asked for permission before recording people, often decided not to use the recorder, and always tried to be as unobtrusive as possible when taking notes. The sensitive nature of my topic – road construction in a highly militarized border area – was the cause of issues such as the enquiry by the ITBF. Therefore, my presence on the road construction site had to be carefully negotiated with officers and engineers; fortunately, it was nearly never seen as a threat. Morally, the highest imperative was not to harm participants and this always prevailed over research considerations. Informed consent was given prior to interviewing participants. Sensitive issues such as death and danger were discussed and tackled in a sensitive way and questions were never forced on participants. The identities of some BRO employees and government officials had to be kept secret, sometimes on their own request. They were also kept secret when illegal activities (such as corruption, robbery, or murder) were disclosed or when the information could be used against participants. In other cases, I decided not to mention the information when the anonymity of participants could not be guaranteed, as is often the case in villages.⁴⁹ My position as a male researcher restricted my access to women. Especially with migrants, I had to ask husbands and fathers for permission to interview their wives and daughters, respectively, and discussions were likely to be mediated through the filter of

I compensated more generously than usual. I bought gifts for the children. When we met a Nepali family in great financial difficulty, my interpreter (Alok) and I decided to send their son Harida to school and pay for his expenditures, which set the trend for other children in the camp. Another well-connected interpreter was able to help another family obtain a post-mortem report of their mother (who had died in a landslide) so that they could finally receive compensation from the BRO.

⁴⁹ For most participants, however, being in a “book” – be it a thesis – was perceived as access to posterity and people expressly asked me to disclose their identity.

gender relations. On the other hand, I had full access to the male world of workers, male villagers, and *lamas* (monks).

I also had to find my place in socially structured groups with their own power relations and dynamics. Understanding and respecting rules and customs was one thing. I tried as much as I could to integrate myself into patterns of reciprocity, contributing with gifts to invitations, family expenses, and ceremonial expenditures, and taking part in every village event.⁵⁰ Being an outsider was not always limiting, it was also enabling. With migrants, I even found myself comfortable: we were all outsiders. I never felt that my actions were observed and commented on as I had sometimes felt in other situations.⁵¹ Being a foreigner was also instrumental in granting me unbridled access to the spectrum of otherwise hierarchically organized and segmented social groups: I could have tea with the king in his palace in Stok on one day and spend the next with migrant workers on the road in Chilling. Such freedom and ease of access would have been unthinkable had I belonged to one group or the other. In Ladakhi villages, as a foreigner I was initially treated as a guest; as I stayed longer, my status changed and it seemed important for my fellow villagers to make sense of my place and rank in society. I was married and therefore I was an adult but I had no children and my wife lived in Delhi: these were objects of both jokes and concern. In a way, the fact that I worked as a teacher helped my fellow villagers make sense of my presence as well as give me a status; this status, which is sanctioned in the sitting order in any private or public gathering, was then constantly renegotiated as one always tried to sit in a lower place while other guests attempted to make you sit higher in the rank (See Aggarwal 2004; Gutschow 2004).

⁵⁰ I do not hide that this integration was necessarily limited and incomplete. When reflecting on her experience as an anthropologist in Ladakh, Aggarwal writes meaningfully that “borders between observers and observed [are] constructed in the process of fieldwork” (2004: 58). Yet episodes in which interactions between her and her ‘subjects’ were directed, denied, or severely restricted were not necessarily ‘failed’ field experiences. They ended up being instrumental in her understanding and demonstration of how borders are performed. Similarly, reflecting on how differences were built between us on what was unspoken or hidden by my participants (or translators) or on what expectations my presence raised were fundamental in my understanding of the culture and society.

⁵¹ Although uncomfortable, feeling observed was also a good reminder of the reality of research. I was trying to do it in an unobtrusive way but in the end I was also observing them. Similarly, a participant once decided to conduct my own life history: cast for the first time in the role of the interviewee was very instructive as to how one might feel when one’s personal life is examined in detail.

Getting to know customs and abiding by them was immensely gratifying. As it pleased my hosts and friends, I felt more and more accepted. Where it became a moral dilemma for me was when social discrimination based on caste or origin came into play. With road workers, but more especially with Ladakhis, caste-based discrimination was sometimes present or expressed in the discourse in very strong terms.⁵² I also encountered strong anti-migrant discourses against Nepalis and Biharis. Because of the suffering it created, I found in these practices and discourses a profound sense of injustice. I was aware that, by voicing my discontent and going against discriminatory practices, I ran the risk of alienating some of my participants. Worse, in the case of castes, ritual pollution could potentially be transmitted to me: this would have had heavy consequences for the rest of my fieldwork. It was a serious dilemma, which I found difficult to conceal behind the mask of cultural relativism. I gradually became more vocal about it, voicing my opposition or consciously performing symbolic acts.⁵³ In the end, perhaps because of my ambivalent position as a foreigner, it did not have any impact on the research process. I doubt that it changed anybody's opinion of castes or the place of migrants, but I did what I thought was morally appropriate.

Finally, I felt my position as a researcher to be the centre of a moral paradox, which I can only conciliate now that I am writing this thesis. Since I was living with participants in the field, I often found being a researcher quite oppressive and felt that I was utilising people. Many participants became close friends but my presence was motivated and that initial motivation was not friendship but research. My questions and conversations were oriented. As I spent months in the field, there was no time at which I could stop being a

⁵² For instance, as a participant once told me about the usefulness of providing education for Dalits (as there were Dalits in the group): “No matter how well you teach a dog, he will keep raising his leg to pee” (anonymous, Chilling, 13 June 2006). Interestingly, although caste-based hierarchy and discrimination were extremely important among road workers in their place of origin – either in Nepal or Jharkhand – they were not so while workers lived in Ladakh. Workers lived, cooked, ate, and slept in the same place, and Adivasis and Dalits could end up cooking for higher castes or eating out of the same pot as Rajputs and Brahmins, for instance. However, this change in practices was only temporary: when they were back home, discriminatory practices based on caste were again enforced. Castes exist in Ladakh too, as I explain in Chapter 3. The lowest castes are the *mon* (itinerant musicians), *beda* (musicians), and *gara* (blacksmiths and carpenters). In 2004, my interpreter had refused to interview a *gara*; at that time I had decided not to argue with him to avoid jeopardizing my research as he was the only translator I had. In 2007, I went to stay with his family.

⁵³ This included sitting below a *beda* in the line, offering to share his cup in public, or accepting the invitation of a *gara* family and staying in their house for a week. The fact that my translator and I spent days with road workers was met with a lot of incomprehension. Ladakhis did not know the migrants but for them migrants were dishonest, bad, and dangerous, and therefore we were necessarily crazy and totally irresponsible. I was thus always keen to share the stories of migrant workers, whom I always referred to as “my friends” when with Ladakhis.

researcher since everything people did or told me could end up being used in my work. I never hid the fact that I was doing research but probably none of my participants had ever read a piece of research or knew what it really meant. There was something deeply unethical in this that I found difficult to cope with. There was also a wide imbalance between them and me: I shared their difficult conditions, lived, ate, and slept like them, but in the end I had chosen to be there while they had not. After my fieldwork, I left and returned to my relatively comfortable and easy life whereas they are still there, risking their lives, living, working, or simply waiting for the road. At the same time, now that I am here, I feel compelled to write about them so that they are not forgotten, that their problems become known, and that my intrusion into their lives has not been in vain. In a way, writing about people's lives and distress has become ethically justified. While I felt morally uncomfortable researching people when I was there, I now find it a moral duty to write about them. Paradoxically, my ethical issue has become its own solution.

6. Plan of the thesis

The thesis looks mainly at the construction of the Zaskar Highway and draws on ethnographic material collected principally in two places: Lingshed and Chilling. In addition, the thesis builds on examples drawn from different locations and periods, from the 1960s to the present. The plan does not follow a chronological or location-specific order but a logical development that can be divided into three sequences: (1) before the road, (2) during road construction, and (3) after the road.

Chapters 2, 3, and 4 focus on pre-road conditions. In **Chapter 2**, I explore the macropolitics of road construction in Ladakh. After reviewing the literature on roads and development, I focus on the political economy of road construction in India and Ladakh. I show how different priorities, understandings of the consequences of roads, and conceptions of the state's role can explain the different phases of development of the road network. **Chapter 3** deals with the situation of people who are "waiting for the road" and their experience of isolation and mobility. I attempt to document what life is like in the absence of roads and understand why people want a road. In **Chapter 4**, I look at how people in Lingshed must unite and "fight for the road", and document the cyclothymic process of road construction. I show that people mobilize all sorts of

means, re-appropriate the state discourse, and actively lobby their representatives, officials, engineers, and contractors to have a road built through their village.

Chapters 5 and 6 deal with what happens during road construction. In **Chapter 5**, I look at village politics and how people negotiate around the trajectory of the road. Once the road reaches the village, the initial consensus often breaks down. Since the trajectory of the road determines the distribution of gains and losses, people are often divided on where the road should be built. People negotiate its trajectory through institutions and power relations and use different strategies to advance their interests. The chapter also uncovers diverging priorities between engineers, contractors, and villagers, and shows that village politics are constantly minimized, ignored, or instrumentalized by planners and engineers. **Chapter 6** is about people who are “working on the road”: migrants from the plains of India and Nepal and their families. I examine their contribution to the transformation of the Ladakhi environment as well as the effects the road has on them.

Finally, **Chapter 7** focuses on what happens after road construction. It deals with the consequences of the road on local populations: those “living on the road”. I explore the effects that roads have on resource use, patterns of consumption and production, people’s livelihoods, well-being, mobility, and demography, showing how these are linked as changes in one field translate into changes in another. In terms of livelihoods, the evidence shows that the road clearly benefits people, although gains and losses are not equally distributed. I argue that the road is seldom the factor of change in itself and never acts in isolation: it often makes change possible but does not directly induce change. In the conclusion (**Chapter 8**), I bring together the arguments and findings of the thesis, and discuss the policy implications as well as the gaps and limitations of my work.

Chapter 2. The macropolitics of road construction

Why are roads built?

This chapter aims to situate the thesis within a theoretical debate – that of roads and development – and within a geographical and historical context – road construction in India and Ladakh. This review of the theoretical and historical context is fundamental in order to understand the debates to which this thesis contributes. Yet, more than a literature review followed by a history of road construction, this chapter aims to link the two and show how they are articulated. While there are development discourses and state policies regarding roads at the national level, they are reworked and refracted at the local level, reflecting the political economy of a particular place at a particular time. Also, road construction has long been justified in terms of development but the theories and discourses used to link roads to development have been debated, criticized, and changed over time, leading to different successive theories, which I attempt to separate into distinct phases.¹ Lacking any determinism, these paradigms have had a deep impact on the kinds of roads built and therefore on the evolution of the road network.

The chapter deals with the macropolitics of road construction on three different scales that shape the background against which the political ecology of road construction in Ladakh takes place. In the first section, I look at theories linking road construction and development, their criticisms, and the reasons why states want to build roads. In the second section, I deal with the case of road construction in India: changes in its road construction policies and the evolution of its road network. In the third section, I look at road construction in Ladakh and attempt to account for the factors that explain the late and sudden development of its roadscape.

I argue that the effects of roads are contested and widely misunderstood, and that judging these effects exclusively in terms of economic development is necessarily

¹ Having said that, any attempt to portray evolving ideas in an uncluttered manner runs the risk of oversimplifying: “There are leads and lags in the transmission of new ideas across space and time” (Ellis and Biggs 2001: 437) and their application is always historically and locally specific.

limiting. Roads are built to serve several purposes – economic development, employment, security, as well as administrative, political, and symbolic purposes – some of which are fulfilled by the process of road construction while others are fulfilled by the road itself. It is against this whole set of purposes and expected effects that the consequences of roads must be assessed. I show that, in India and Ladakh, the motives that have driven the construction of roads are diverse, have changed over time, and are linked to the distinct roles and priorities of the state. These in turn explain the historical development of the road network.² It also implies that the justification for a single road can evolve: a road that is under construction can build on several justifications that change over time. Roads are adaptive, they survive shifts in theories and state priorities.

1. Roads in the literature

Roads and development: debated and changing narratives

One striking observation about roads is their durability and pervasiveness in the development discourse and practice, despite the fact that their consequences are widely debated. Ellis describes infrastructure as “one of the few priorities that belongs both in the 1960s era of dinosaur development projects and in the 1990s era of participatory community development” (Ellis 1998: 27). Yet, the consequences of roads, which should serve as arguments for road construction, remain largely misunderstood. It seems that roads are “logically assumed to alleviate [...] poverty associated with spatial isolation” (Bryceson et al. 2008: 460), and that their benefits “are often seen as so obvious in the development literature that they are listed rather than discussed” (Wilson 2004: 525).

As DeGrassi argues, “The idea that more roads mean more development” is part of conventional wisdom and is so deeply entrenched in the development discourse and practice that it is often taken for granted (2005: 52). However, there is a critical lack of evidence regarding roads’ consequences in terms of development. Studies on this have

² However, as I argue further, people are not absent from the process: the point of articulation is local politics, through which they actively contribute to and interfere in the development of the road network; this will be the focus of Chapters 3 to 5.

been conducted but methodologies have been grossly inadequate and the results rather unconvincing.³ Poverty alleviation is often used to justify the building of roads but “short-term and long-term distributive impacts of transport projects, particularly on low-income groups, are not well understood ” (ibid.: 53). In general, “Ex ante studies have tended to over-estimate benefits and under-estimate costs” (RAP 2003: 2) while ex-post studies, when conducted, have only provided patchy information of variable quality (Blaikie et al. 1979a). As van de Walle concludes, “There is as yet little convincing empirical evidence that rural roads affect social outcomes beyond what they would have been without the road” (2002: 575).

The development literature is highly divided on the subject. A good strand of it emphasizes the benefits of road provision. Porter sums up, for instance: “Getting to market to sell produce, getting to school, obtaining medical attention, finding employment, buying spare parts, farm inputs and consumer items not available locally, trying to arrange a loan at the bank – these can be difficult tasks for the rural poor in general, but for the residents of off-road settlements the hurdles to be crossed are additionally complex” (2002: 288). This is backed by the observation that rural populations often describe poverty in terms of isolation and lack of access to social services and the road network.⁴ However, numerous authors show that roads can also have detrimental effects. For instance, based on the African case, deGrassi suggests that transport development that attempted to increase agricultural growth in order to reduce poverty might have had very contradictory effects: “rising productivity may not raise rural wages if new roads increase labour supplies” and “increased food production may not lower prices for poor consumers if improved transport increases food exports; and increased income might not result in job creation if it is spent on imported commodities (2005: 53). DeGrassi and other authors also list several harmful effects associated with improved transportation, including, among others, the increased speed of disease

³ The effects of roads were often misperceived as “road investments were guided by relatively crude cost-benefit analysis”, and whereas social benefits and costs have long been recognised, “they have only been narrowly conceptualised, poorly measured, and sparsely integrated into project policies” (deGrassi 2005: 53).

⁴ Note that lack of roads can also be attributed to poverty. Porter finds a kind of vicious dependency pattern between poverty and lack of transportation: poverty reduces the economic demand for transportation, as a result of which no transport is available. This in turn induces more poverty in areas with limited or no motorized access (2002). Regarding ‘isolation’, one should mention that it is a subjective, experienced, as well as manufactured and multidimensional concept. The lack of roads is by far not the major factor that accounts for ‘isolation’. I develop these arguments in Chapters 3, 4, and 7.

transmission, usurpation of local resources, increased pollution and land degradation, increasing class and gender inequality, dependency on oil prices, and reduced availability of intermediate transport on which the poor often depend (Fairhead 1992; Fouracre 2001; Smethurst 2000).

A large part of the literature stands somewhere in the middle and acknowledges that roads have mixed results in terms of development. For instance, the Rural Access Programme (RAP) in Nepal found that roads and transport programmes “have a positive impact in terms of improved access to financial, physical and natural capital, but less [in terms of] access to social and human capital” (2003: 2). Also, roads’ benefits are not equally distributed (Molesworth 2001). It is often found that people’s ability to benefit from the road depends largely on their initial assets: individual landholdings, livestock, proximity to the road,⁵ and the presence and efficacy of integrated development projects. In general, only “better off communities are able to take advantage of the new opportunities [while] the poor and socially disadvantaged require additional interventions if their capacity to benefit from transport improvements is to be increased” (RAP 2003: 2). Blaikie et al. also show that roads per se are insufficient in leading to any sort of economic development because they fail both to change structural issues and affect major determinants of the local political economy (Blaikie et al. 1979a). As these examples show, the socioeconomic effects of roads are a highly controversial topic. In spite of this, roads have remained a perennial theme on the development agenda for both donors and governments.

What the stability and pervasiveness of roads in development practice and discourse should not conceal is that arguments in favour of roads have evolved over time. Intended consequences attributed to roads have changed and, with them, the way in which road construction has been justified. This evolution partly explains why “the belief in the power of roads to spur development has largely prevailed to the present” (Byrceson et al. 2008: 459), in spite of criticisms and contested results. The purpose of this section is to show how arguments for road construction have evolved in the

⁵ Porter has noted considerable albeit unequally distributed socioeconomic benefits for local populations as such benefits often do not accrue to those living outside a 3- to 4-kilometre-corridor along the road (Porter 2003; see also Hakangard 1992).

development literature and practice, in order to back the firmly entrenched idea that roads are conducive to development.

The dominant view in the early twentieth century was, as King Leopold II put it, that “*coloniser, c’est transporter*” (deGrassi 2005: 54). In the colonies, this perspective led to the construction of “a dendritic system, firmly directed to the evacuation of primary produce to coastal ports for onward shipment to Europe [in which] production zones were favoured” whereas most rural areas remained widely unaffected (Mwase 1989; Porter 2002: 286). After independence, the construction of the road network followed similar patterns – as countries were highly dependent on primary exports – but it also developed according to specific priorities: providing food to growing urban centres, establishing administrative structures, linking isolated areas, encouraging economic development, and “link[ing] the nation together” (Dawson and Barwell 1993: 2). Until the 1950s, Lugard’s assertion that “the prospects for development can be summed up in one word, transport” remained widely unchallenged (Edmonds 1998: 25). Backed by early modernisation theory (Bryceson et al. 2008: 359), the idea that the development of transport was necessarily conducive to economic growth unquestionably dominated both practice and discourse.⁶

In the 1950s, this assumption was critically assessed by Hirshmann and Wilson (respectively, 1958 and 1965, in Edmonds 1998). Hirshmann argued that investing in transport infrastructure was “costly and unpredictable” (Edmonds 1998: 26), and that economic growth would lead to the development of transport, not the other way round.⁷ Based on his research into highway investments in the developing world, Wilson argued that “transport [was] no more an initiator of growth than any other form of investment”(in Edmonds 1998: 26), and his work showed that transport “may not have played the catalytic role that had previously been assumed” (ibid.). Although their respective works considerably weakened the conventional view that investments in transport led to agricultural and economic growth, the same conventional view

⁶ As the economist A. Lewis wrote in 1955: “A cheap and extensive network of transport and communications is the greatest blessing that any country can have from the economic point of view” (in Mwase 1989: 237).

⁷ Hirschmann argued that economic growth cannot be created but is the result of a process of change in which transport could act as a facilitator: “In economic terms, Hirschmann saw transport infrastructure as just one part of Social Overhead Capital (SOC)” (Edmonds 1998: 26). For Hirshmann, the best way to promote economic growth was to invest in directly productive activities, which would in turn call for investments in SOC.

continued to guide most countries' and developing agencies' investments in large infrastructure projects, as if it was in some way "indispensable for development" (ibid.: 25).

The 1970s saw an important change in priorities in terms of transport and development. With the shift towards agriculture, rural development, and basic needs that started under McNamara's presidency at the World Bank, a lot of development financing was transferred from primary infrastructure projects to rural transport (Dawson and Barwell 1993; Edmonds 1998; Ellis and Biggs 2001). Also, studies in the 1970s and early 1980s noted that rural areas had been neglected, that the majority of villages fell outside the map of road transport, and that the poor made infrequent use of public transport.⁸ Development interventions and roads were now built to target the rural poor and possibly to generate agricultural growth, following the 'producer-surplus' approach (Dawson and Barwell 1993: 7). In 1977, 93% of roads financed by the World Bank were rural roads as against only 38% in 1966 (Edmonds 1998: 27). As Edmonds observes, the same logic that had been at play regarding large projects was now at work in rural road development, once again overlooking Hirshmann's and Wilson's conclusions.

In theory, the argument was based on the idea that roads provide farmers with access to markets for agricultural inputs, labour, and outputs, and therefore stimulate agricultural production. In practice, whether roads effectively contribute to agricultural growth is largely debated, and the assessment methods used have been criticized (deGrassi 2005).⁹ Studies also showed that the impact of roads on agricultural growth was minimal or non-existent (Mwase 1989), and that "major investment programmes in rural roads have not achieved the hoped-for increases in either agricultural production nor more generally in the living standards of the rural population" (Edmonds 1998: 28).

⁸ In the opinion of Barwell et al., this was paradoxically "the natural result of an exaggerated concern with economic rather than socio-economic development" (1985: 128).

⁹ Sometimes, "simplistic juxtapositions of high-road density, food-surplus Asia and low-road density, food-deficit Africa" are used, or more sophisticated models examining "correlations between road density or distance to roads and agricultural productivity growth or adoption of technology" (deGrassi 2005: 53). But even in the second case: what if roads were built in the first place in regions with higher productivity or potential, as is often the case? For instance, "The W[orld] D[evelopment] R[eport]" (World Bank, 1994) cites a number of studies that note a positive correlation between the level of investment (or capital stock) in infrastructure on the one hand and growth on the other. It notes, however, that there are a priori reasons to expect the direction of causation to run both from growth to infrastructure and from infrastructure to growth" (Booth et al. 2000: 20).

Nepal – a mainly rural country where roads were largely non-existent – is a case in point. In the 1970s, roads were seen as the panacea for the nation's development: they were heavily funded by international donors, and in the fourth Plan (1970-75), 70% of government spending was allocated to the transport and communications sector (Molesworth 2001). However, as Blaikie et al. note: "Quite early on, it became clear that roads were having only a minimal effect in developing agricultural production" (1980: 3). In many cases, the poor were simply unable to take advantage of new opportunities as agricultural inputs remained beyond their reach and the risk of innovation in new crops and techniques was too high, and because of the failure of government agricultural services (Molesworth 2001). As Molesworth concludes: "Roads alone provide an insufficient stimulus for growth in the agrarian sector" (ibid.: 119-20). However, the argument is tenacious: it is often cited as a justification for road construction (for a criticism, see Ferguson 1994) and it is the same idea that underlies the argument in the World Bank's 2008 World Development Report, that "improving road connections is [...] critical to strengthening the links of farmers and the rural economy to local, regional, and international markets" (2007: 119).¹⁰

After economic growth and agricultural development theories, their failed promises and criticisms, a subsequent argument was developed based on notions of access to socioeconomic services, human development, and human rights. The reasoning was that poverty is often linked to lack of access to schools, healthcare, labour markets, and credit facilities (Porter 2002), that these services have a direct impact on socioeconomic well-being and human development, and that the road can provide access to them (Booth et al. 2000; Fouracre 2001; Lebo and Schelling 2001).¹¹ Because transport is essential to gaining access to such services, it is considered a "basic human right"

¹⁰ However, the report is far more careful when it states: "These effects will be mediated by specific geographic, political, and economic settings. Complementary inputs and policies may be required to achieve the full benefits from improved roads. Even if aggregate output gains are forthcoming, there will almost certainly be losers too. How one weighs the gains and losses and whether poverty falls is ultimately an empirical question. Recent work using impact evaluation methods shows mixed results, suggesting that to be effective, rural road policy needs to adapt to context and setting" (ibid.: 119).

¹¹ It was found that, in addition to providing access to markets, roads could help alleviate three dimensions of poverty: inadequate social participation, increased vulnerability (due to lack of access to food, credit, or protection, for instance), and limited access to services (mainly health and education) (Booth et al. 2000). Also, as Fouracre notes, transport can contribute to social, human, financial, and physical capital, but the road may negatively affect natural capital (2001).

(SSATP 2008b: 21).¹² The new approach is also broader: it advocates “a redefinition of rural transport, to be considered in its totality and to encompass: ‘the movement of rural people and their goods to meet their domestic, economic and social needs, by any means, along paths, tracks and roads’” (Dawson and Barwell 1993: 7). Rural development is “no longer to be defined in terms of output, income and other ‘hard’ economic indicators but in terms of human development” (Edmonds 1998: 27). Moreover, by improving access, not only do roads increase the use of essential socioeconomic services, they also reduce the amount of time required to access them, considered unproductive or “wasted time” that could be better spent on livelihood activities (ibid.).

In terms of the development of the roadscape, this approach gives priority to “the provision of reliable, all-season access, to as many villages as possible, over the upgrading of individual links to higher than basic access standard” (Lebo and Schelling 2001: 1). Overall, one can see an evolution in the road-for-development discourse: from an urban/industrial to a rural context; from macro to micro; and from gross economic development to agricultural growth to human development and household well-being. This evolution has a direct impact on the kinds of roads that have to be built, and therefore on the development of the road network.

Naturally, new theories and new effects of roads necessitate new assessment tools, and the same trend can be studied through the evolution of appraisal methods for road construction projects. Van de Walle’s review of evaluation methods for roads’ benefits (2002) indirectly shows that these methods have gone through several debated phases, which have evolved in exactly the same way as the changing road-development theories previously highlighted.¹³ Therefore, assessment methods should not only be seen as grossly inappropriate, as van de Walle demonstrates, but rather as inappropriate in the light of new contingent arguments developed to link road construction to development.

Initially, road projects were evaluated through cost-benefit (CB) analysis methods based on consumer surplus calculations and people’s willingness to pay. Similar to criticisms

¹² “The provision of basic access to resources and facilities is increasingly being regarded as a basic human right similar to the provision of basic education and basic health” (SSATP 2008b: 21).

¹³ However, van de Walle does not establish any link between evaluation methods and transport theories.

of the first phase of infrastructure development, this method was criticized for being biased towards richer areas (with a higher willingness to pay), being appropriate only for high-traffic regions, and failing to capture the hard-to-quantify benefits of road construction. As a result, in the late 1970s, consumer surplus measures were replaced or supplemented by producer surplus measures in an attempt to account for expected gains in agricultural production. However, some key individual and collective benefits were still omitted from measurements (such as increased school attendance or access to healthcare), and by focusing only on farmers, the impacts on non-farm income and new income-earning opportunities were ignored. It was feared that such conventional appraisal methods were still likely to result in the under-funding of rural roads (ibid.: 577). This was to be overcome by a cost-effectiveness (CE) calculations¹⁴ method, in which the cost of projects is still taken into account but the eligibility of road projects further depends on “‘social criteria’ such as poverty indicators” and population (ibid.).

In the end, assessment methods respond to the common wisdom that roads are good for development: measuring the benefits of rural roads is fraught with difficulties, therefore “special selection and appraisal criteria for rural roads have evolved that simply assume important social benefits, despite a general lack of rigorous empirical evidence” (ibid.: 587). Selection and appraisal criteria seem to have evolved in order to provide the justification needed to build roads according to different set priorities:¹⁵ CB consumer-surplus evaluation for macroeconomic growth-based development; CB producer-surplus evaluation for rural roads and agricultural growth; and finally CE methods for non-

¹⁴ Or multi-criteria analysis, a method used to efficiently allocate a defined budget for different road construction projects according to different preset criteria that do not need to be expressed in monetary terms. An example is the access approach or *Pradhan Mantri Gram Sadak Yojana* (PMGSY) programme in India, which is further developed later in this chapter. To be fair, one should mention that assessment methods for road projects that include social benefits are also contested. As researchers put it, as late as 1997, “economic efficiency [was] widely accepted as the primary objective of transport sector operations”, being clear that other types of benefits and income distribution matters are mostly a political issue and a different question (van de Walle 2002: 578). Furthermore, this selection approach has several shortcomings: which criteria should be taken into consideration and how they should be weighted is also a matter of debate. Moreover, cost thresholds often prevent the construction of projects that could potentially have far greater social benefits (due to more difficult terrain and a higher degree of isolation).

¹⁵ The case of the RAP in Nepal perfectly illustrates these three phases (RAP 2003: 2). During the first phase (mid-1950s to mid-1970s), the state was concerned with the construction of a strategic road network and with ‘nation building’. The following period (mid-1970s to early 1990s) saw the era of integrated rural development projects, with road development seen as the engine of economic development through increased agricultural production. In the last period (mid-1990s until now), the emphasis has been on the social and environmental consequences of road construction. With this, the concept of the ‘green road’ was developed, which emphasized poverty alleviation through a labour-based and environmentally sensitive approach to road planning and construction.

quantifiable socioeconomic benefits of roads targeting the poor. To changing purposes correspond different evaluation techniques, leading to optimal justification for the construction of more new roads. Yet, in the end, the argument for road construction is still widely based on assumptions: “Although the argument that high social benefits will ensue is sometimes plausible, the evidence provided in justification is rarely so” (ibid.: 575).

Roads and their discontents

However, the “naivety about the power of road investment [...] and reductionism that casually assumes poverty reduction will necessarily follow” have come under serious criticism (Bryceson et al. 2008: 462). It is not only that the socioeconomic effects of roads are difficult to assess, there is also clear evidence that roads have sometimes either failed to improve the lot of the poor or even been detrimental to them (Edmonds 1998). Broadly, there are two sets of criticisms. The first argues that that roads have failed to act in favour of development because *roads are not enough* (Dawson and Barwell 1993): roads are either not the appropriate answer or they have not been accompanied by correct policies that could have had an impact on socioeconomic development and poverty reduction. For instance, “the planning and development of rural transport facilities is currently dominated by the provision of engineered roads” write Barwell et al. (1985: 135), with a focus on all-weather roads and motor vehicles (Dawson and Barwell 1993).¹⁶ Evidence shows that roads do not adequately serve people’s needs, which have been misconceived: the “transport needs of rural population can be characterized as the movement of small loads over relatively short distances” and

¹⁶ The idea was that, by building roads, one could create an environment that would generate the use of motorized vehicles but non-motorized means of transport were forgotten and displaced from the market. As some authors have observed: “The road element is only one part of the transport system” (Barwell et al. 1985: 135). This criticism has been integrated by planners such as Beenhakker et al. (1987) who state that “access problems are solved only when both infrastructure and transport aid [i.e., transport means] are available”. However, it seems to reduce the question of access to issues of travel and transport, and it still considers the idea that rural roads lead to economic development as given. The focus on expensive motorable roads has also created problems for governments since they are costly to maintain (Barwell et al. 1985: 135; see also Hine and Rutter 2000).

the predominant means of transport is often on foot (Barwell et al. 1985: 130). For this, roads and mechanized transport are of little use.¹⁷

Moreover, transport policies have often been inappropriate because planners have focused on increasing mobility through road provision rather than on the broader problem of “accessibility”.¹⁸ the need for transport can be reduced by relocating resources and services (Dawson and Barwell 1993: 41). Such critiques have argued that policies must be location-specific, answering the particular needs of people, and that communities should therefore be involved in their design. In other cases, when roads were effectively needed, they failed to bring the promised benefits because they were not accompanied by adequate policies. The stimulus provided by roads has been insufficient and more interventions are needed so that road infrastructure can be utilized by people and agriculture transformed (Blaikie et al. 1980; Molesworth 2001). As Blaikie et al. note about Nepal, without any improvement in the country’s productive capacity, infrastructural investments such as road construction cannot be expected to lead to any kind of economic development. In Edmonds’s critique of rural roads: “Whilst opportunities have been created for development, they have not been matched by an ability to grasp them” (1998: 4).

The second set of criticisms argues that roads have had detrimental effects. As Booth et al. found, not only have transport interventions frequently failed to improve people’s livelihoods, in some cases they have even impoverished people (2000). Roads are reproached for destroying existing livelihoods, creating disputes over resources, and increasing social differentiation, thereby generating social conflicts (Perz et al. 2007; TRL 1997). Fairhead found that roads in Zaire had increased market integration and

¹⁷ It was argued that roads would serve people’s economic needs and people’s economic activity would pay for transport, but in reality not more than half of all rural travel is related to waged employment (Booth et al. 2000: 36) and “trips within villages, as opposed to trips to a destination outside the village, are greatest in number and account for the most time and kilometre tonnes.” Planners mainly assume that rural transport is related to agricultural needs whereas studies show that journeys linked to the marketing of agricultural products are actually in the minority. Also, the existence of a “local transport system” in rural areas on which economic and social development depends and which complements the national transport system was largely forgotten (Barwell et al. 1985: 127). This set of criticisms recommends the use of intermediate means of transport and the development of a local transport infrastructure (including paths, tracks, and low-cost roads) and transport services. An additional set of criticisms is inspired by Chambers’s “tarmac bias” (1983): states, NGOs and officials still tend to ignore and neglect off-road locations, therefore, roads tend to divert attention away from the rural poor.

¹⁸ Or “access” (Edmonds 1998): “Interventions [...] all approach the problem from the standpoint of increasing mobility. As such, they look at the problem as if it had to do with transport only.”

therefore exacerbated the food crisis by creating ambiguities within households over individuals' rights and duties, and by generating counterproductive coping strategies (1992). As a result, roads had exacerbated poverty and vulnerability and undermined food security. Other detrimental social consequences of roads include gender-specific effects. Molesworth argues that, by encouraging male migration,¹⁹ the road increases the work burden of women, children, and the elderly, who remain in the village (Molesworth 2001). She also found an increase in prostitution, due to increased dependence on cash, increased female migration, and higher vulnerability to sex trafficking. Male migration also increased the need for children's labour, therefore encouraging child labour, school dropout (especially among girls), and continued high fertility.

Roads also have health consequences as they accelerate the rate of transmission of diseases and change the epidemiological environment (notably for HIV-AIDS, respiratory and intestinal diseases, and cholera). Detractors of roads in the post-development literature consider roads a "symbol of non-sustainability and ecological exclusion" (Shiva 2004). Roads create environmental destruction (Fouracre 2001), especially in mountain environments (Humbert-Droz and Dawa 2004; Smethurst 2000). They "fragment habitats, degrade stream networks and water quality, foster the spread of exotic invasive species, cause wildlife mortality and species loss, and may bring about local climate change" (Perz et al. 2007: 529). Roads also provoke soil and channel erosion, often increase the pressure on natural resources, and destroy agricultural land (TRL 1997).

Finally, a large number of criticisms are directed at the concealed motivations that guide the construction of roads and their implications in terms of power and control. For the state, is development the main or only rationale behind road construction? Often, roads do not bring the anticipated benefits to people but remain extremely beneficial to the state and elite. In Nepal, for instance, roads have increased government revenues tremendously through "customs and surcharge on imported vehicles, fuel, spare parts, sales tax, licensing and registration of vehicles, vehicle tax, route operation tax for passenger carriers, and tolls", of which only a small part is reinvested in road

¹⁹ However, it is not evident from her study that roads increase migration. As I argue in Chapter 7, this is a contested matter: many other factors affect migration patterns and the role of roads is ambiguous.

maintenance (Blaikie et al. 1980: 176; see also Wilson 2004 on Peru). Road provision has become a source of ‘tribute’ to the state as a significant amount of foreign aid is channelled into road construction. The main criticism is directed at another element: “The assumption that merely building a road through an area to join two administrative centres will have the required effects upon the productive base of the economy [...] is so misplaced as to raise suspicion that strategic and security considerations were fundamental to the decisions regarding road construction” (Blaikie et al. 1980: 4). Indeed, security matters are an important motivation for the state and the main criticism is that the roads that were built for people might end up being used against them.

As Scott observes, roads are linked to military issues: they are essential for the movement of armies, crushing rebellions, and maintaining internal order (Scott 1998). For road detractors, development purposes are just a varnish. A strong example is given by Ferguson in his case-study of the Thaba-Tseka integrated development project in Lesotho (1994). The most expensive and visible component of the project, he says, were roads and infrastructure. The road was seen as central for “mountain development”, first, as good access was perceived as necessary for the state to introduce development in the region (ibid.: 77); and second, because roads were essential to link this mountain region to markets where agricultural surplus could be traded, thereby promoting commercial farming and economic “development”. As Ferguson shows, the road and the project failed in terms of agricultural development and decentralization. However, it had powerful “side effects” on the region by linking it to the capital: instead of providing services to the people, in the end “state power was expanded and strengthened by the establishment of the local governing machinery”, whose control was not only political but also military (ibid.: 253). In that case, the road was sold as a “development” project intended to boost agricultural production but ended up mostly expanding government power. This is the role of “development”: acting as a depoliticizing machine, reducing issues of poverty and deprivation to technical matters. For road detractors, road construction is part of these highly political matters that the development apparatus and discourse reduce to a neutral and technical fix.²⁰

²⁰ In *The Way of the Road*, Ben Campbell narrates the case of a road built by the government in the Rasuwa district in Nepal up to the Tibetan border (2009). The road was built for military purposes but sold as a development project so that the Maoists might not oppose or attempt to destroy the project.

Another edifying case is that of the East-West Highway in Nepal. In 1970-80, a large part of foreign aid was concentrated in transport projects, which received high priority in the state's expenditures, reaching as much as 33.6% of its budget in 1969/70. The aim was "ostensibly as a means of providing what is declared to be the necessary infrastructure without which agricultural and industrial development and broader-based economic growth cannot take place", although "much of the impetus [...] derives from a concern about internal security and from the interests of major foreign aid donors" (Blaikie et al. 1980: 65). The East-West Highway was wanted by the king essentially for strategic and political reasons; it also played with national sentiment since "it would be built for the Nepalese by the Nepalese" (ibid.: 66). Ineffective planning and supervision eroded popular support and ultimately led to the failure of the project, so that the government asked China and India to build it – two countries that had a clear interest in increasing their influence in Nepal.²¹ As the authors note with irony, the road was clearly built with political aims in mind but the United Nations Development Programme (UNDP) carried out a study to assess the economic costs and benefits "as if no political decisions had already been made" (ibid.: 67). As they write: "If roads have been built primarily for political and/or strategic reasons in Nepal it seems curious to investigate the feasibility of their construction on the grounds of economic benefits they would generate" (ibid.).

It is interesting to note here the same process at work as in Ferguson's case, in which the "development" apparatus tended to work as an anti-politics machine, legitimizing through socioeconomic development discourse a project that was initially built for political and strategic purposes. Interestingly, the sequence is the opposite here: in Ferguson's Thaba-Tseka case, the process worked ex-ante, whereas in Nepal it worked ex-post. The other interesting idea is that the same road can be wanted by different agents for very different reasons and be given different justifications. Justifications can vary over time but, in the end, the same road is built. Security considerations and strategies of power and control are central features of roads and essential motivations in road development plans – an idea I will develop later in this section as well as in the case study of Ladakh.

²¹ Initially, China agreed but India objected to China building the road so close to the Indian border. Therefore, India agreed to build it while China was put in charge of building another road in the east.

Road construction and employment generation

In all the theories presented so far as well as in their criticisms, the road was the agent of change. Through its effects on mobility and access, the road was supposed to bring about socioeconomic development. Yet, as far as development is concerned, road construction and maintenance matter too: they provide employment, create wealth, and redistribute income. Hence, labour-intensive methods have been devised in order to maximize employment and these have been partially integrated into road construction projects. These considerations also matter in the decision to construct roads.

The idea of launching large-scale infrastructure projects during an economic crisis – such as the construction of motorways in Germany or the New Deal in the United States in the 1930s – or building a road to employ a mass of labour that has suddenly become more abundant – such as the Great Ocean Road in Australia, which was built by returning servicemen after World War I – is not new. As the numerous illustrations in Edmonds's and Howe's *Roads and Resources* (1980) show, such strategies have also been consciously used by developing countries to employ a mass of unemployed or underemployed labourers, often in order to provide a safety net to prevent poor people from falling into destitution and sometimes as food-for-work or famine relief programmes (Booth et al. 2000: 43). The main theorists of labour-intensive road construction, mainly found among the proponents of the *intermediate technology* current, argue that the share of road construction in government spending is a consequent one and that, by using labour-intensive methods, this kind of government spending can be used to promote employment (Edmonds and Howe 1980; Tajgman and De Veen 1998).²² By creating employment in rural areas for unskilled labour, labour-based methods also decrease rural-to-urban migration; they allow local contractors to be employed and therefore bring economic development to rural areas at the same time as they increase rural workers' skill levels. Importantly, they generate an income that can be immediately invested, therefore increasing agricultural production and rural

²² This was also to reduce dependence on foreign imports of equipment and spare parts and therefore limit pressure on foreign exchange resources. Labour-based methods were further popularised and promoted by the International Labour Organization (ILO) under the umbrella of the Integrated Rural Accessibility Planning (IRAP) programme in the 1980s.

industrial activities.²³ In the longer run, labour-intensive methods can also be used for road maintenance, providing durable employment to the population.

This principle has been adopted largely in developing countries where labour is generally abundant in relation to capital.²⁴ The feasibility of substituting labour for equipment has also been tested through a whole range of macroeconomic case studies (Irvin 1975; Lal 1978; McCleary 1976; Rieger and Bhadra 1979). Today, as Porter notes, labour-based road construction and maintenance are strongly encouraged and favoured by donors (see Porter 2002). In its annual report on the Sub-Saharan Africa Transport Policy (SSATP) Programme, the World Bank considers employment generation to be one of the crosscutting issues of transport development (SSATP 2008a) and actively promotes the concept (SSATP 2007, 2009a).²⁵ Road construction and labour-intensive methods are adopted by states and donors as developmental instruments, and evidence shows that their effects on the local economy can be consequent. Road construction is not only the means to an end, i.e., having a road built; the process of construction matters too because of all the socioeconomic effects mentioned above. Therefore, any tentative attempt to understand and explain the rationale and consequences of road construction in terms of development and poverty alleviation must integrate this dimension into its analysis. This is one fundamental aspect that guides the approach of this thesis: if one is to understand the nature and consequences of changes brought about by the road, one also has to take into consideration the effects of its construction.

²³ However, Edmonds and Howe warn that road construction will not create development, but “only the means by which it can take place” (1980: 198). Road construction must be integrated into a rural development framework, along with other activities and services. Road workers are generally the poorest among the population. Therefore, the rise in income is often just enough to lift them above the subsistence level, but not sufficient to be translated into savings and productive investment (see Chapter 6).

²⁴ Using the same ratio of capital/labour as in industrialised countries would lead to a rate of employment of 4 to 5% only (Edmonds and Howe 1980: 14).

²⁵ “Employment generation and the assurance of a fair wage are therefore areas that should be of concern to every development initiative, whether such an initiative has a main focus on policy development or on the delivery of infrastructure and services. In the case of the SSATP, this concern has historically been evident in its efforts to promote the use of employment intensive/labor-based road works methods [*sic*]” (SSATP 2008a).

Symbolic, political, and strategic aspects of roads

Crowden writes about roads “when the vehicle has passed its usefulness is over, until the next vehicle comes along. Although a road may be several hundred miles long its usefulness is at least in one sense transitory” (1996: 55). Such an attempt to philosophize on the utility of roads is interesting but its conception is segmented as it fails to see the multiple purposes and functions of roads. Roads are built to allow the movement of people and goods over distances but they are also built to provide employment and have several other symbolic, strategic, and political dimensions.

Roads mean different things to different people and are used largely for their symbolic dimension. “Transport is loaded with potent symbolism” (deGrassi 2005: 55); for some, roads can be symbols of prestige, modernity, development, change (Skafté 1986) and “progress”²⁶ (Conover 2010: 5). Roads are “objects of both fascination and terror” and have “material and iconic dimensions” (Masquelier 2002: 831). Roads are considered to be a “modern infrastructure” (Kreutzman 1993: 38) that allows “modern forms of transport” – understand mechanized and oil-based (Dalvi and Verma 1984). This is especially the case when roads are built in remote, isolated regions, and suddenly appear as the link to the ‘modern’ world outside. Roads are “the signature of modern India” as advertised by the Department of Roads and Transport in brochures and magazines in 2007. For nations whose remote parts are being connected, roads are symbols of freedom, independence, and even unity, such as the Great *Uhuru* (Freedom) Railway in Tanzania.²⁷ Their symbolic aspects are often, though not always, linked to their capacity to rapidly transport people and goods. There are roads whose role is purely ornamental: in the Inca empire, where the wheel did not exist, tremendous long, straight roads – stone paths nearly 100 m wide – were built to embody the empire’s power (Conover

²⁶ Perhaps because roads are such an essential feature of our civilization and so indispensable to our modes of organization and economy, they have somehow become indissociable from notions of development and progress. One has only to turn to the popular literature to see how roads are cast in the debate of isolation versus progress, presented as “the essential network of the non-virtual world” and “the infrastructure upon which almost all other infrastructure depends” (Conover 2010: 5).

²⁷ Roads can also be symbols of struggle: Onesto (2005) tells the story of a road built by the Communist Party of Nepal (Maoist) who seized power in Rolpa – a road that the central government had long promised but now attempted to destroy. As a People’s Liberation Army fighter puts it: “This road is not being built just to run vehicles, but to convey the history of struggle and the revolutionary significance.” In the words of a cadre of the party: “The building of the road is related to more than just development and economics. Its aims are also ideological and political.”

2010). On the other hand, because roads are associated with state power, they can also be negatively connoted for the people. As Fairhead writes about Zaire (1992: 21):

From colonial times, roads were associated with the exercise of power by the state or the chiefs: forced labour was recruited to build them, personal movement along them was taxed and controlled, and indigenous land near them was expropriated for plantations and mission stations.²⁸

In the same vein, Masquelier observes how roads in Niger embody colonial experience since the first and most enduring aspect of colonialism affecting Mawri villagers was the construction of roads (2002: 829). So was the case in Peru after independence, where road-building schemes were heavily resisted by the population (Wilson 2004). Hence, roads become cast in a relation between the state's power and control versus people's autonomy and resistance.

The association between roads and state power occurs in the relationship between the state and its subjects, between government and governed, and between elected representatives and electors: "road projects – with expensive, bright, large, heavy and loud equipment – can garner state legitimacy", and road construction often coincides with election times (deGrassi 2005: 55). "Roads can be both a response to political pressure, as well as a means for it" (ibid.: 54). For instance, Porter observes that road construction and maintenance tend to favour political allies rather than political opponents, so that "political interests have had a strong influence on road alignments across much of sub-Saharan Africa" (2002: 292). Roads reward those who support the government while those who build roads are given political credit and rewarded.²⁹ But roads also matter in influencing politics: "To live off-road is to be invisible" (ibid.: 291) as people might blame the lack of roads for why they cannot access policymakers and influence policymaking.

²⁸ This, notes Fairhead, has not changed radically after independence: for ordinary people, roads are sites of exaction by robbers and extortion by state officials (1992).

²⁹ Skafte, for instance, tells the story of a road in the Arun Valley of eastern Nepal that was built by a politician solely to "bring him prestige and give him a political edge in the regional election" (1986: 102). The road is unconnected, there are no cars, and it is quickly destroyed by landslides, thus becoming unusable. Yet, in the end, the political credit goes to a politician who, thanks to "his reputation of having brought the 'modern age' to east Nepal", becomes secretary of education in the national government.

Hence, roads are often designed, built, and used to pursue political ends. In this process, the road matters as a symbol of progress and unity, and for its expected socioeconomic consequences. Even if the road “brings development”, it cannot be reduced to a neutral intervention and technological fix. The question of who is rewarded with the socioeconomic consequences of a road is a political one.³⁰ The idea of targeting remote and autonomous populations is often guided by more than an ideal of equity in terms of development. As Skeldon writes:

There have [...] been development programmes to win the hearts and minds of the peoples in these mountainous regions. Roads, airstrips, townships, hospitals, agricultural extension services, and other symbols of "development" have been established in these regions of refuge to tie the populations more securely to the nation state, effectively extending centralized control over the territory and at the same time protecting the flanks of the lowland powers. (Skeldon 1985: 236)

In the specific case of mountain regions such as Ladakh, the purposes of roads are manifold: economic, social, symbolic, administrative, and political – which includes internal politics, nation building, and security. Roads are very much a tool of the state. They are even “critical to the definition of the modern state” (Ispahani 1989: 5) and its capacity to administer and secure a territory. “Routes are the means for the centralization of the state, for the distribution of resources, [...] for the movement of ideas, transmitting what has been called the ‘iconography’ of the state, the dominant culture and ideology of the political center [*sic*], to its peripheries” (ibid.). They are essential when “large land masses and disparate people must be bound together”, an idea very well captured by Wilson’s notion of “territorializing regime” (2004).

Routes create access, and creating or denying access is a political decision. The state can use routes to facilitate access, and the absence of routes – or borders as well as natural features of the landscape, such as mountain ranges and rivers – to regulate it.³¹

³⁰ Moreover, as Edmonds and Howe observe, the choice of road construction methods is not neutral either. Colonial needs, in terms of resource exploitation, did not lead to a road system that would serve the population but to roads and railways of a high standard – using the most productive capital techniques similar to those used in industrialized countries – that would first serve the colonial power (1980).

³¹ Ispahani suggests calling it an “anti-route – any natural or artificial constraint on access” (1989: 2). Anti-routes serve the same purpose as routes: whether borders, migration policies, tariffs, or quotas, “anti-routes create pressure against movement – they limit, restrain, or ‘channel’ it – whereas routes facilitate broader movement” (ibid.: 3).

As Sikor and Lund argue, it is also part of the state's territorializing strategies to allow or prevent certain forms of land use and access, and to regulate forms of mobility, thereby contributing to the structuration of citizenship (2009: 14). The ability to deny and regulate access through roads is essential to the state's existence and exercise of its sovereignty; it participates in the creation and enforcement of its territorializing regime.

As was mentioned in the earlier criticisms of roads, roads are also linked to the state's military power. In the view of military strategists and planners, roads are essential for the movement of armies (Scott 1998). This is true internally: in the cases of Nepal (by Blaikie et al.) and Lesotho (by Ferguson), roads are built to reinforce or end up re-enforcing the state's control over its territory. One could also think of the reconstruction of Paris by Baron Haussmann under Louis Napoleon (*ibid.*: 62) or the reorganization of the transport map in France by Colbert and later by Legrand (*ibid.*: 75). Externally, roads are essential for the conduct of war (Ispahani 1989: 5): the Burma Road and the Ho Chi Minh trail are just famous historical examples; in the conduct of war, roads, bridges, and airstrips are alternatively objectives to be secured or targets to be destroyed.

Roads are essential to the formation, continuation, and expansion of states and empires.³² Similar strategic considerations govern the construction (or non-construction) of road links, depending on the experience and doctrine of military elites and on how the environment is perceived, whether as a natural barrier to invaders or as a vulnerable place to be secured. In the case of Nepal, for instance, Caplan writes (in Molesworth 2001: 3):

The poverty of road transport [...] was quite clearly not due to any lack of technical ability. [...] Nepal's no-roads policy for very nearly 200 years following the founding of the state was dictated largely by its distrust of Britain's intentions

³² Conover (2010) gives a good historical illustration of this: the Romans were the first to demonstrate the importance of the road network in the expansion and continuation of their empire. Built over 800 years, the road system – which covered up to 53,000 miles, with 18 roads that radiated out of Rome – allowed the movement of armies and the expansion and consolidation of the empire. But, as he also notes, Roman roads had a drawback since the same roads were used by 'barbarian' tribes to quickly move and attack the empire, leading to its demise.

in the region. ... it feared the possible military consequences of establishing a proper transport system...³³

The fact that roads are an instrument of the state and instruments of power – to administrate, regulate, control – means that roads are symbols to be read: history inscribes itself in the evolution of road networks. Roads are linked to histories of war and trade, and are markers of the relationship between different political entities. Roads can be seen as a ‘language’ that is better read on maps or aerial views and can be interpreted. They “can define the territorial reach and physical capabilities of the state and are integral to the achievement of its political, economic, and military potential” (Ispahani 1989: 3). Roads are built by the state as a symbol and marker of its presence: they can be used to link two territorial entities, to define borders and secure them, or even to claim a territory: “A route is both a geographical and a political idea, both an end and a means” (Ispahani 1989: 2).³⁴

As the previous section showed, roads are often built in the name of development although the road-development nexus has been severely criticized. This last section provides wide evidence that, when it comes to the decision to build roads, development is not the only reason that matters to the state. States build roads for reasons related to security and strategic purposes, and for reasons that are related to the exercise of state power. Roads create legitimacy and are an essential tool in the state’s territorializing project. Many of these aspects are both real and symbolic as roads are symbols of what they are supposed to do: they are symbols of the capacity, legitimacy, and territorial reach of the state. Given the strong and pervasive assumption – both in theory and practice – that roads are good for development no matter what the evidence suggests, and given the capacity of road development theories to mutate and adapt, roads also become symbols of development. This further enhances the legitimacy of the state through road construction at the same time as it depoliticizes road construction. These multiple purposes of road construction explain the political economy of roads: they

³³ A similar illustration is given by the Batak of northern Sumatra in Indonesia, who did not build trails or bridges between villages out of distrust for one other.

³⁴ Geographical, because a road is physical and its construction is partly dictated by physical needs and the vagaries of terrain and climate; political, because a road is shaped by politics and responds to political aims. Moreover, a road is an end because it is a symbol of the state and a product of history; and a means because it is used by the state to achieve other objectives, fight battles, and shape history. It is difficult to separate both roles – as an end or a means – as the symbolic role of the road (as an end) is very much linked to the state’s ability to use the road as a means.

provide a comprehensive explanation for why states build roads and how the road network develops accordingly. In the following sections, I put road construction in India and Ladakh into a historical perspective to try to understand how these different theories and plural motivations of the state account for the development of the national and regional roadscape.

2. Road development in the Indian context

In the case of India, the development of the road network was certainly influenced by the vision and imprint of its first prime minister and modernizer, Jawaharlal Nehru. As he put it in 1952 (Ministry of Defence 2003):

I have come to the conclusion that one thing to which we must give top-most priority is roads; roads of all kinds, not only very up-to-date bituminised or cement roads, but roads of any kind, to open out vast areas of this country which are closed up today and which you cannot reach unless you walk or ride. I give roads first priority.

Yet the study of road development in India clearly shows that the country has followed different phases of road construction, determined by changing objectives. In her *Political Economy of Roads*, Wilson tries to link questions of movement, routes, and roads to the broader political economy whereby economic needs in terms of labour and resources, political orientations, civilizing missions, and administrative requirements tend to explain the unequal and cyclothymic nature of road construction in Peru (2004). Through the concept of territorializing regime, she “situates mobility and movement, routes and roads, within relations of power and political economy” (ibid.: 526). Territorializing, she writes, is a constant process that “involves colonization, maintaining routes, and exerting control over people and resources located at a distance” and strategies “to impose/demarcate boundaries, classify regions and populations, guide, deploy and fix people and space” (ibid.: 530). The following section applies the concept of *territorializing regime* to the case of India.

In the *History of Road Construction in India*, the Central Road Research Institute presents a naïve, apolitical, and naturalistic view in which roads were built according to “an evolutionary process of development spread over centuries” (Central Road Research Institute 1963: i). Hence, animals make trails, humans follow animals, make their own trails for hunting, improve them, and “within a few centuries after the introduction of the wheel, long and trans-subcontinental trade routes connecting regions of varying climates and people started appearing” (ibid.: 2), creating, by the same token, the myth of an already connected and unified nation spanning the whole Indian subcontinent.

What this view conceals is that road construction is not a spontaneous process and that the decision to have routes (or not) is eminently political. The study of five-year plans, road development plans, other official documents, and the road literature shows that road construction in India has gone through various phases, balancing between pragmatism and the optimal allocation of limited financial resources on one hand, and differing conceptions of the state and the role of roads on the other. Starting from the colonial period, we saw that roads were first envisioned as a means to extract and export resources to the metropole and rule the country: the case of India was no exception (Anstey 1977; Government of India 1997). As some Indian scholars wrote, the “road then was a tool for plundering Indian raw material and capturing market by foreign commodities [*sic*]” (Kanaga Durai et al. 2000: 14). Roads and railroads linked regions of production with the main ports on the Indian coast. In reaction to this, the appropriation and construction of a transport network that would truly serve the country and its inhabitants was symbolically linked to India’s struggle for independence and autonomy. Hence, the 1943 First Twenty-Year Road Development Plan (or Nagpur Plan) pragmatically put the emphasis on “agriculturally developed areas”³⁵ (ibid.: 15) and the First Five-Year Plan on “national and local resources and needs”.³⁶ Symbolically, after independence, roads were seen as an exercise in state building, the

³⁵ The plan discriminated between “agriculturally developed areas”, where no village should be more than 2 miles away from any road, and “non-agricultural areas”, in which no village should be more than 5 miles from any road. It is likely that the Bengal famine of 1943 might have had an impact on the debate.

³⁶ “Priority in the development of roads has to be determined in relation to plans of development in other spheres in the light of national and local resources and needs. Roads which assist production, and especially agricultural production, should have a high priority in existing conditions” (Government of India 1951).

“thread that binds the nation together” (Central Road Research Institute 1963; India Profile).³⁷

In successive five-year plans and road development plans, questions of food production and distribution continued to be seen as a high priority. As such, regions that produced large agricultural surpluses were targeted for the development of roads and, in the Bombay Plan (1961-81), the distance between a road and any village in an agriculturally developed area was shrunk from 2 to 1.5 miles (Central Road Research Institute 1963; Government of India 1951: art 69).³⁸ In 1967, a special committee appointed to study rural roads suggested that 40% of budget funds should be allocated to “areas where a rapid increase in agricultural production is expected” (Kanaga Durai et al. 2000: 16). In a way, the emphasis on rural roads in India intervened at a time when the Green Revolution was in full swing in the country (starting from 1965) but it predated and announced the shift towards rural development and agricultural growth-oriented road construction programmes operated by the World Bank and development agencies in the 1970s.

At the same time, the objective of employment generation was duly included in road construction considerations: the Bombay Plan also stated that “road construction and maintenance can provide employment for a very large number of skilled and unskilled labour” and it was later established that employment generation should be seen as one of the key objectives in the development of the country's transport system (Dalvi and Verma 1984). Chief engineers estimated that “road construction and maintenance can provide employment for a very large number of skilled and unskilled labour”, whose number would grow “from about eight *lakhs* [800,000] in 1961-62 to 42 *lakhs* [4.2 million] in 1980-81” (Central Road Research Institute 1963: 100). In 1974, a study

³⁷ On a purely discursive basis, note that the conclusions of the Road Development Committee (1927-28), or Jayakar Committee, had already stated that roads mattered for the general welfare of the country, for “better marketing of agricultural produce”, and for the “social and political progress of the rural population” (Central Road Research Institute 1963: 43). Yet there was no increase in road expenditures until the Nagpur Conference in 1943.

³⁸ Incidentally, it might be no surprise to read that agricultural productivity is higher in areas connected by roads than in off-road areas since agricultural areas were targeted for road construction in the first place. Also note that the Twenty-Year Road Development Plan takes into consideration other needs such as “the future trends in traffic; the needs for fully developed, semi-developed and under-developed agricultural areas; location of industries, commercial centres, ports, places of pilgrimage, universities and cultural centres, administrative headquarters; the strategic needs of the country, etc.” (Central Road Research Institute 1963: 53). However, the emphasis is still on agricultural areas and towns (industries and commercial centres), and the socioeconomic needs of rural populations remain largely ignored.

commissioned by the Planning Commission estimated that the construction of every kilometre of national highway would create 141 to 153 person-years, up to 96 for state highways, 85 for district roads, and 32 for village roads (NCAER 1974: v). Road construction targets included in the Fifth Five-Year Plan (1974-79), it said, would generate an employment level of 10.8 million person-years, while the transport sector would employ another 2.9 million people permanently. This would create employment for a large percentage of the new workforce arriving in the market every year, particularly for unskilled labour.³⁹ The employment component can be found in the following five-year plans issued by the Planning Commission, which state that numerous village roads have been constructed under various employment programmes and famine relief schemes (see for instance the 9th Five Year Plan: Government of India 1997). The Eleventh Five-Year Plan insists on the use of labour-based technology to provide employment in rural areas and contain rural-to-urban migration (Ministry of Rural Development and Planning Commission 2006). This highlights the dual objective of road construction in India: delivering roads as well as creating employment and redistributing income.

Until then, the state's priorities in terms of infrastructure and road development had favoured agricultural regions to the detriment of others. Regions presenting no particular resource (mainly 'hill states', deserts, and 'tribal areas'), low agricultural productivity, and low population density were unlikely to see their road network developed, and such policies undeniably led to wide unbalances among and within regions.⁴⁰ The role of roads in providing social and economic services, which had not been seen as a priority, was to be gradually integrated into road development and five-year plans. Hence, in the Fifth Five-Year Plan, rural roads were included in the national Minimum Needs Programme (MNP), and in 1978 a working group set up by the Planning Commission recommended that 70% of road funds be spent on linking

³⁹ Given that the population of India at the time was probably around 600 million (548 million in the 1971 census, 683 million in the 1981 census), it represent a consequent share of the active population (figures: Census of India 2001, Chapter 3, p. 4). Moreover, Dalvi and Verma estimate that "a sizeable portion of the country's working population (roughly 10%) is directly or indirectly employed in the transport sector" (1984: 231); among these, road-based transport would generate as many as 17 million jobs per year in India.

⁴⁰ Road construction policies led to considerable discrepancies between states. For instance, in 1961, while the state of Mysore had a road mileage of 166 miles per 100,000 (1 *lakh*) inhabitants, J&K had only 18 miles. West Bengal had 119 miles per hundred square mile whereas J&K had only 8. J&K, of which Ladakh is a part, had the lowest mileage in both categories (Central Road Research Institute 1963: 108). Further focus on agricultural areas and population clusters has reinforced this tendency.

villages of 1,500 inhabitants to all-weather roads (revised to 1,000 inhabitants in the Eighth Five-Year Plan for 1992-97).

The real impetus undeniably came with the Pradhan Mantri Gram Sadak Yojana (PMGSY) programme, adopted by the Ministry of Rural Development in December 2000. Noting that “40% of the Habitations in the country [were] still not connected by All-weather roads [*sic*]”, the PMGSY scheme aimed at countering this national imbalance (Ministry of Rural Development 2004). The scheme would cover “all Unconnected Habitations with a population of 500 persons and above [and in] the Hill States (North-East, Sikkim, Himachal Pradesh, Jammu & Kashmir, Uttaranchal) and the Desert Areas [...] as well as the Tribal (Schedule V) areas, the objective would be to connect Habitations with a population of 250 persons and above [*sic*]”. In PMGSY guidelines, roads are uncritically presented as “a key component of Rural Development by promoting access to economic and social services and thereby generating increased agricultural incomes and productive employment opportunities [*sic*]”, and “a key ingredient in ensuring sustainable poverty reduction” (PMGSY 2004b).⁴¹ As this shows, the socioeconomic benefits of road construction are once again taken for granted, ignoring the evidence-based criticisms previously mentioned. Roads were built with the aim of providing social and economic services to the rural population, targeting regions in which roads had not yet made any real incursion. By March 2009, 155,000 km of roads had been built, connecting nearly 32,000 villages to the road network.

Therefore, one can visualize the process of road construction in India as the extension of a network whose growth and direction is guided by diverse priorities and political considerations: resource extraction, nation building, administration, agricultural production, employment generation, and finally socioeconomic development. Successive phases of construction partially follow the theoretical shifts presented in the previous section, and partially overlap, leading to the present road network. The role of transport and road construction in providing employment, as well as the persistent assumption that roads are good for development, remain omnipresent. The same road

⁴¹ Two references to socioeconomic development are given to justify the PMGSY (2004b): the first one in the beginning is cited above; the second one at the end: “Rural connectivity is not an end in itself. It is a means. It is expected that the connectivity will improve indicators of education, health, rural incomes etc.” Once again, roads’ consequences are assumed and improvements in health, education, and incomes are uncritically presented as direct by-products of roads.

optimism is found in India as in the development literature, only tempered by limited means and an increasing population that makes quantitative targets always more difficult to reach. National priorities also explain why border regions, especially mountainous and desert areas, were largely excluded from the process and their road system weakly developed relative to the rest of the country. As the road infrastructure developed, the varying conceptions of the role of roads and the priorities set by the government created inconsistencies in the development of a national network. The development of the road network was largely politically driven, and the roadscape was a physical expression of socially perceived needs and political processes.

3. Roads in Ladakh

How does the case of Ladakh conform to phases of road construction defined by the development discourse and national priorities? Both offer a partial explanation. Ladakh somewhat follows general theoretical shifts and changing national trends, at least in the later period. However, because it is a border region, the political economy of roads in Ladakh is again different. Its road infrastructure was totally non-existent until the beginning of the 1960s. After 1962, the road network slowly developed (Rizvi 1996) until the recent boom in road construction during the last decade. The following section explains why no roads were built before 1960 and why roads are built today.

The political economy of no roads

In Ladakh, roads often follow existing trails (both being partly dictated by the geomorphology of the place) but the former should not be seen as a continuation of the latter. Roads and trails are very different because they correspond to distinct roles of the state: from extraction to redistribution. The development of the road network in Ladakh follows the evolution of the state and the transformation of its role from an extractive to a redistributive one. Trails were improved to allow for the passage of armies but, for a long time, they were sufficient for the conduct of trade and state affairs.

As mentioned in Chapter 1, until the 1950s Ladakh was far from an isolated region. It was one of the crossroads of trans-Himalayan and trans-Karakoram trade, between India, Tibet, Central Asia, and Afghanistan; for pilgrims from Central Asia, it was the route to Mecca (Fewekes and Khan 2005; Rizvi 2005).⁴² As Rizvi writes, “There was not one trade, but many trades” (1996: 96): (1) a subsistence trade of salt and grain, on which Ladakh partially depended; (2) a regional trade balancing the surpluses and deficits of regions within Ladakh; (3) the trade in *pashm* (also called “cashmere wool”), produced on the Tibetan Plateau but in which Kashmir had exclusivity; and (4) a long-distance trade in luxury goods. Leh was a bustling bazaar where goods from diverse origins were sold and exchanged, and the volume of trade was considerable, if variable.⁴³ Ladakh was also situated at a strategic location, being the place where “the three greatest Empires of the Earth meet – Great Britain, Russia and China” (Knight 1893: viii). Far from being cut off from the rest of the world, rulers of Ladakh were conscious of their position: when Moorcroft entered Leh in October 1820, one of the first question he was asked was “whether [they] were on terms of friendship with the *Vrús* (Russians), *Kathás* (Chinese), and Tanjit Sinh [Ranjit Singh, Maharaja of the Sikh Empire], whether [they] had ever visited *Rúm* (Constantinople)” (Moorcroft et al. 1989a[1837]: 249).

Cunningham wrote: “In Tibetan every road is called *Lam*; but the high-roads are distinguished by the name of *Lam-chhen*, or ‘Great Roads,’ and *Gya Lam*, or ‘Passable Roads’” (1854: 146). One and a half centuries later, the same distinction applies, with *lam* designating any route or trail, and *gya lam* or *jeep lam* a motorable road. Cunningham enumerated and described seven of these ‘roads’ or ‘routes’, which linked Leh to faraway regions. Two of these still exist today and connect Ladakh to the outside

⁴² Considering the provenance of goods exchanged in Leh in the 1920s, Fewekes and Khan legitimately ask “the extent to which Ladakh’s trading networks could be understood as a feature of ‘globalization’” (2005: 331).

⁴³ During its long history and up to the present day, trade in Ladakh has been closely linked to regional political developments, as political turmoil and events affected commercial relations and concurrent trade routes. Trade between India and Central Asia through Ladakh culminated at Rs680,000 in 1920/21 (Warikoo 1995: 240), declined with the opening of a direct route between Russia and Sinkiang, and decreased even further when disorders arose in Sinkiang (ibid.: 244). It came to a near-complete standstill after the Communist Party took power in 1949, China occupied Tibet in 1950, and finally closed the India-Tibet border in 1959. Yet, trans-border trade survived as recently as 2009, as it remained tolerated and provided lucrative livelihoods to shopkeepers and unemployed youths in Ladakh as Chinese blankets, flasks, shoes, and mobile telephones were smuggled across the border and bartered for sugar, wheat flour, and the traditional apricot and walnuts. In 2009, a regain of tensions provoked by the two neighbours’ road construction activities and cross-border incursions led to closer monitoring and sealing of the border, and trans-border smuggling came to a halt (Gupta 2009).

world: the “Western road” from Srinagar, and the “Southern road” through Manali and Darcha. Cunningham, who travelled the western route in 1846/47, described it as “one of the most excellent and most easy routes to be found throughout the Alpine Punjab” (Cunningham 1854: 149).⁴⁴ Yet it had not always been like this.⁴⁵ The Dogra general Zorawar Singh was mainly responsible for improving the route after he conquered Ladakh in 1834 so as to make it passable for mounted armies. He also built the bridge over the Indus at Khaltse, as well as those over the Wanla, Kanji, Waka, Suru, and Dras rivers.⁴⁶ Today, the Srinagar-Leh Highway follows the same trajectory. As for the southern route, it was travelled by Cunningham in August 1846 and corresponds more or less to the present Manali-Leh Highway. He and his party found the passes easy, with the most difficult part being the crossing of the Chandra River at Koksar, today the first checkpoint after the Rothang La on the road from Manali to Leh.

Routes in Ladakh were used by traders and travellers. The Srinagar-Leh route was improved to allow for the movement of armies after the Dogra conquest of 1834 but until 1954 (except for a brief episode in 1948) no real amelioration was made to the transport infrastructure. Routes were maintained but they remained more or less in the same state and were not upgraded.⁴⁷ The explanation relies partly on physical factors and the difficulty of building roads in such an environment, but essentially on political factors, notably the weak involvement of the state in Ladakhi affairs and the existence of the *res* system (Bray 2008).⁴⁸

A communication and transport network is essential for a state to administer a territory but, in Ladakh, the role of the state was reduced to a strict minimum: mainly levying heavy taxes on people in labour and in kind. The Dogra rulers, who controlled Ladakh

⁴⁴ This was with the exception of the march over the Zoji La which, at that time was “so difficult and rocky, so as to be impassable by a mounted traveller” (ibid.). Moreover, the quality of the road depended on the season. Knight wrote about the same road, which he travelled nearly half a century later: “The road was in so bad a condition after the hard winter, that we knew we should have to employ coolie labour for our baggage, and would be lucky if we got all Bower’s horses across the pass unladen” (1893: 88).

⁴⁵ See the description of the route by the Jesuit priest Ippolito Desideri in 1715 (in Rizvi 1996: 109).

⁴⁶ In other places where bridges did not exist, people crossed rivers with the help of rafts made of 40 goatskins and propelled by poles. Goatskins had to be constantly re-inflated through one leg that would later be tied with a knot. This system was explained to me by some villagers in Alchi and is described in detail by Moorcroft et al. (1837), Cunningham (1854), and Knight (1893).

⁴⁷ This was with the exception of the road to Yarkand through the Chang Chenmo, which was improved and made free following the conclusion of the 1870 treaty between Kashmir and the British government in India (Warikoo 1995: 236; see also Rizvi 1996: 106-107).

⁴⁸ Also called *begar* in Persian/Urdu – meaning obligatory labour for communal benefit: e.g., the repair of roads, bridges, and temples – or *U-lag* in Tibetan.

from 1834 to 1947, left their imprint on the region but, in general, “their attitude toward Ladakhi subjects was extractive, autocratic, and aloof, by and large” (Aggarwal 2004: 35). Administration and trade relied essentially on the *res* system, under which villagers had to provide corvée transport (as they previously did for the king of Ladakh) to officials, monks, state traders, and other people issued with a passport. The government made people maintain routes, caravan-serais, godowns, and stables on the way, and provided grain and forage at subsidized rates. Villagers were made responsible for providing pack animals and coolies at fixed rates – who were often unpaid. As Bray summarizes: “It was imperfect at every level, but [...] met the minimum requirements of the British and Dogra leaders at the top of the power hierarchy” (2008: 64).⁴⁹ For the British, their main interest in Ladakh was also to have a buffer state at the frontier without having to rule it; this and the fact that Ladakh was only indirectly administered by the British certainly did not encourage the development of any transport infrastructure either. The importance of the *res* system is highlighted by an exchange of letters between the viceroy and the secretary of state in London in 1892: “The *begar* [*res*] had survived in Kashmir chiefly owing to the remoteness of the country and its defective communications. Its sudden abolition would ‘throw out of gear the whole machinery of Government’” (ibid.: 58). Effectively, after independence, the newly independent government had no alternative but to maintain the unpopular system until the early 1960s (Murup Tharchin, Leh, 21 July 2009).

Hence, the *res* system was instrumental in enabling the “central government to maintain communications with all points in the polity with a minimum of personnel and expense” (Bray 2008: 62) and in allowing trans-Himalayan trade on such a scale. The situation between the absence of roads and the *res* system was one of mutual interdependence: at the same time as the *res* system allowed the region to do without a road network, the absence of roads made the *res* system necessary and the state did not develop roads until a later period.

⁴⁹ Also, thanks to the *res* system, the Srinagar-Leh-Yarkand route remained “the most important and long established thoroughfare between India and Central Asia” (Warikoo 1995: 236), despite attempts by the British to promote the Kulu-Leh road in order to encourage direct trade with British India.

Ladakh on the geopolitical map

After independence, India invested massively in road development in order to promote economic and agricultural growth, develop and administrate the country, and feed its large population. Yet resources were limited: it had to prioritize and, according to India's road construction objectives, Ladakh was clearly not seen as a priority. Slowly, the road network developed but for a very different set of reasons. Ladakh was a periphery: a mountainous and weakly populated region of India that had neither high agricultural nor economic potential and therefore did not qualify for road construction. However, as Ispahani writes, "Where a periphery takes on strategic importance [...] the infrastructure of access begins to emerge" (Ispahani 1989: 6). In Ladakh, it is mostly strategic imperatives that explain the first phase of road construction.

Strategically, Ladakh gained in importance after 1947 on two fronts: with Pakistan and China. The partition of India in 1947 marked the birth of its Pakistani rival on the western front and the beginning of Kashmir and Ladakh as contested regions. On the eastern front, in the wake of the Chinese takeover of Tibet in 1950 and subsequent events, the Aksai Chin and disputed Sino-Indian border have become factors of contention between the two Asian giants.

Until 1947, Ladakh was part of the princely state of J&K, itself under the indirect rule of British India. At independence in 1947, princely states were given a choice between joining India or Pakistan or remaining independent. The Dogra Maharajah Hari Singh, head of the state of J&K, which had a majority of Muslims (Kashmir) along with sizable Hindu (Jammu) and Buddhist minorities (Ladakh), would have chosen independence if a revolt had not started in the western part of the state, followed by Pashtun infiltration from Pakistan. Unable to resist, the Maharajah called for India's military help, which he received at the price of accession to India in October 1947. From October 1947 to December 1948, a fierce battle was fought between Pakistan and India in Kashmir and Ladakh, followed by the signature of a ceasefire agreement under UN auspices and a settlement around the Line of Control (LOC)⁵⁰ – the state of J&K lost a large part of Kashmir in the west and parts of Baltistan and Gilgit in the north.

⁵⁰ Initially called the Ceasefire Line and redesignated the LOC in the Simla Agreement of 1972.

Three more wars with Pakistan followed – in 1965, 1971, and the Kargil war in 1999 – as well as several border skirmishes, including on the Siachen Glacier, known as the highest battlefield in the world. The whole of Ladakh and Kashmir have remained heavily disputed territories and a major factor of contention between the two countries, which both successfully tested nuclear weapons in 1998.

On the eastern border, relations between Ladakh and Tibet (under Chinese suzerainty) had been stable since the signature of the Treaty of Leh in 1842, which put an end to hostilities with the Dogra Maharaja who then ruled Ladakh. The closure of the Sino-Tibetan border in 1949 by China, its invasion of Tibet in 1950, and its gradual involvement in the region culminated in the flight of the Dalai Lama in 1959, followed by thousands of Tibetan refugees to India. Although the British had attempted to demarcate the border between British India and Tibet in the north and northeast, their position had been inconsistent and China had never recognized the proposed demarcation (the Johnson Line in Ladakh and the MacMahon Line in Arunachal Pradesh), resulting in a contested border between India and China. This contested border (particularly the Aksai Chin in Ladakh) and what China took as Indian efforts to undermine Chinese control of Tibet led to an increase in tensions and ultimately to the Sino-Indian war from October to November 1962. At the end of the war, the entire Aksai Chin remained *de facto* in Chinese hands, while the no-less-contested 4,057-kilometre-long Line of Actual Control (LAC), running from Ladakh to Arunachal, became the effective border between the two rivals. During the years that preceded the war, Ladakh and its borders acquired a strategic importance.

Concretely, the tumultuous history between India and its neighbours is a strategic concern that is also materially and psychologically present in Ladakhis' daily lives.⁵¹ It led to a massive military build-up on each side of the borders. It is also in this context that the first roads were built and such strategic concerns have remained the predominant motive of road construction, as the history of the Srinagar-Leh road, the

⁵¹ In Ladakh, switching on the radio and browsing through different programmes in Ladakhi, Balti, Urdu, Hindi, Russian, and Chinese is a reminder of the region's geo-strategic situation and the proximity of past enemies. Border rivalries are well integrated into people's lives and memories. Many of my informants had either fought in or lost somebody as a result of wars with Pakistan. Those old enough often remembered Pakistani occupation (in Khatse or Chilling, for instance) and such events were nearly always taken as benchmarks to situate events in time. The birth and enforcement of borders also heavily altered the life of those whose livelihoods depend on trade or grazing fields in contested territory.

Manali-Leh road, and the Zaskar Highway show. The first motorable road in Ladakh was built in 1948 during the first war with Pakistan. Military motives had already driven Zorawar Singh to improve the Srinagar-Leh route and build bridges to transport his army (Cunningham 1854) but it was only in 1948 that a portion of the route was made motorable. During the first Indo-Pakistani war, a first stretch of 8 km was built in order to bring tanks over the Zoji La in what remains one of the most decisive episodes of the war. As the history of the road tends to prove, the rest of its construction was also dictated by military considerations.

The construction of the road took place as part of the run-up to the 1962 war and coincides with mounting tensions between India and China. It is sometimes argued that the road that China built through the Aksai Chin in the 1950s triggered the war (*Kashmir Observer* 01 May 2010).⁵² After the initial stretch of road at the Zoji La, the construction of the Kargil-Leh road started properly in 1954 (Prasad 1995: 561) and the first portion – until Kargil – was completed in 1957/58 (*The New York Times* 7 February 1960). The memoirs of President Prasad state that construction works were suspended for two years, until October 1959, and seriously impeded by climate and labour shortages (the population of Ladakh was only 40,000 then). Yet, at that time, “the Kargil-Leh road was said to be nearly ready” and passable by jeep (Prasad 1995: 562). Large patches (totalling 30 miles) around Lamayuru still had to be completed and, most of all, the Khaltse bridge had to be constructed. The same source states that the road opened for jeep traffic in July 1960.⁵³

An important event related to the strategic nature of road construction was the creation in May 1960 of the BRO, an inter-ministerial agency under the chairpersonship of the prime minister (of the minister of state for defence since 1985).⁵⁴ Until then, all road

⁵² “India and China fought a bloody war in 1962. One of the main causes of the Sino-Indian War was India's discovery of a road that the Chinese had built through Aksai Chin, the eastern-most part of the Kashmir, now under Chinese control” (*Kashmir Observer*, 1 May 2010).

⁵³ Accounts of the completion of the Srinagar-Leh road differ. Kreutzman (1991) writes that it was started in 1962 and completed in 1974. In fact, 1962 would correspond to its completion and 1974 to the opening of the Srinagar-Leh road to foreigners. Aggarwal (2004: 41) writes that the Leh-Srinagar Highway was completed in 1976. The PWD for Leh was unable to give a precise date, while the Information Department told me it was completed in July/August 1959. This is contradicted by other sources: an article written in January 1960 states that, at that time, the road had been completed only 60 miles beyond Kargil, until Khaltse (*New York Times*, 1960).

⁵⁴ BRO is in charge of the construction of strategic infrastructure (roads, bridges, airstrips, buildings, etc.) and supports the army in time of war. It has a semi-military structure and is composed of the General

construction works had been undertaken by public work departments (PWDs): the national PWD for national highways and state PWDs for state roads and highways. The construction and maintenance of a strategic road network in border regions necessitated the creation of an adequate and centrally funded and controlled agency, which led to the creation of BRO (Noatay 2005). The Srinagar-Leh road, initially built by the PWD and transferred to BRO in 1960 as project Beacon, was BRO's first project with project *Tusker* (later renamed *Vartak*) in the northeast (Department of Road Transport and Highways 2004; Ministry of Defence 2003). Military accounts state that military traffic on the Srinagar-Leh road started in May 1962 and the road was formally completed in August 1962 (Sinha and Athale 1992: 341).⁵⁵

Undeniably, Chinese military activities in the Aksai Chin and the subsequent creation of BRO accelerated the pace of construction. The Chinese started building the Xinjiang-Tibet Highway in 1956 – two years after India started the Kargil-Leh road – and finished it in 1957. Several feeder roads were added to it, both in Tibet and in what India considered its territory (Prasad 1995: 561). Although I have found no sources to corroborate this, it is likely that the Chinese authorities started the construction of the road linking Tibet to Xinjiang through the Aksai Chin partly in reaction to road activities in India.⁵⁶ Starting from the early summer of 1960, India extended the Srinagar-Leh road from Leh up to Chushul towards the Chinese border (ibid.) and completed it on the eve of the war in September 1962 (Sinha and Athale 1992). Except for these roads, all other routes in Ladakh were mule tracks and walking paths at that time. By comparison, the 1,200-kilometre-long Aksai Chin Highway connecting Gartok in Tibet to Yarkand in Xinjiang was a two-way road “capable of taking even the heavier

Reserve Engineer Force (GREF), engineers of the Indian army's corps of engineers, as well as numerous casual workers. As of 2004, BRO employed 37,300 GREF personnel and 70,000 CPL (employed on a six-month renewable contract). BRO is composed of 15 projects. In Ladakh, the project is called Himank (since 1985; before that, project Beacon covered the whole state of J&K) from the Zoji La in the west to the Tanglang La in the east. Project Beacon is in charge of the road before the Zoji La and Project Deepak in charge of the road before the Tanglang La.

⁵⁵ At that time, the road was still very unstable and prone to landslides (ibid.: 11). The date of completion is confirmed by another account that states that, in 1961, the road was only motorable from Srinagar to Kargil, and one had to wait until May 1962 to access Leh via motor vehicle (ibid.: 18). Other accounts state that the “Leh road was completed in October 1961, and was blocked by snow during winter months” (ibid.: xxi; India News Online 2000). It was successfully cleared of snow in May 1962 and subsequently used for army vehicles. Most authors agree on 1962 as the year Leh was connected by a fair-weather “access road” (Sinha and Athale 1992) and retain it as the date of completion (van Beek and Pirie 2008).

⁵⁶ On the other hand, the road to Tibet through the Aksai Chin was a “vital lifeline” for China: it was essential for control of western Tibet. It is the easiest of the three access roads to Tibet (the others being the northern road via Qinghai and the eastern route via Sichuan) as it is open all year round and has a more continuous rise in elevation (Ramachandran, 14 June 2008).

army vehicles” (ibid.) and all Chinese posts were connected by roads that enabled them to transport troops and artillery at will. India was aware of this and saw it as a threat but could never catch up with what it saw as “nearly ten years’ advance” on behalf of China (Prasad 1993: 170). In a study commissioned by the Ministry of Defence 30 years after the Sino-Indian war, the authors attribute India’s defeat and the annexation of the Aksai Chin by the People’s Liberation Army to India’s lack of roads in comparison with China (Sinha and Athale 1992).

The Manali-Leh road has a very similar history. Because the road was initially open only to the army, the date of its completion is couched in controversy. Although van Beek and Pirie (2008) write that it opened in 1989, this is the year it was opened to foreign visitors (Thakur 1998) and the actual date of opening can be traced back earlier. The Information Department in Leh said that its construction had started in the 1970s and been completed in 1984/85. Jina and Rizvi give 1987 as the date of opening of the Manali road to traffic, and Jina says that he used this road in 1988 (Jina 1996; Rizvi 1996). Interestingly, the first tourism guide book written on Ladakh (Hassnain et al. 1977[1975]) already mentions in 1977 that the road was open.⁵⁷ Further research shows that the road probably opened in 1973 although only to military vehicles (Noatay 2005; Thakur 2008). Its construction would have started in 1960 to link Kulu to the southern border of Ladakh (*The New York Times* 7 February 1960). In 1964, the road was built up to Keylong by the PWD Punjab and transferred to BRO under the name of Project Deepak, emphasizing its strategic character. This communication axis has remained vital for Ladakh since 1948, when it was used to bring in troops (including a Gurkha battalion) to defend Leh, to 1999, when the Srinagar-Kargil road was under fire and the Manali road was opened early in season to allow for the movement of troops and material to Ladakh (Sharma 26 October 2002). Unlike the Srinagar road, it is not vulnerable to Pakistani attacks: it is considered “the lifeline” of Ladakh, and threats to it are taken very seriously (Upmanyu 2008).⁵⁸

⁵⁷ “Leh is connected by road to Manali (Himachal Pradesh). Four wheel drive vehicles can operate on the 500-kilometre long road. [...] Special permits would be needed for journey on this route because there are no board and lodge arrangements on this route.”

⁵⁸ Since the 1990s, the Leh-Manali road has also replaced the Srinagar-Leh road as the main access road to Ladakh for tourists because of the growth of militancy in Kashmir.

Finally, the Chadar road or Zaskar Highway⁵⁹ is another illustration of the strategic nature of road construction in Ladakh. Interestingly, parts of the Zaskar axis had already been surveyed in 1956 as the “Government of India was also considering linking the Kulu Valley in Himachal Pradesh with Ladakh via the Zaskar division of Ladakh [...] through the Baralacha Pass” (Prasad 1995: 561), although nothing was done for one and a half decades. Once again, it is difficult to date the beginning of the construction of the Chadar road since the PWD office in Leh – and with it, all records of road construction in Ladakh – was ‘accidentally’ burnt down in 2006.⁶⁰ However, some of my respondents at the PWD have dated it as early as 1971 or 1979 (personal communication, Leh, July 2007/09). The road under construction passed into BRO hands in 2001, following the war and the recommendations of the Kargil Committee (*Daily Excelsior* 13 August 2002). It was already under construction for civilian purposes but the war demonstrated the need for all-year-round access to Ladakh to move troops and supplies to the Pakistani front, as opposed to the existing roads that were closed for five to six months in winter.⁶¹

As these three roads illustrate,⁶² road construction in Ladakh is closely linked to its military history and strategic situation. The first road to Ladakh was built for military purposes and even roads that were initially built for civilians were later transferred to BRO and built for the Indian army. However, one must highlight the fact that the physical situation of Ladakh in itself is not sufficient to determine the construction of

⁵⁹ The Chadar road designates the section along the Zaskar River, from Nimmu to Padum, whereas the Zaskar axis or Zaskar Highway designates the totality of the road: 292 km from Nimmu to Padum and Darsha, where it meets the Leh-Manali road. Moorcroft (1837), Wilson (1875), Thomson (1852), and Crowden (1984) have all walked and described different parts of the route at different times. Thomson mentions the Chadar route but Crowden was the first westerner to walk the Chadar in 1976 and give a written account of it.

⁶⁰ Some informants in Ladakh affirm that it was intentional and aimed at destroying evidence of corruption.

⁶¹ The director of BRO laid the “foundation stone” of the Zaskar axis in August 2002 (*Daily Excelsior*, 13 August 2002). Through this symbolic act, BRO could be seen as imposing its own territorializing regime. The transition was seen with a lot of hope but, according to civilians and engineers in Ladakh and Zaskar, the pace of construction has slowed down since 2002. The target for completion was 2012 but people now think it will take between 10 and 50 years to complete the road through the Zaskar gorge. In 2009, people in Leh said that BRO had asked for a 10-year extension to the initial deadline. Many of my participants attributed the slow pace of construction to: (1) better relations between India and Pakistan – the latter was no longer perceived as a threat and therefore the Chadar road had ceased to be seen as a priority; (2) corruption within BRO; or (3) the inexperience and lack of motivation of its workforce. The difficulty of the terrain, harsh climatic conditions, and short working season are also to blame.

⁶² Another illustration would be the Khardung La road, which grants access to the Nubra Valley and the Siachen Glacier where Pakistani and Indian armies have been fighting since 1984. Its construction started in the 1960s; in 1976 it was transferred to BRO and it opened to traffic in 1988 (Murup Tharchin, 21 July 2009).

roads. What matters is the perception of Ladakh as being vulnerable to enemies, and the way in which Ladakh is ideologically constructed. Post-independence events helped shape a different perception of Ladakh for those in New Delhi who controlled state power and resources. For instance, the Himalayas (and Ladakh) were successively perceived as “dangerous and unknown frontiers”, the “natural borders of India”, and a natural “buffer-state” by colonial administrators (Aggarwal 2004: 5, 36). After independence, wars, border incidents, and infiltrations forced the Indian government to realize that the “the mighty Himalayas [...] were no longer a reliable natural barrier against possible aggression” (ibid.; see also Ministry of Defence 2003). The Himalayas and Ladakh were properly constructed as “borders” to be defended and this largely determined the attitude towards the region and investments made in its infrastructure.⁶³

Moreover, construing the region as a “border” is not sufficient either as the development of infrastructure also depends on strategic considerations and military doctrines. In India, the link between roads and security is highly debated as roads that are necessary to move troops and materials can also potentially be used by an enemy to invade the country. For this reason, the dominant view among Indian military strategists was that roads should not be built up to the border, especially in mountainous regions where the mountains can act as barriers against aggression. This doctrine, which prevailed from 1962 to 2002, explains why no roads were built despite the perception of threats, resulting in an imbalance in comparison with the Chinese side where roads were heavily developed. This doctrine only changed in 2002 (Dutta 7 May 2008). As a result, more than Rs21 billion has been requested by BRO, and funds and resources have been transferred from other construction sites to build and rehabilitate 73 road projects and 4 army landing grounds along the LAC. Of these, 14 are situated in J&K, all in Ladakh (Pandit 19 January 2009; Sharma 30 June 2006).

There are also other factors that justify the construction of roads in Ladakh as road construction in the physical margins of the state is associated with power in a way that goes beyond questions of military strategy. Roads respond to the state’s need to

⁶³ Similarly, Crowden writes that the road from Kargil to Padum in Zaskar was started in 1962 “but because it was to no strategic purpose the construction was slow” (1995: 275). Hence, the road was only completed in 1980. Similar views were often expressed regarding the slow pace of construction of the Nimmu-Padum road in Ladakh, which was attributed to the relative absence of tensions between Pakistan and India after the Kargil war.

administrate and control a region and its people and make them “legible” (Scott 1998). However, roads are also instruments of power and symbols of the state, two functions embodied in the concept of territorializing regime (Wilson 2004). As instruments of power, roads are built to administrate and control and to extend the state’s administrative capacity to the margins of India. But, given the contested nature of the region, roads also matter as symbols. Ladakh was only integrated with India with the rest of the state of J&K in 1947 and the modalities of accession have been contested externally (by Pakistan) and internally (especially in Kashmir). Its borders also remain contested by China. The state has to be visible and roads represent material symbols of its presence in the face of contestation. Internally, the state also has to provide what its citizens expect in order to assert and justify its legitimacy. In a “recently” acquired and contested territory like Ladakh, territorializing its presence and imposing its regime is a necessity. When people say that “[the] Chinese have roads, we do not even have roads” (Tashi Jamspal, Leh, 24 July 2007), they question the state’s ability to deliver what it should, hence questioning its legitimacy. What is available on the other side of the border, in China and in Pakistan, has to be matched or even surpassed.⁶⁴ The territorializing programme can be likened to a process of internal colonization – rendering both the land and its people “legible” – but also to the colonization of minds, for which the state has to be present: building roads is one way for it to assert its presence.⁶⁵ In Ladakh, roads are also symbols of the nation’s unity (see Illustration 2.1). As Khaduri, the union minister for road transport and highways, wrote, “National Highways are not only arteries of the economy but also the backbone for cultural exchange, social equality, national unity and integrity [*sic*]” (Department of Road Transport and Highways 2004) and BRO is “a symbol of Nation Building, National Integration and an inseparable component in maintaining the security and integrity of the Nation [*sic*]” (BRO 2010).

⁶⁴ Such messages are sometimes reported in the press. After one of the numerous Chinese incursions into Indian territory in 2009, “villagers told [...] that the two Chinese choppers buzzed the village in August and flew several miles into Indian territory [...] The villagers had some pointed questions for the visiting officials. In particular, they asked why on the Chinese side of the river there are paved roads and development but nothing on their side [*sic*]” (Arnoldy, 29 September 2009).

⁶⁵ This is not only done through the delivery of infrastructure and material symbols but also through all sorts of non-material means, such as education or state rituals. Aggarwal shows how, in the margins of the state, symbolic authority has to be constantly reasserted through state rituals: “The border becomes a space where the state expresses itself through a habitualized performativity and repeatedly asserts physical and symbolic authority over its citizens, particularly over hybrid zones and migrant bodies that contaminate dominant notions of purity and unsettle orderliness” (2004).



2.1. BRO milestone in Padum (Zaskar): roads and nation building

Externally too, roads are symbols of power and markers of territory. The correspondence between Prime Minister Nehru and President Rajendra Prasad in the years that preceded the Sino-Indian war reveals the perceptions and role of roads as territorial claims and symbols of the state (Prasad 1993: 170).⁶⁶ This is especially the case in hostile terrain such as the high plateaus of Ladakh, where maintaining human

⁶⁶ In a letter dated 5 December 1959, Prasad warned Nehru about Chinese road construction on Ladakh's border (1993: 170): "As regards the Ladakh side, there is a very big piece of territory which may be called disputed territory [...]. We know that one big road has been built in the Aksai Chin area and it runs through our territory and the road is being used, and presumably the Chinese are in possession of the entire area to the north of this road, perhaps to some distance to the south of it also. I understand that there is another road or track more or less parallel to it further south and running across our territory. If this road has been built or is being built, it will undoubtedly be in constant possession and occupation of the Chinese, and not only the entire area between the two roads, but also practically the whole of that part of Ladakh would be fully occupied by them as far as occupation is possible in that terrain." In the same letter, Prasad asks for the creation of an agency "military or civil or both" to deal with the massive task of building a network of roads and advanced posts at the border. A few months later, Nehru created the BRO (Sinha and Athale 1992; Ministry of Defence 2003).

occupation is hardly conceivable. Instead, a road can be a durable mark of occupation. As the Sino-Indian border in Ladakh was largely unmanned, it took a while before India discovered that China was building a road there and started to closely monitor its activities. In a report on the war of 1962, the authors also analyse how, by building new roads in Ladakh, “the Chinese had pushed forward towards their 1960 claim line in the Western sector” (Sinha and Athale 1992: 64). Roads are built for military purposes but also as political markers and claims of sovereignty over a territory; they are interpreted by other agents accordingly. Roads in Ladakh are also built to make borders visible when they are ignored or contested. Pakistani infiltrations across the LOC are common and Chinese incursions across the LAC happen almost daily.⁶⁷ This has also reinforced the case for India’s Strategic Accelerated Road Development Programme of road building in the northern and north-eastern areas in 2010 (Shukla 7 May 2010). The symbolic role of roads as political markers and symbols of sovereignty was further exemplified in November 2009 when China stopped the construction of the road in Demchok, Ladakh, well within the limits of Indian territory (Kazmin 30 November 2009; *The Economic Times* 1 December 2009). By doing so, China symbolically and concretely denied India the exercise of authority and sovereignty over what it considered its territory (Ai 12 February 2009).⁶⁸

In these different cases, roads are used and interpreted by both parties as communicative tools: the absence of roads could be interpreted as *terra nullius*, therefore roads symbolically occupy territory that a state considers its own, and a state that contests this territory will oppose the road. India’s strategy for dealing with China is “to expand infrastructure and bring more of a government footprint to the contested region”, as a security expert explicitly wrote in a recent article (Arnoldy 29 September 2009). Just like planting a flag, building roads physically and symbolically extends the state’s sovereignty over its entire territory. The action is both strategic and symbolic, and the frenetic pace of road construction between India, Pakistan, and China⁶⁹ somehow looks

⁶⁷ More than 400 Chinese incursions over the LAC were reported between April and September 2009 (Bhat, 14 September 2009), and these continued in 2010 and 2011.

⁶⁸ “India thinks it can force China to agree with it (by building a road over the disputed area), but China’s attitude won’t bend” (Ai Yang, 12 February 2009).

⁶⁹ The Karakoram Highway in Pakistan is being widened and the construction of a railway to Leh is now under study as a reaction to the Chinese construction of a railway to Lhasa. As the chief minister of Himachal Pradesh put it: “With China building the Beijing-Lhasa railway track, it is critical for India to respond and build the Manali-Leh route” (Chauhan and Bijith, 6 July 2008). Or, as a military source

as though the Great Game in Central Asia is being revived. Road construction is part of the state's territorializing regime and this largely accounts for 50 years of road construction and the (limited) expansion of the road network in Ladakh.

Local politics and the expansion of the roadscape

Today in Ladakh, the construction of roads and the burden of maintaining them are shared between the state PWD and BRO. In 2007, solely in Leh district, the PWD had constructed and was maintaining a total road length of 1,230 km,⁷⁰ and 94 of the district's 112 villages were connected (Department of Statistics District of Leh 2007: 19). BRO, through Project Himank, was in charge of the construction, improvement, and maintenance of a total road length of 1,763.31 km (ibid.).⁷¹ As previously exposed, strategic and symbolic motives explain why the state constructs roads in Ladakh. Ladakh's Vision document itself states: "The remote and geo-strategic location of Ladakh makes it vulnerable to security threats at all times. Road connectivity is therefore of the greatest importance for this region" (LAHDC Leh 2005: 31). But there are also other considerations that matter for the centre, state, or district government, and that explain the most recent expansion of the roadscape.

First are economic considerations: in 1968, a state commission established to investigate the reasons for "Ladakh's backwardness" set three priorities, one of which was developing its transport infrastructure⁷² (Wangyal 1997). Moreover, in 2007, roads were uncritically justified in terms of economic development: "The road transport is the major and principle mode of mobility of men and material in the district. Roads are thus considered as arteries of our economy" (Department of Statistics District of Leh 2007: 19). Also, the government takes it for granted that "the adequate availability of [roads and civil aviation] leads to rapid economic development" (ibid.).

wrote: "The plan is to construct the 73 roads [...] to counter the rapid pace of military development in the Tibetan Autonomous Region" (Pandit, 10 January 2009).

⁷⁰ Of this, 385 km was blacktopped, 85 km metalled, 178 km shingled, 575 km made fair-weather, and 7 km "jeepable".

⁷¹ Of this, 1,470 km was blacktopped, 67 km shingled or metalled, and 229.5 km made fair-weather.

⁷² Along with the establishment of degree colleges in Leh and Kargil and improvement in electricity supply.

Employment also matters as a motive for building roads in Ladakh. For instance, J&K's minister for transport, Qamar Ai Akhoun, does not dissociate road construction/improvement from employment when he says that the two priorities for the people of Kargil are to upgrade the airport and construct the Zoji La tunnel. He justifies these by citing the government's mission to overcome unemployment issues in J&K (Bashir 7 June 2010). Also, many roads in Ladakh are built and maintained by BRO (including the Zaskar Highway). BRO has never claimed to be privileging labour-intensive methods out of employment concerns but it is the subject of a full chapter in Edmond's and Howe's *Roads and Resources* as an example of an organization that successfully uses labour-intensive construction methods on a large scale (Soin 1980). From the experience of Ladakh, it is also evident that BRO has a major role to play in providing employment and redistributing wealth in the district (officially through tenders and illegally through all sorts of means, including corruption; see Chapter 6) but most of all in the out-migration regions of Bihar and Jharkhand that provide the bulk of its labour needs.⁷³ In Ladakh, the bulk of road workers are migrants; however, road construction mainly benefits a number of local or state contractors, building companies, and administrators. Roads are always under construction or improvement through widening, tunnelling, rectification, reparation, blacktopping, maintenance, and the construction of walls, bridges, drainage, etc. This is true anywhere but more especially in mountain districts such as Ladakh, where the incessant and powerful agency of nature ensures that roads are subject to a constant process of erosion, destruction, and reconstruction. In fact, roads in this terrain are never finished – as the environment is constantly being transformed by natural and human forces – and they give place to an incessant activity.

In Ladakh, a large programme of road construction was started over the last decade to connect remote villages. In Leh district, road construction accounts for a significant part of the government's expenditures. In 2007/08, out of a budget of Rs650 million, Rs213.5 million (one-third of the total budget) was dedicated to "roads and buildings" (LAHDC Leh 2008). This represents five times the budget dedicated to "health" and seven times the budget dedicated to "education", the next two most important items in the budget. Districts funds are only one part of the funds available for road construction

⁷³ Given BRO's inefficiency in delivering roads on target, one might even be tempted to conclude that the company's main purpose is to provide employment.

in Ladakh. Other sources of funding include PMGSY, NABARD, CRF, ADB and the World Bank, other special funds such as those allocated to MLAs and MLCs, councillors' constituency development funds, the CEC's fund, and BADP (Leh, 17 January 2008).⁷⁴ This gives an idea of the importance of the sector and of the boom in road construction. In the Khaltse block – the block being a subdivision of the district – I was told by a PWD official that “more than a hundred roads” were under construction (28 July 2007), and in the Leh block, the quantity of roads under construction was said to be “innumerable” (22 July 2007). No engineer could give me an approximate number because there were too many roads currently under construction. Today, Ladakh is adding to its strategic road network a sparse system of capillaries that is slowly progressing in the direction of scattered settlements.

To understand this road construction boom in Ladakh, one has to turn to local politics, which I touch on at the end of this chapter. Although politics have been blamed for the absence of roads in Ladakh⁷⁵ (Gardner 27 June 2009), today the same kind of politics lead to road construction there. The state has its own various motivations for building roads, as exposed in this chapter, but people are not “weak local recipients who are acted upon” (Wilson 2004: 529): they actively participate in the selection and construction of road projects. There is no determinism in the macropolitics of road construction as road discourses and state policies are implemented, “refracted, reworked, and sometimes subverted” (Moore 1999: 655) at the local level through the interplay of people and state representatives. People lobby for roads and oppose others, and roads divide villages, depending on how people interpret the symbolic and material effects of roads.⁷⁶ Moreover, the state is not a single entity: road schemes and projects are implemented through multiple layers of government, agencies, and ultimately

⁷⁴ NABARD is the National Bank for Agriculture and Rural Development, CRF the Central Road Fund, ADB the Asian Development Bank, MLA a member of the legislative assembly, MLC a member of the legislative council, CEC the chief executive councillor, and BADP the Border Area Development Programme. BADP is an interesting programme in that it associates security with development concerns. It was started in 1986 in the states bordering Pakistan and then extended to those bordering China, Bangladesh, Nepal, and Bhutan, with the aim of promoting “a balanced development” and “a sense of security amongst the local population” (Government of India 2003: 370). BADP initiates projects that have both development and security components.

⁷⁵ “Lack of funds combined with a democratic system also meant successive Indian governments preferred to spend their limited budgets on projects in densely populated areas where they would do the most good – and win the most votes – rather than on difficult and expensive ventures in the thinly populated border regions” (Gardner, 27 June 2009).

⁷⁶ Just as Cooper and Packard show that people do not accept the whole “package of modernity” but choose, pick up, and transform elements of it (1997: 28).

individuals whose interests and understandings diverge. In the end, it is at the micro-level that the macropolitics of road construction are implemented and the expansion of the roadscape decided.⁷⁷ Although a preliminary grasp of the macropolitics of road construction is necessary to understand the context of road construction, this is why a study of road politics must be based on a comprehensive analysis of local politics, to which the rest of this thesis is dedicated.

Conclusion

Both at the national and regional levels, different priorities, state policies, and considerations concerning the role of roads explain which roads are built and for what purposes. It is possible to distinguish among the different phases and priorities in road construction – resource extraction, administration and nation building, agricultural production, employment generation, income redistribution, socioeconomic development, and security – that explain the development of the roadscape. However, they only partially overlap and in the end, as in Ladakh, the development of the road network is locally and historically specific. Also, the absence of roads is mostly the result of political decisions.

Roads mean different things to different people because their *raison d'être* is multidimensional. Theories linking roads to development have been thoroughly criticized and are still debated. As these theories have come under criticism, the discourse has evolved and new theories have been developed, mostly with the aim of linking roads to development. In the end, the assumption that “more roads mean more development” remains backed mostly by conventional wisdom and is deeply entrenched in the development discourse and practice (deGrassi 2005: 52). When it comes to road construction, symbolic effects are just as important as real ones: roads are symbols of what they are supposed to do, whether or not they do it, whether they are used for that specific purpose or for another, and roads are also symbols of development.

⁷⁷ This is keeping in mind that macro- and micro-levels cannot be ontologically differentiated but only in terms of their relation of one to the other (Long 1992).

These considerations explain why roads have remained a stable and pervasive theme in the development discourse and practice. Roads are very adaptive: this is true in terms of development theories but also in practice as road networks and specific roads have been able to build on shifting priorities and policies. Theories evolve, policies are altered, development priorities change, but in the end roads – sometimes the same roads, as the Zanskar Highway shows – are still built and the roadscape expands accordingly. These considerations also set the ambitious framework against which the consequences of road and road construction are assessed in this thesis.

In the following chapters, I leave the macro-political level to dig into the black box of the micropolitics of road construction. This chapter has illustrated how paradigms, policies, and construction plans shape the development of the road network but, in the end, road construction is an erratic process that is locally decided. Following Cooper and Packard, Moore distinguishes between development as a “discourse of control” and development as a “discourse of entitlement” animated by populist rhetoric (1999: 673). Similarly, there are the macropolitics of roads as imposed from above and the micropolitics of roads from below, in which the road discourse is appropriated and claimed as a right. In this process, what matters is the active involvement of people, which keeps road construction going and determines the development of the roadscape. In the next chapter, I look at the case of Lingshed, an ‘isolated’ village in which people are actively ‘waiting for the road’. I attempt to understand what living off-road means and why people want the road.

Chapter 3. Waiting for the road

Experiencing mobility and isolation in Lingshed

Lingshedpas have probably never felt as bitterly isolated as when the visit of His Holiness, the fourteenth Dalai Lama, was cancelled for the third time, in August 2007; as on other occasions, isolation is unevenly perceived. Porter notes how people living in off-road settlements have received limited attention in the development literature and mentions how one needs to look at practices and meanings of mobility and “the lived experiences of women and men in off-road villages” (Porter 2002: 286). This is what I do in this chapter by looking into the ‘isolated world’ of Lingshed.

The concept of isolation defines a state of separation between persons or groups and carries ideas of immobility, backwardness, encapsulation, and autarky. Yet isolation and its corollary – autonomy – are also relative and subjective concepts. Also, isolation is rarely physical but rather multidimensional, and has both experienced and manufactured aspects. Rather than taking isolation as ontologically given, this thesis differentiates between its experienced aspects – discussed in this chapter – and manufactured aspects – developed in the following one. In this chapter, I argue that the situation of Lingshed cannot simply be reduced to one of isolation. Based on ethnographic observations, I argue that, despite the absence of a road, people are extremely mobile and connected and, in Lingshed too, society is not insulated but rapidly changing. I look at several dimensions of isolation – physical, cultural, economic, and political – and show that these are contingent and unevenly experienced.

Far from romanticizing the situation of Lingshed, the chapter depicts what life is like in the absence of roads, what difficulties people have to face, and why people want a road built to their village. The first section examines practices of mobility in Lingshed and how these are embedded into wider sociocultural practices. The second section looks at livelihoods and consumption and production patterns in Ladakh and Lingshed, and reflects on the way in which isolation – but also connectedness and change – is

experienced. The findings are also relevant to Chapter 7 because they represent the situation of reference against which the consequences of roads will be assessed.

1. Experiencing mobility

It is often assumed that the absence of roads leads to isolation and lack of mobility (Hine and Rutter 2000).¹ For instance, in a study on rural transport in sub-Saharan Africa, Barwell writes: “In the more typical rural areas, people lack mobility [...] because they depend primarily on travel on foot” (1996: 20). In India, the National Rural Roads Development Committee has declared its objective as setting “villages free from the handicap of isolation and deprivation of accessibility” (Ministry of Rural Development and Planning Commission 2006: 94). Alternatively, as Rawat and Sharma write evocatively of Nepal: “In upland areas the road network [...] provides the only mode of transport and communication”, as if transport and communication did not exist in the absence of roads (1997: 117).² Such a restrictive conception of transport and communication is obviously too simplistic and, in Ladakh, nothing could be more inexact. The following section starts by situating Lingshed before examining practices of mobility among Lingshedpas.

According to the official census, Lingshed consists of 154 households³ and 758 inhabitants (424 males, 334 females). It is situated 92 km away from the nearest bus stop (and hence from the end of the road), 116 km away from the local administrative centre Khaltse and its police station, and 216 km away from the nearest district hospital (Leh), college, pharmacy, firestation, court, and district headquarter (LAHDC Leh 2007: 13-8).

¹ “The key characteristics of poor households in rural areas include isolation, vulnerability to shocks, lack of access to education and health facilities and social and economic exclusion” (ibid.: 2).

² On the contrary, Bryceson et al. insist that their approach “departs from earlier rural studies that assumed that rural dwellers’ mobility, regardless of income, was restricted” (2003: 6).

³ Figures include the hamlet of Dibling, a 10-hour-walk from Lingshed, physically distinct but historically and administratively a part of Lingshed.



3.1. The people of Lingshed preparing to welcome Khensur Jhado Tulku Rinpoche

Physically, Lingshed's location, away from any kind of facilities and administrative centre and many days' walk from the road, undeniably qualifies it as a 'remote' village. Some even say that it is the most isolated village in Ladakh, and therefore "one of the most isolated areas in the world" (Suri 25 August 2002). It is also often held that Lingshed is "possibly the most backward and underdeveloped in the district", where people are "virtually living in isolation" (Government of J&K 1996: 8).⁴ Lingshedpas are said to be "backward" or, on the contrary, "closer to their traditions, more religious and honest" (Tashi, Lingshed, 12 August 2007). In both cases, these qualities are attributed to isolation and "lack of exposure", it being understood that, "once the road is there, this will change" (ibid.). But isolation is a subjective concept (Wilson 2004) and categorizations of isolation are often moulded out of comparison with external and imported standards of connectivity and mobility.

⁴ The notion of backwardness is widely integrated by its inhabitants. In a letter to the chief minister of J&K, the councillor Sonam Dorje writes that the villages of the Singge La area are "the remoteness [*sic*] and backward in the entire region of Leh district", later adding that the "villages are remote and backward" (Priority Demand for DSPT and Telephone, 17 January 2008).

Isolation is a social construct. By “examining the dynamics of water scarcity within their ecological and socio-cultural, political, economic and historical contexts”, Mehta identifies different discourses on scarcity: the generalized (or popular) one, the discourse of the state, and that of rural people (2005: 8-9). She also distinguishes between experienced and manufactured aspects of scarcity. Experienced aspects of scarcity are grounded in people’s experiences whereas manufactured ones refer to “myths”, “received wisdom”, and “narratives”, and tend to present scarcity as natural and universal (ibid.: 239). The same can be said about concepts such as remoteness, isolation, and mobility. All three are experienced by Lingshedpas but the way in which they are experienced certainly differs from the popular or technical discourse that tends to manufacture isolation or take it for granted. The following extract from my field notes about my third journey to Lingshed illustrates some of the practices of mobility and experiences of isolation in Ladakh.

On 5 November (2007), after a full day spent in the bus,⁵ Phuntsog, Lobzang, and I reached Phanjila, from where one starts walking to Lingshed. Phuntsog – the *goba* (village head) of Lingshed – had gone to Leh to arrange for subsidized rations to be sent to the village. Lobzang was from Pidmo in Zanskar and was coming back from the hospital in Leh. Three weeks ago, he and his wife had walked to Zangla and taken the bus all the way from Zangla to Padum, Padum to Kargil, and Kargil to Leh to reach the hospital after an exhausting five-day journey. But the snow had started falling, the road over the Pensi La – the pass between Kargil and Zanskar – had closed, and Lobzang had to walk to Lingshed and from there another two days to reach his village in order to look after his two sons, his fields, house, and cattle. We decided to wait in Phanjila until the following morning when a donkey would be available to carry Phuntsog’s luggage – a huge loudspeaker and massive tape recorder – to Photoksar. Until recently, Lingshedpas had to wait days in Phanjila for horses and donkeys to be sent. Now, donkeys could be arranged over the phone from Leh.

In Phanjila, a Lingshedpa was renting a room in the single street of the village and offered to put us up for the night. The poor man had had an accident and had lost two of his horses on his way from Lingshed a few days before. He had been walking with his three horses in the early morning between Haskuta and Sumdo

⁵ There are two weekly buses from Leh to Phanjila. The whole trip takes about nine hours, including the stop en route at Khaltse.

where the gorge is really narrow and the path high above the river. There, they had stumbled on an old man from Photoksar who had drunk so much the day before that he had fallen asleep in the middle of the way. Hearing the three horses approaching in the darkness, the old man had suddenly awoken, jumped up, and scared the horses, which reared and fell down the cliff. Only the third horse had survived, with a broken leg. The next day, we saw the horses' carcasses lying in the river – one already half-eaten by wolves – and our friend was waiting for the survivor to recover before going back to Lingshed. Although the circumstances of the accident were unusual, such casualties were not uncommon: the path carved into the cliff is so narrow in some places that horses and donkeys have to be unloaded and walkers have to take extra care not to be destabilized by their backpacks and fall down the cliff. That night, we had a great dinner that contrasted with the frugality of ordinary meals: rice, canned mackerel from the army,⁶ potatoes, goat's meat (kidneys and trachea), and of course *chang* and *arak*.⁷

We left Phanjila in the early morning, after turning the big *mane* (prayer wheel) in the village and paying a last homage to the statue of Guru Padmasambhava. The bus drove us another 4 km just before the bridge and the actual end of the road. We helped villagers from Sumdo, Photoksar, Nierak, Yulchung, Skiumpata, Lingshed, and beyond unload their heavy bags, gas cylinders, jerrycans, plastic buckets, construction material, and wooden pillars and beams from the roof of the bus. At the time of leaving, there were four of us: Phuntsog, Lobzang, and I, and *Meme*⁸ Le, the old *amchi* from Yulchung. On the way, time was usefully employed while walking since my companions were reciting mantras and ceaselessly rolling the 108 beads of their rosaries between their fingers, one by one, thus acquiring religious merit. Also, the landscape presented numerous *chortens* and *mani* walls and other votive monuments that have to be bypassed on the left, offering more opportunities to acquire merit.⁹

⁶ A lot of products meant for the Indian armed forces – from rum and brandy to soap, soups, and expired canned food – are sold on the black market in Ladakh, partly as a result of “Operation Goodwill” through which the army attempts to win the hearts and minds of people in J&K, and partly as a result of corruption. In Lingshed, canned mackerel was an expensive food reserved for celebrations and special occasions.

⁷ Alcoholic drink made out of fermented barley.

⁸ Literally, grandfather; used in deference to elderly men.

⁹ *Mani* walls are alignments of votive stones on which are carved the mantra *Om mane padme hum* (the mantra of Manjushri, the Buddha of compassion). A *chorten* or *stupa* is a religious consecrated monument representing the Buddha, his body, his word, and his spirit. It also represents the four elements plus the supremacy of Buddhist laws or the five elements of the cosmos. Initially a reliquary of the Buddha's remains, it can also contain the remains of Buddhist saints and *rinpoches* (reincarnated *lamas*) or be dedicated to a divinity (Levenson 1999; see also Genoud and Chabloz 2002).

From time to time, we stopped to rest or let our heavy loads rest on a rock. We also stopped for longer to share food and drink – eggs, cake, sweets, biscuits, and most of all *chang* and *arak* – so that every halt was an opportunity to regain strength and display generosity [see Illustration 3.2]. Every occasion to visit friends and relatives was equally seized: we visited two houses on the first day in Haskuta where we had lunch; two houses in Machu where we had dinner and spent the night; one house in Yulchung where we spent the second night (making a three-hour detour); and on the last day a house in Skiumpata where we had lunch. Every time, we were offered *solja*¹⁰ *kante* (butter tea), *cha ngarmo* (sweet tea), and *chang*, and in every house we left something in exchange: tea herbs, matches, candies, or cash.

We also met a lot of travellers like ourselves from all the villages in the area. Every encounter was an occasion to halt right on the spot, sharing food, *chang*, or *arak*, as every time somebody seemed to have a bottle ready for the occasion, and men a cup in the bands of their *goncha*¹¹ to be filled. Although villages are remote, separated by long distances and high passes, there seems to be intense traffic on these trails for varied reasons – whether to bring grass for sale, grain, consumption goods, or to simply go and spend the winter in Leh. The absence of roads does not seem to impede movement, rather the contrary.

We finally reached Lingshed at dusk after a four-day journey, three high passes, and three days of walking. Phuntsog's wife welcomed us with *cha kante*, *cha ngarmo*, and *chang*, and we completed our trip by a visit to the monastery high up in the village the following morning.

Numerous observations on the experience of isolation and mobility can be drawn from this account. The travel to Lingshed is certainly strenuous, physically tiring, and time-consuming, making it difficult for people in weak condition. Also, the journey is not without danger: pack animals sometimes fall down the path, resulting in death or injuries. Yet notions of isolation and mobility have to be reconsidered.

¹⁰ *Solja* is the honorific form of *cha*: both mean tea.

¹¹ The standard Ladakhi woollen coat.



3.2. Sharing *chang* with a group we met between Yulchung and Skiumpata

First, what is clear is that the absence of roads does not preclude mobility. I have mentioned in my notes the large number of people we met on the trails linking the different villages between Phanjila and Lingshed. The same can be said of paths between Lingshed and Zanskar, and generally of most paths in areas not connected by roads. Over the last few years, I have had the opportunity to walk to and from Lingshed with teachers going to work at the centralized school in Lingshed, children returning from Leh for the holidays, a group of Zanskarpas who had come to see the Dalai Lama, people returning from the hospital and bringing back rations, villagers carrying wood or bringing their yaks back from the pastures, *lamas* visiting villages to perform rituals, foreign trekkers, migrant workers carrying metallic pipes, and Lingshedpas going to Leh to work as porters on the Chadar. People travel to and from Lingshed for all sorts of reasons: to see a *rinpoche*; begin a pilgrimage or visit a *gonpa* (monastery); register their children at a school; carry rations or gas cylinders; contract a loan or fulfil administrative duties; sell hay, *torma* (potentilla roots), or *churpe* (dried cheese) in town; bring back cooking utensils, furniture, consumption goods, radio, TVs, DVD players, loudspeakers, and wooden pillars or huge *mane*; work as guides, horsemen, or

cooks with trekkers; find work in Leh; or visit relatives. There always seems to be intense traffic: villagers of all ages and conditions, tourists, *lamas*, nuns, and children. There are many reasons that drive peoples onto paths despite the absence of roads, and they appear extremely mobile.

Second, walking in Ladakh cannot not be reduced to its simplest function – moving from one point to the other. Instead, it is a truly social activity, embedded in cultural codes and practices. A long trip often starts and ends with a visit to the monastery, making offerings of money and *kataks* (white scarves) to deities and monks, partly as a way of asking for protection during the journey.¹² Sometimes, Ladakhis consult an *onpo* (astrologer) before undertaking a hazardous journey (Crowden 1994). Dignitaries such as teachers or medical doctors are offered *chang* before undertaking their journey. When walking, trajectories are determined by physical obstacles as well as the religious symbols and monuments scattered across the landscape that have to be skirted around clockwise: *mane*, *mani* walls, *chortens*, *rig sum gonpos*, and other religious constructions (Pirie 2002: 137). Lingshedpas rarely walk alone, rather undertaking the journey in groups of varying size. This might be dictated by security or practical reasons – such as helping each other to carry loads, fetch wood and dung for fire, and cook during halts – but also by the fact that a walking trip is something enjoyable that is better appreciated in good company. It is not rare to see people delaying trips by days in order to travel together. The journey is made even more enjoyable by carrying and consuming better-than-ordinary food, often luxury food – large quantities of meat,¹³ canned mackerel, *churpe*, *kambir* (bread made of fermented flour) and *pemar* (dough made of barley flour, tea, butter, and sugar) – and drinks – *chang*, *arak*, rum, and whiskey – that are generously shared among travellers, sometimes around a bonfire in the evening. Villagers who used to undertake long journeys before the road was built to their village often recalled such travels and happy moments. Because travelling is a highly social activity, the few times I walked over long distances *chikpo* (alone), it was always met with a great deal of astonishment and amusement.

¹² Protection is needed from both the physical and spiritual realms. For instance, Pirie shows how, in the cosmology of Ladakh, any journey beyond the limits of the village – where people benefit from the protection of the *yul-lha* (spirit of the village) and its physical presence (the *lhato*) – is potentially dangerous: “Beyond these limits, [...] the spirits roam around untamed and all journeys are perilous, despite the small *lhato* at strategic points on paths and passes where the *lha* are invoked to give protection to travellers” (2002: 137).

¹³ When I left Lingshed in January 2007, two of my companions carried a whole yak’s elbow and a goat’s leg in their bags for the three-day trip.

Travelling and walking is also instrumental in maintaining physical and social networks. People in Ladakh seize every opportunity to visit relatives and acquaintances en route, sometimes making long detours and spending hours with them. Hence, travelling allows people to maintain reciprocal relationships¹⁴ and carry information and messages from village to village. Similarly, meeting people on the way nearly always led to a halt right on the spot during which news, jokes, food, and drink were exchanged. Just like roads, paths are “stretched-out places where intersecting social relations cluster and adhere” (Wilson 2004: 529). In the case of Cayash in Peru, Wilson notes how moving was also instrumental in keeping routeways open, and securing routes and rights of way (ibid.: 539). Likewise, in Ladakh paths that stop being used quickly become impracticable and cease to exist physically.

In the transport literature, transport and travel are often seen as a “constraint”, a “burden”, and a “time-consuming task”; the emphasis is on “wasted time” and “time and effort spent on transport” (Barwell 1996: 1-2; Doran 1996; see also Porter 2002: 288). For instance, Barwell writes that “rural households in [sub-Saharan Africa] devote significant time and effort to rural transport”, which is seen as “a constraint to the optimal exploitation of agricultural and social opportunities” (1996: 7). This might be true in purely economic terms¹⁵ but such a statement fails to mention that transport is also a social activity. Time spent travelling certainly reduces the time available for other activities and can rightly be valued in terms of forgone economic activities but a more qualitative assessment of travelling time reveals that time is not wasted. In Ladakh, it is often spent praying and reciting mantras, an activity that Ladakhi Buddhists carry out whether or not they are travelling. Such an activity is primordial in the “Buddhist economy of merit” in which “both lay people and nuns consciously pursue merit and purification in order to achieve a better rebirth” (Gutschow 2004: 7).

In Tibetan Buddhism, merit is the symbolic effect of virtue and manifests itself through intentional acts. Such acts can produce merit, demerit, or be ethically neutral; by

¹⁴ In a way that does not exist anymore where the road has been constructed as places on the way are no longer visited.

¹⁵ Although it could be argued that transport necessitates animals that provide manure, which is the basis of the agricultural system in most rural areas.

determining one individual's *karma*¹⁶ they influence his or her present and future rebirth. Merit is produced by abstaining from ten non-virtuous acts – “killing, stealing, sexual misconduct, lying, slander, using harsh words, idle gossip, being covetous, hatred and wrong views” – or by following different ways of making merit (Gutschow 2004: 14-5). These include mechanical acts such as “circumambulation, repeating mantras, spinning prayer wheels, and raising prayer flags” and “constructing and deconstructing *mandalas*”.¹⁷ Generosity, morality, meditation, as well as “blessed substances” are also sources of merit. In addition, “remorse, receiving teachings, reciting mantras, making images, making offerings and [...] hearing the Buddha's words” allow one to eradicate negative *karma* and balance demerit against the “merit of positive deeds” (ibid.). Travelling offers countless opportunities to earn merit by praying, reciting mantras, circumambulating, paying visits to monasteries, spinning *mane*, or simply living and moving in a landscape scattered with religious constructions. Therefore, time spent walking is not wasted but optimized as merit-making time, social time, or even productive time when spinning wool during halts.

Moreover, the case of Lingshed shows that there is a real culture of mobility in Ladakh. As a Ladakhi proverb says: “A man does not know where he will die and where he will be burnt”, referring to the high mobility of men in Ladakh (Dollfus 1989: 148).¹⁸ In the case of Tamang communities in Nepal, Molesworth mentions how travelling and journeys figure among favourite topics of conversation and are even present in greetings (2001). In Ladakh, the notion of mobility itself is strongly embedded in cultural idioms and practices. In Lingshed, the traditional *Juley!* (Hello!) is systematically followed or replaced by the question *Skyot-at le?* (So, have you come?).¹⁹ Every time somebody is spotted walking in or around the village or passing by a house, people will ask, “*Karu skyot?*” (Where are you going?) or “*Gana skyot?*” (Where are you coming from?). People would ask me the same question every day, even if they had seen me that morning leaving home for school where they knew I was going to teach. Everyday, the answer was the same: “*Sukul-a chaat le!*” or “*Kangba-ne yongat le!*” (I'm going to

¹⁶ The law of *karma* (action) posits that intentional acts produce an effect and that “through conscious acts of body, speech and mind [...] individuals create their present as well as their future reality and rebirth” (ibid.: 14; see also pp.15-6 for the difference between the Buddhist and Hindu theories of *karma*).

¹⁷ *Mandalas* are representations of the universe.

¹⁸ Note that the saying applies only to men, not women. Long-distance mobility is highly gendered, a point I will return to later in this chapter.

¹⁹ The surprise was nearly always simulated: the question was also asked at religious festivals during which the whole village – without a single exception – was present.

school, or I'm coming from home). Similarly, people's movements were often closely monitored – and with respect to that, the glass room originally made to keep warm during winter days but often oriented more towards the rest of the village than towards the sun made an excellent panopticon from which people's movements were inevitably scrutinized and commented on. In Lingshed, one can barely go anywhere without the whole village knowing it.

This culture of mobility seems doubled by an intimate knowledge of the place in which people live and move in. Crowden remarks how following the wrong side of the Chadar could force you to retrace your steps by several miles but this never happened for “Zanskaris know their river and the gorge intimately” (1994: 291). Not only are people deeply aware of their physical environment, the landscape is also inhabited by their social world, cultural meanings, stories, and memories. In Ladakh, “Peasants distinguish between several units of landscape, defined according to topographic, bio-geographical and functional criteria” (Dollfus and Labbal 2003a: 92). Toponymies are essentially descriptive, notably for plains and mountains, and derived from what can be seen: “size, shape, aspect, colour, nature of the soil or vegetation” (Dollfus and Labbal 2003b: 242). But names are also derived from the resources available or from the way in which places are used. In inhabited places, names are linked mainly to human activities, more particularly agricultural ones. As they sum up: “Through their toponymy [...] inhabitants have created an inventory of their milieu, of its resources and its dangers, but also of village's and family's remarkable events.” Ladakhis' toponymy reveals “a utilitarian, pragmatic reading of the territory” (ibid.: 256). Yet the names of places also show how knowledge of the territory is constituted and derived from dwelling activities: moving through the landscape and perceiving it through the senses, using its resources, and cultivating it (Ingold 2000). Through their daily activities, people mentally construct the landscape give it a meaning and a history, and transform it. Osmaston and Rabgyas note how a field in Zanskar is “described in terms of agriculturally relevant quantities such as the amount of seed needed to sow it (*khal*), or the time or number of days taken to plough it (*khal chuksun*)” (1994: 121-2). Distances are often measured in terms of a day's journey on foot (*nyima chik-y-lam*) (ibid.: 135). In Ladakh, the strong interconnection between people and their place is illustrated by Aggarwal's comment, as an elder villager of Achinathang once told her: “Every place has a history that can be revealed through metaphor, story, and song. To understand people, one must know their

place [...]. To understand places, one must know the people they are composed of.” (2004: 61). She also discusses how practices around death rituals leave their imprint on the landscape: “Ancestor worship in fields and houses is a means for farmers to demarcate the landscape with their personal and collective histories” (ibid.: 83-4).

Stories and personal and collective histories linked to specific places were common when travelling to and from Lingshed. Moreover, it was striking how such stories are constantly re-enacted and updated, and new ones added to the landscape with every journey. When I last left Lingshed with four Lingshedpas in the middle of January 2008 before the passes closed, my companions and I stopped just after crossing the Margun La²⁰ and sat down to eat a few pieces of fried bread and enjoy a sip of rum. Heavy snow was falling. After telling a joke that made us all burst into laughter for two whole minutes, my friend Yangphel told me (8 January 2009): “I will always remember this place. It will remind me of you, and every time I come here I will remember you and the good time we had together. I remember every place where I have had a good time”. What is singular is how much stories and practices are associated with mobility. As Aggarwal notices, the people of Achinathang rarely had names for the mountains surrounding them, but “mountain passes were named and known, bearing testimony to the importance of travel and the connection of landscape with social life” (ibid.: 61). In Ladakh, people do not just ‘pass through’ the landscape but physically (through their constructions) and cognitively appropriate the landscape they live and move in as part of their culture of mobility.

In Ladakh, the assertion that people who travel on foot lack mobility is grossly unfounded (Barwell 1996). Mobility in the Singge La *Lok*²¹ might be physically demanding but despite the fact that people depend almost entirely on travel by foot (as horses are seldom ridden) and that transportation relies mostly on the use of pack animals (horses, donkeys, and sometimes yaks), the population of Lingshed is not sedentary as the previous qualitative observations tend to suggest. This is further demonstrated quantitatively by the results of a participatory field inquiry conducted in

²⁰ The pass separating Lingshed from Skiumpata, and the first and lowest of the three passes en route to Phanjila.

²¹ This designates the area south of the Singge La, namely Lingshed, Dibling, Nierak, Skiumpata, and Yulchung. The trans-Singge La *Lok* includes this area plus the villages of Photoksar, Hanupata, and Sumdo.

Lingshed, the results of which are presented in Figure 3.3.²² The results for the two groups of male adults were aggregated and remapped in order to represent visually patterns of movement to and from Lingshed (Figure 3.4 below). The map discloses several particularities of patterns of mobility in Lingshed, which are discussed below (the tables and map will also be used in Chapter 7 to compare movements in on-road and off-road locations).

3.3. Men's mobility in Lingshed

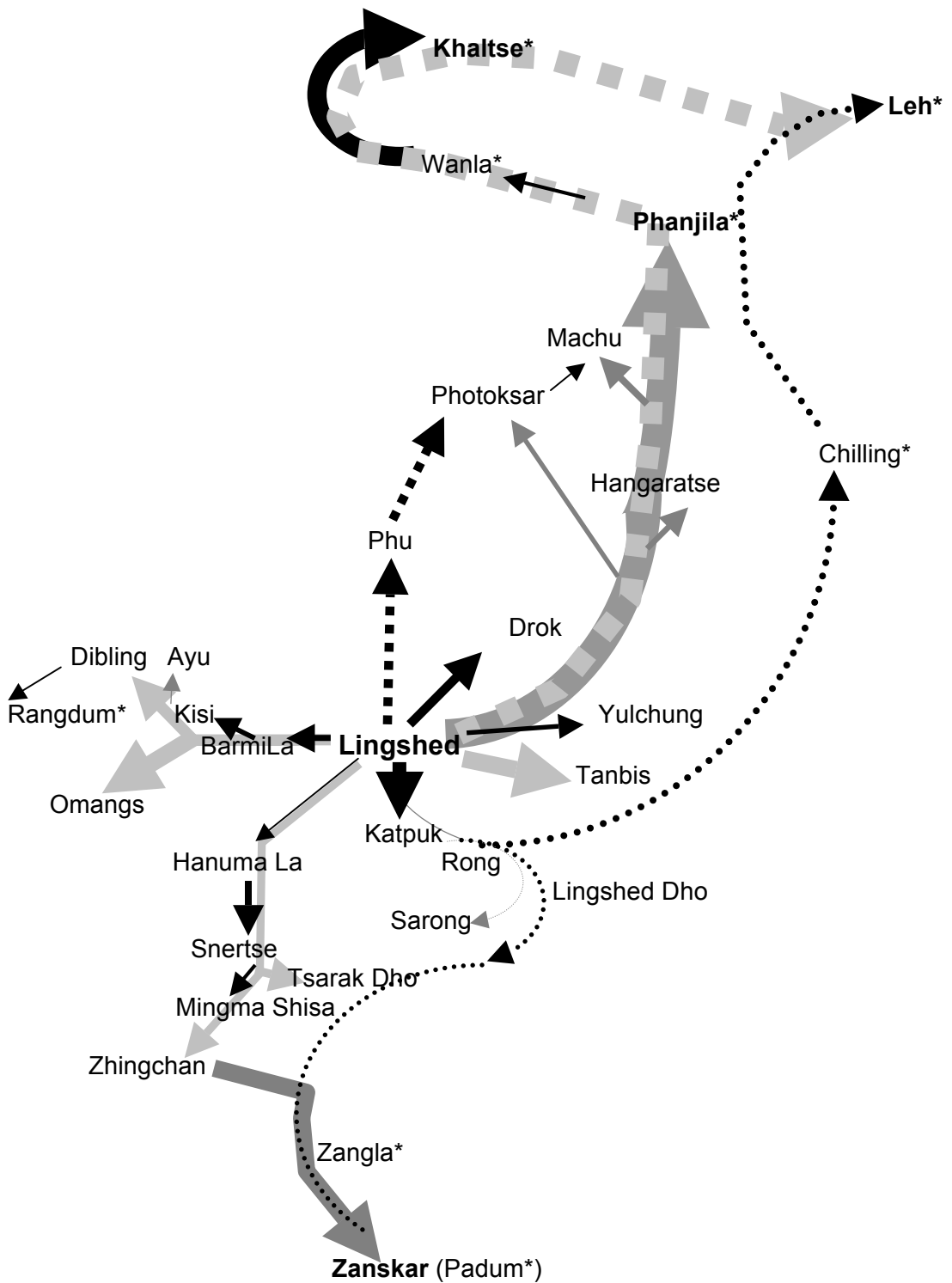
Journeys in one year - Group of 16 men		
Destination	Journeys	Journeys/capita
Phanjila	102	6.4
Leh	78	4.9
Khaltse	67	4.2
Zanskar (Padum and Zangla)	61	3.8
Omangs (pasture)	61	3.8
Tanbis (pasture)	60	3.8
Katpuk (pasture on the way to the river)	49	3.1
Barmi La (Dibling side)	41	2.6
Dibling	40	2.5
Phu (Spring way to Leh)	30	1.9
Tsarak dho (pasture)	30	1.9
Zhingchan (after Hanuma La)	28	1.8
Machu	25	1.6
Snertse	24	1.5
Chilling	20	1.3
Hangaratse (on the way to Machu)	20	1.3
Kisi (pasture)	17	1.1
Yulchung	15	0.9
Photoksar	15	0.9
Pharma rok (pasture)	15	0.9
Migma Shisa	13	0.8
Wanla	12	0.8
Rangdum	8	0.5
Hanuma La	8	0.5
Ayu (pasture)	4	0.3

²² The figures for the realisation of the travels map were collected on the second day of a participatory session organized in Lingshed on 11 and 12 November 2007. Attendance varied and, in addition to my two research assistants, 25 people participated in the second session. The purpose of this specific exercise was to map journeys to and from Lingshed according to parameters such as gender and age group. Therefore, people were separated into four groups: two groups of eight men each, one group of seven youths (10 to 16 years old), and one group of three women. People wrote on a large piece of paper the names of all the places to which they had gone in the last year and then placed beans on each destination according to the number of times they had gone there. Participation on the second day of the exercise was higher in general but lower for women (three instead of ten on the previous day), reflecting the higher domestic burden accruing to women and therefore the smaller amount of leisure time available. Results are nonetheless presented here and discussed, keeping in mind that their representativeness might not be optimal.

Overall, what is striking is the great density and complexity of mobility patterns as many trails radiate around Lingshed and link the village to several destinations that are often associated with a particular resource or activity: trading, trekking, grazing yaks or goats and sheep, or gathering wood. Among this diversity of destinations and paths, some are more walked than others: Phanjila (6.4 journeys/capita/year), Leh (4.9), and Khaltse (4.2) come first, before Padum (3.8) in Zaskar, and Omangs and Tanbis (3.8 journeys/capita/year each; see Figure 3.3). Yet different ways are used to reach these destinations since another particularity is the seasonality of access routes to and out of Lingshed. Access routes depend on climatic conditions and are therefore seasonal. The main access routes are across the passes: the Margun La, Kiupa La, and Singge La in the north to Phanjila,²³ Khaltse, and Leh; and the Hanuma La and Parfi La in the south to Zangla and Padum in Zaskar. In late autumn or the beginning of winter, snowfall makes the route impassable until early spring. In December or January, depending on weather conditions, the Zaskar River freezes and forms the Chadar, which becomes the only access route to Chilling and Leh in the north and to Zaskar in the south. The Chadar is used to reach pastures and “forests” south of Lingshed and to bring yaks back to the village in January. In February/March, the Chadar melts and becomes impassable. In early spring, when the weather is still cold enough and springs are frozen, Lingshedpas use a third way to go to Leh: through Phu and Photoksar. This third way becomes impassable in turn when temperatures rise and the main access route across the Singge La is again used. The timing between early snowfalls and the formation of the Chadar can result in the region becoming physically isolated for a few weeks in early winter. The same happens again in late winter/early spring, when the Chadar starts melting. These are the two times in the year when access to Lingshed is possible only by helicopter and hence reserved for emergencies: here, one could really speak about physical isolation. Thus, isolation is seasonal and timebound. Also, mobility in Lingshed in general is highly weather-dependent.

²³ Note that this trail is recent; until a few years ago, people used to go through Photoksar, the Sirsir La in the west, and then Hanupata until Phanjila. Thus, in addition to being seasonal, access routes are also temporal.

3.4. Schematic map of movements in Lingshed

**Legend:**

The width of arrows is proportional to the frequency of travel (per year per capita).

* Localities on the road

■ ■ ■ Summer access

..... Winter access (*Chadar*)

..... Spring access

Genderwise, there are huge discrepancies in terms of mobility (see Figure 3.5). Among the women who were present during the exercise, none had been out of the village in the last year. Two of the three women told me they had travelled during the previous year and recorded the names of their destinations and the number of times they had gone there, while the third one counted the journeys she could remember having made in her whole life. The number of journeys made was still consequent and represented several days of travel a year on average but in any case it was significantly lower than for men. This is partly a question of generation, since the three women were in their fifties, but it seems a fact that women in Ladakh travel less than men. The man is the “itinerant element” in the household, writes Dollfus (1989: 147). As Gutschow writes about Zanskar, women are free to travel but they must ask permission from their male family members (2004) as, in Nepal, men’s travels prevent those of women since someone has to stay home to perform domestic tasks and look after the family, fields, and animals (Molesworth 2001; see also Nyborg 2002 on gendered mobility in Baltistan).²⁴ Although activities in Ladakh are widely interchangeable,²⁵ these tasks are done mainly by women (Dollfus 1989). Consequently, they travel less than men.

Quantitative evidence tends to confirm the high mobility of Lingshedpas suggested by ethnographic observations, notwithstanding large gender disparities. Patterns of mobility are characterized by a diversity of destinations and number of seasonal trails that converge on the village, as represented by the mobility map. The map also offers a physical, if schematic, representation of the “culture of mobility” that I have previously described. It depicts the several connections that link Lingshedpas to villages and places around them, and through which people, goods, news, and ideas transit so that, far from being isolated, the village is constantly changing. It is to this point that I turn in the next section.

²⁴ Molesworth also found differences in the purpose of travel: men mostly travelled for cash while women travelled mainly for social purposes, to visit kin, or to make pilgrimages (ibid.: 134). The data on Lingshed is insufficient to draw such conclusions but further observations in Lingshed and other villages (including quantitative data on Alchi, situated on the road, as presented in Chapter 7) tend to corroborate these findings.

²⁵ With the exception of ploughing and weaving (Kaplanian 1981) as well as animal slaughtering (Dollfus 1989) – activities that are performed only by men.

2. Experiencing change and isolation in Lingshed

A legend says that the village of *Ling-shed* was founded a long time ago by hunters who stopped in one of its caves for the night. As they took off their leather shoes and the straw they had stuffed inside, some barley seeds fell onto the soil.²⁶ When the hunters returned the following year, fields of barley had arisen and they decided to settle there and build a village. The legend is a good reminder of the fact that, in Ladakh, places suitable for cultivation are rare and determine the location of settlements, and that the bulk of the population depends to a large extent on agriculture, although not entirely.²⁷

Lingshed might be remote but the very idea according to which it would be considered an isolated village – preserved and unaffected by development, living in autarky, insulated from modernity, and lacking exposure – is betrayed by its physical appearance. As soon as one passes the *chorten* and flickering *lungtas* (prayer flags) that mark the Margun La, Lingshed unveils itself: a large village dominated by an imposing *gonpa*, large patches of green field, scattered whitewashed mud houses with photovoltaics and solar cookers on their roof, glass rooms, a school equipped with solar lighting and a satellite dish, and disco beats that resonate from a house in the evening. Lingshed reveals its “landscape of scattered modernities” (Arce and Long 2000: 164).

A closer look at the life histories of Lingshedpas unveils the contours of the situation of Lingshed, largely connected to the world around, not insulated from changes but at the same time confronted by problems such as economic exclusion, marginalization, and seasonality. In what follows, I use the life histories of Tsering Angdus and Chozang Kunzes to illustrate and introduce the particular features of Ladakhi socioeconomic organization, as well as the way it has changed under the influence of diverse factors. I pay particular attention to livelihoods and consumption and production patterns, and how they are affected by seasonality – themes I will develop further in this section. These observations – which will be compared to those made in on-road locations in

²⁶ At that time – and until a few years ago (see Crowden 1994) – people used to stuff straw in their leather shoes (*jato*) to isolate themselves from the cold and humidity.

²⁷ Lingshed is also where King Lhawang of the Namgyal dynasty had his brother Trashi imprisoned around 1470 after having had his eyes pierced (Kaplanian 1981: 47). As Lhawang could not have children, he gave Trashi a wife, with whom the latter had a son. When the son became king, he brought his father back to Leh. Today, the ruins of the castle where Trashi was imprisoned remain visible in Lingshed.

Chapter 7 – help me comprehend the way in which isolation is experienced in off-road locations such as Lingshed.

Two life histories

The story of Tsering Angdus

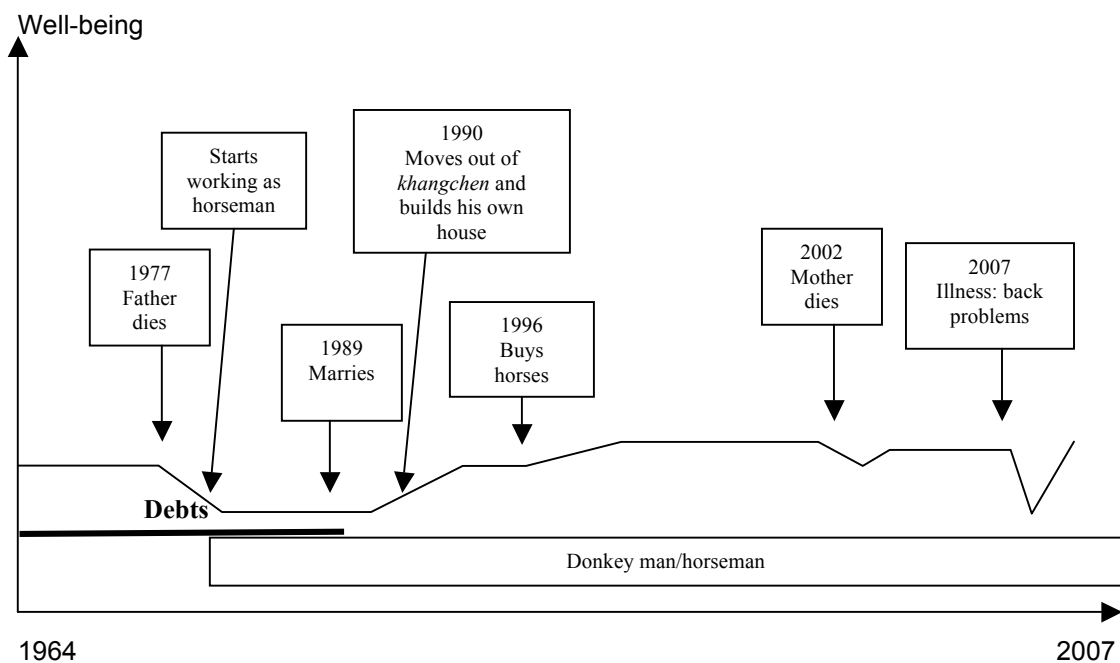
Tsering Angdus (Lingshed, 10 November 2007) lives in a simple one-storey house in Kartse (the southernmost area of Lingshed) with his wife and two youngest children. He is certainly not poor by local standards although the level of his possessions shows that his family is not among the richest either.²⁸ He lives mainly on the revenue from his land and benefits from government-subsidized rations, and complements his income by working for trekkers during the tourist season.

Tsering Angdus was born in 1964 in Lingshed (see Figure 3.5). “We had no shoes in summer, not much to eat, and had to borrow grain from other families,” he recalls. Life was very difficult. Every year, they went into debt, which they could only repay after the harvest. The situation improved 16 years ago when he moved into the *khangbu*²⁹ while his elder brother and sister stayed in the *khangchen* (main house), and his younger brother married in Macho. As his elder brother inherited from the *khangchen* with all the obligations it implied, Tsering Angdus’s charges and duties became much lighter and he became free to make his own decisions. In 1989, he married Tsewang Dolma, with whom he has had five children, and built his house in Kartse. Of their five children, one daughter is married and lives in Spiti, one is a nun in Lingshed, one daughter studies in Leh on a scholarship, while their two youngest sons stay in the village.

²⁸ Despite the seemingly equalitarian appearance of villages, there can be large discrepancies in wealth between the richest and poorest households, which are often linked to differences in land ownership. Inequalities are also made visible through external signs of wealth (such as the size of the *perak* – woman’s headgear) or by possessions displayed in the house (such as an ornamented stove, cooking pots and utensils, ladles, carpets, and furniture) and through donations to the monastery.

²⁹ The *khangbu* or *khangchung* (in Zanskar) or *kuttu* (in Lingshed) designates the small house that is attached to the *khangchen* (also called *khangba* in some villages). Note that these terms designate both the house and its occupants. The system is explained in detail further on.

When the land was divided between the *khangbu* and *khangchen*, Tsering received 11 *khals* (around 0.18 ha) of land.³⁰ They own some livestock (two yaks, three female yaks or *dimos*, three horses, two donkeys, ten goats, and seven sheep) and a few trees. Like every household in Lingshed, they depend partly on subsidized rations (200 kg of wheat flour, 200 kg of rice, 10 kg of sugar, and four jerrycans/80 l of kerosene) and on the transport subsidy of Rs1,300 per quintal, which they receive with these rations.³¹ Tsering works as a horseman in the summer (earning Rs9,000-10,000 a year), and weaves *snambu* (cloth) for other houses (earning Rs800 a year). In terms of expenditures, they buy mostly food items such as local butter (10 kg for Rs2,500), tea (7 kg for Rs2,800), salt (Rs250), and meat for *Losar* (Rs4,000), but also children's stationery (Rs2,000) and shoes and clothes; they also have to spend on their horses. Their cash needs are met but money income is insufficient to allow for any saving.



3.5. Life history of Tsering Angdus (LLin1)

Since they escaped chronic debt 16 or 17 years ago, Tsering went through one crisis in spring 2007 when a back illness prevented him from working for two months until he

³⁰ Note that, in Ladakh, the average landholding is small: 1.38 ha on average while 49.4% of the population holds less than 0.5 ha; the average landholding within this cohort is 0.22 ha (LAHDC-Leh 2007b: 25)

³¹ Inhabitants of the trans-Singge La area receive a transport subsidy to compensate for the cost of bringing their rations to the village. People normally use this subsidy to buy rations since they use their own horses and donkeys for transport. When rations are not needed, they take only the transport subsidy and leave the rations or sometimes resell them at a higher price.

was cured by the local *amchi*. Overall, he feels that there are more opportunities now compared to the past: they have more cattle and can work as horsemen for tourists in the summer. He started working as a horseman at the age of 13, just after his father passed away. In 1996, he bought horses and could increase his income. Government services, such as subsidized rations and free healthcare provided at the local dispensary, were crucial improvements for him and his family.

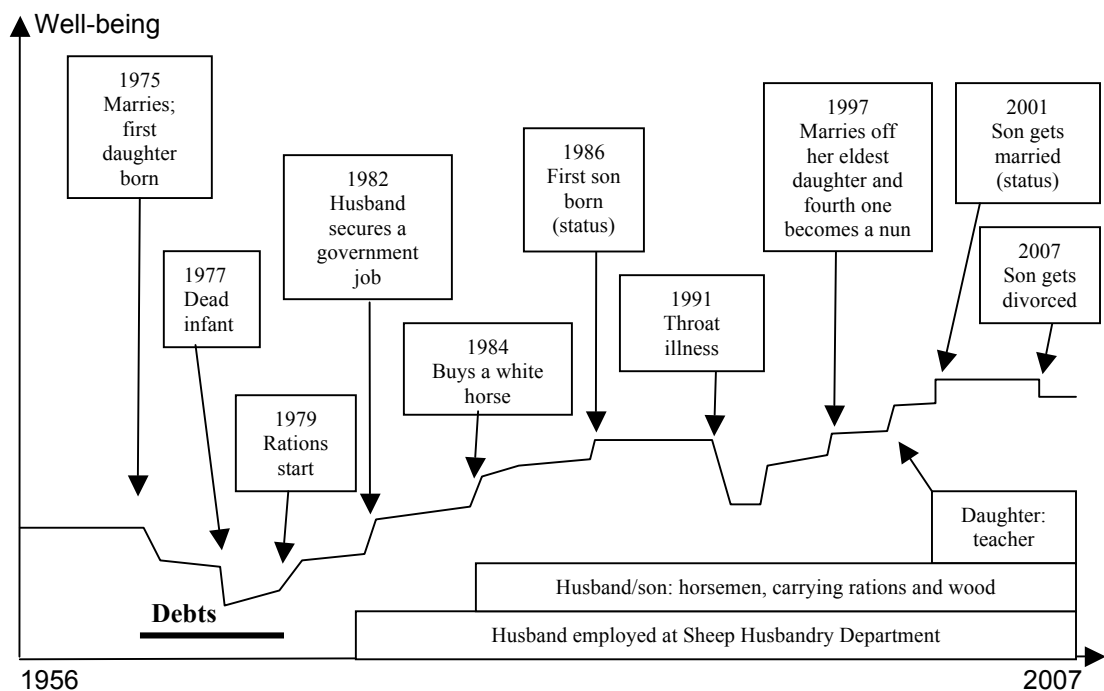
The story of Tsering Angdus is emblematic of the situation of many Lingshedpas. Tsering and his family rely mainly on agriculture and herding but the revenue from these activities is not sufficient to meet their needs, especially monetary needs, which can be permanent (food, education, clothing) or episodic (disease). Their land endowment is rather modest but not exceptionally low: some families own less land to cultivate, and one family owns no land at all and cultivates the fields of the *gonpa* against a share of the crops (up to 50%). As a result, Tsering Angdus's family relies to a large extent on rations, revenue from tourism, and more 'traditional' activities such as weaving that have come to be paid for in cash rather than in kind. His family is spread among different locations in and outside Ladakh due to marriage (generally patrilocal), work, and education.³² In many cases, sudden shocks, such as the death of a parent, gave place to livelihood adjustments, such as starting an income-earning activity or entering the monastery. Tsering mentions many changes in terms of healthcare, rations, changes in consumption and production, and changes in livelihood, to which I return in the rest of this chapter. Overall, Tsering's well-being has been affected by episodic events such as debts and disease. His material well-being improved slightly with the introduction of rations and as he moved to the *khangbu* but there was no steady improvement and Tsering's household remains quite vulnerable. As livelihood options are limited, his income is just enough to meet family's needs.

The story of Chozang Kunzes

Chozang Kunzes's case is more atypical for Lingshed: she is relatively well-off and her material situation and well-being considerably improved compared to others in the village (Lingshed, 14 November 2007; see Figure 3.6). Chozang lives with her four

³² In 2004, nearly half of households had at least one person who lived outside the village.

children in the lower part of the village in a large comfortable house that might contain one of the biggest and most richly decorated altar rooms (*choskhang*) of Lingshed, where some of the *Losar* celebrations took place in 2007. She and her family depend to a large extent on revenue from their land (40 *khals*), from herding (two yaks, three *dimos*, two horses, four donkeys, twelve goats, and three sheep), but most of all on the wages of her husband and one daughter: both are employed by the government, resulting in a consequent increase in the family's income.



3.6. Life history of Chozang Kunzes (LLin5)

Like most households, they have also had debts in the past, which have had to be returned at a 25% interest rate (5 *bey*s per *khal*).¹ This ended in 1979 with the arrival of government rations and their situation started improving. It improved even further when her husband secured a job with the Sheep Husbandry Department (locally referred to as *raluk rgyusphel*) 25 years ago, bringing in a steady income to the household every month. The job did not require his constant presence and left time for other activities, so he “bought a white horse” and started working as a horseman for tourists, as did their son later. Their income (and well-being) increased even further when one of her

¹ A *bey* is a volumetric unit measured with a wooden mug; one *khal* is generally equivalent to 20 *bey*.

daughters became a teacher and started working for the government school in Lingshed.²

By cumulating several livelihood activities – agriculture and herding, government service (Rs50,000), horsemanship (Rs10,000), and teaching (Rs36,000) – Chozang Kunzes's family is one of the most prosperous households in Lingshed. Both government jobs bring in a steady source of income. In spite of this, they do not make any savings. However, the family is quite resilient to external shocks such as disease. They spend significantly more than other households on food, clothing, shoes, and school stationery (respectively, Rs12,000, Rs12,000, Rs4,000, and Rs3,000) and spend the rest on improving their house, buying statues of divinities, *tangkas* and other religious artefacts for their *choskhang*, and making pilgrimages.

Ladakh: environment, economy and society

The two life histories above display some of the features of Ladakh's socioeconomic organization and the way in which these have changed. In this section, I attempt to describe and explain these main features in breadth but I also focus on how Ladakh has been constructed as ecologically self-sufficient, isolated, and encapsulated in a kind of timeless immobility. In terms of agroecological systems, Ladakh – sheltered from the monsoon by the Himalayas – receives scant precipitation, mostly in the form of snow in winter.³ As a result, the landscape is nearly devoid of vegetation, with the exception of bushes, planted trees, irrigated patches of land on valley floors (at 2,800 to 4,000 m), and alpine pastures (at 4,000 to 5,000 m) on which the humidity condenses due to lower temperatures.

As the two life histories show, Ladakh's people depend to a large extent on agriculture and herding, two activities that are highly complementary and allow them to exploit Ladakh's different ecological zones (for a detailed description, see Gokhale-Chatterji 1994; Osmaston et al. 1994; Osmaston and Crook 1994). Agriculture takes place mainly

² Her status/well-being increased with the birth of her first son, the marriages of her children, and her daughter becoming nun; they decreased with disease and finally with the shame associated with her son's divorce.

³ Around 90 (Kaplanian 1981) to 115 mm a year (Osmaston et al. 1994: 45).

on valley floors, while yaks and *dimos*, yak-cow hybrids (*dzo* and *dzo-mo*),⁴ sheep, and goats are taken to graze in high pastures or kept in the village in winter, along with horses and donkeys (used for transportation). Agriculture is entirely dependent on melting glacierwater, which is brought to terraced fields through rivulets and irrigation channels. Because of climatic conditions, the growing season is short (between four and six months depending on elevation) and fast-growing species of barley, wheat, and peas are planted.⁵ Agricultural waste and fodder (grown between fields and gathered on grassy slopes) are used to feed livestock, which play a crucial role in the system by providing fuel,⁶ transport and labour, wool, hides, meat, milk,⁷ and more essentially the manure (*lut*) that is used to fertilize the fields. *Lut* is collected from pastures, fields, and stables and mixed with ash, soil, and human waste, providing essential nutrients to an otherwise poor and sandy soil. This accounts for Ladakh's formidable agricultural returns, which compare favourably with those obtained in industrialized countries (Gokhale-Chatterji 1994; Mankelov 2003). A few vegetables are locally grown: mainly potatoes, cauliflower, cabbage, spinach, swedes, turnips, carrots, and mustard leaves (Rizvi 1996). Such a land-based economy provides for most people's needs while the monastery's revenues provide for the subsistence of a large monastic population.⁸ Hence, every Buddhist village in Ladakh has a monastery, or at least a temple, and a resident *lama* attached to one of the main monasteries who performs rituals for the population.⁹ Villagers follow a calendar that presents a succession of agricultural and pastoral activities interspersed with religious events.

⁴ A *dzo* is a hybrid between the yak and the cow. Ladakhis use different terms for the male, *dzo*, and the female, *dzo-mo*. Similarly, a *yak* designates a male, whereas the female is called *dimo* or *demo*. Cows are also found in most villages at lower altitudes, but not in the Singge La Lok.

⁵ Apricots, apples, and buckwheat are also grown in the lowest parts of Ladakh, where two crops a year (usually a second crop of buckwheat) are sometimes possible.

⁶ Dung is used along with meagre quantities of locally available wood.

⁷ Milk (*oma*) is turned into butter (*mar*), which is used in *cha kante* and can rightly be considered a staple food in Ladakh. Milk is also turned into yoghurt (*zho*) and *churpe*.

⁸ "A fair proportion of the population" according to Rizvi (1996: 135) and 2% of the population of Zaskar, including one-fourth of nuns, according to Gutschow (2004: 34). Cunningham estimated the monastic population at 12,000 for a total population of 165,000 for the whole of Ladakh for the years 1820 to 1830 (1854: 286), a figure "guided only by the vague statements of the people". The role of the monastery (and perhaps to a lesser extent of the nunnery) as an institution embedded in socioeconomic patterns and a "social safety net" should not be discarded (see Osmaston et al. 1994; Gutschow 2004). Monks subsist on revenues from the property owned by the monastery and through paid ritual services. The same cannot be said of nuns who depend mainly on their families and generally work for the household and for monks. Also, it is widely held that, as a rule, every family in Ladakh should give at least one son to the monastery (Gokhale-Chatterji 1994).

⁹ In Leh district, the majority of villages are Buddhist. All villages situated in the geographic area where I conducted fieldwork and all villages that will be crossed by the Zaskar Highway are Buddhist villages, with the exception of Padum where 20% of the inhabitants are Muslim. Lingshed has a monastic

In terms of social organization, agricultural land is owned either by families, large landowners, or monastic estates, while communal resources like water, pastures, fodder, and wood are owned by the village and managed according to customary rules that vary from place to place. Although land ownership differs significantly between households, access to land – through direct ownership or sharecropping – is nearly universal (Gutschow 2004: 41). Land is rarely given or sold and it is only recently that fields began to be divided between heirs (as in Tsering Angdus's case), although often unequally between the first heir and his younger siblings. New fields can be created on the unanimous decision of all villagers if wasteland and water are available. Landholdings are generally scattered around the village in irregular patterns, partly as a way of spreading risk and taking advantage of differing physical conditions, but mostly as a result of the historical process through which households claimed land. Households are, in Gutschow's words, "the major corporate unit in village life" (ibid.: 50) and the basis of identity and organization around which rights to common resources and duties – obligations in kind, work, and financial contributions to the monastery and village – are organized. Land is the essential resource on which households depend, and social organization and the rules of marriage and inheritance – based on fraternal polyandry and primogeniture – enable the village to preserve the unity of the land as well as the unity and continuity of the household.¹⁰ There are symbolic reasons for this but also pragmatic ones as land and labour are both necessary to the survival of the household and at the same time are available in limited supply. Hence, each family produces only one male heir who marries and inherits the *khangchen* and all the property while his parents and siblings retire to the *khangbu*. Those who live in the *khangbu* work the amount of land they require to live but the land remains the property of the *khangchen* and, on their demise, the land returns to the *khangchen* (Gutschow 2004). When the male heir (generally the eldest son) gets married, his younger brothers may become monks, leave the household, or marry the same wife. His sisters either marry and join another household, or stay and help in the *khangchen* or *khangbu*, or if they chose to become nuns may join a nunnery. Over the last few decades, the practices of polyandry

population of around 40 *lamas* and 20 nuns who reside permanently in the village, and around 30 more *lamas* who live in Leh or in monasteries in south India (Karnataka) and visit in summer during religious festivals.

¹⁰ Incidentally, they also participated in checking the population growth, which can be seen as fundamental in a place like Ladakh where resources such as land and water are limited.

and primogeniture have gradually been abandoned and only concern a minority of families, leading to the fragmentation of land and households.

Ladakh's agro-ecological system is highly integrated, relies on locally available resources, is largely oriented towards subsistence, and has undeniably provided for a large part of people's needs (and still does to some extent). This has in turn given rise to the idea that Ladakhis are self-sufficient – a myth further supported by the image of a Buddhist self-contented people with limited needs, living within the ecological limits of their immediate environment. In the literature, Ladakh often suffers from a partial and romanticized treatment: it is often presented either as backward (Pandit 1997) or glorified as a kind of Shangri-La (Ducoin 2000; Norberg-Hodge 2000). Ladakh tends to be identified as a semi-closed system with a traditional, culturally Buddhist, and equalitarian society frozen in time until the powerful forces of development were unleashed some 30 years ago, opening Ladakh to a new era of modernity (Bhasin 2005; LAHDC Leh 2005; Skeldon 1985).¹¹ However, these views have been rightly criticized by later generations of scholars (Aggarwal 1993, 2001, 2002; Gutschow 2004; Srinivas 1998; van Beek 1996, among others) for “spawn[ing] images that add to the region's marginalization” (Aggarwal 2004: 9).

Ladakh was never culturally insulated: those who have encapsulated Ladakh within the canvas of a timeless traditional society fail to see the numerous deep transformations that have taken place (1) during centuries of trade and cultural exchanges with neighbouring countries, (2) with the involvement of Ladakhi groups in state politics, (3) under the influence of the Moravian Church (since 1885), and (4) since independence, under the influence of India's administration, economic policies, the army, and only

¹¹ As the official *Ladakh 2025 Vision Document* states: “Ladakh is a society in transition. Isolated from the rest of the world for much of its existence before it was thrown open to mass tourism in the mid-1970s, the region is caught in a whirlwind of change today. As new lifestyles, practices and social mores enter the Ladakhi community against a backdrop of centuries' old indigenous traditions and culture, uncertainty and confusion reign supreme in the minds of the region's local populace.” (LADHC-Leh 2005: 2). See also Skeldon who, in 1985, maintained that “there [were] still areas of Ladakh largely untouched by outside influences (1985: 247). Bhasin writes that Ladakh “is remote, inaccessible, resource poor high-altitude zone in western Himalayas, that witnessed little change or advancement in the operative economic and technological level over the centuries [*sic*]” (2005: 1). The myth of Ladakh and Zaskar as completely isolated regions goes back at least as far as the nineteenth century: “No province could be much more secluded than Zaskar is” with “its distance from any civilised region” which “cut it completely off from [any] foreign influences” (Wilson 1875: 245).

recently of international NGOS and tourism.¹² Over the centuries, Ladakh was exposed to considerable cultural influences and developed “a composite culture” (Rizvi 1996: 160) as numerous features considered to be “traditional” were actually imported: the game of polo from Persia, and the *surna* (hoboe) and *daman* (drums)¹³ from Baltistan, for instance. In terms of religion, Ladakh has long turned to Lhasa where it would send its novice monks for education.¹⁴ The Moravian missionaries introduced the stove, new varieties of vegetables, western medicine, and new practices such as knitting, baking, and storing and preserving vegetables in winter in a hole in the ground (Rizvi 1996). Even in ‘remote’ villages, researchers have been quick to point out that, “despite the usual comments by visitors on the isolated and self-sufficient existence of people [...] many articles of domestic furniture and equipment were imported” (Osmaston et al. 1994: 82).¹⁵ These include the large brass pots that are found in every kitchen and come from Srinagar and further west, rugs from India or China “for sufficient time to be now regarded as ‘traditional’” (ibid.), iron stoves, pressure cookers, thermos flasks, jerrycans, kerosene lamps, and now plastic cans and *gurgur* (long tubes used to make butter tea), blankets, and all sorts of consumption goods.

Also, Ladakh is not self-sufficient and might never have been so. As seen in the previous chapter, Ladakhis were highly involved in different kinds of long-distance trades that crisscrossed the territory and brought in and diffused all sorts of products and cultural influences. Not only did Ladakh’s relative prosperity depend on that trade, according to Rizvi, Ladakh was never self-sufficient. Based on the accounts of Cunningham and Moorcroft as well as on her own research, she writes that Ladakh has long depended on foodgrain imports from provinces south of the Himalayas (1996: 116). Other staple commodities such as tea (green and black) were imported from Tibet,

¹² As van Beek writes, from the 1930s onwards, there was “an increasing desire on the part of the state to be involved in ‘developing’ Ladakh’s human and natural potential”; this was “understood to be the task, indeed the basis of legitimation of the nation-state” (1996: 32). Moreover, in the same period, groups such as Representative of Kashmir’s Buddhists and the Ladakhi Young Men’s Buddhist Association were already active in politics and worked at reforming Ladakh’s institutions (van Beek 2001). They demanded a ban on polyandry and a reform of the inheritance laws, both of which were successfully passed as acts in 1941 and 1943, respectively. As Aggarwal notes, the work by political/religious groups to replace older sociocultural practices and impose a new moral of purity gave place to numerous rearrangements and definitely blurred the categories between what might be construed as ‘traditional’ and ‘modern’ (2004: 72).

¹³ These instruments were introduced by the Baltis in the seventeenth century and later spread to Tibet.

¹⁴ By the early twentieth century, young Ladakhis were already being sent to India as well as overseas for their education.

¹⁵ Observations made in sTongde, a three-day walk along the Zanskar, south of Lingshed.

along with large quantities of butter from Zaskar, and salt brought by nomads from the high plateau. Rice, long considered a luxury, was imported from Kashmir, and even the elements used to make jewels and the ‘traditional’ *perak* – gold, silver, turquoise, coral, and conches – were imported. Today, in every village, a significant amount of food – *atta* (wheat flour), rice, and sugar – comes through the public distribution system while other foodstuffs are bought at the bazaar in Leh or from a shop in the village. These include cooking oil, sugar, pulses, rice, butter, canned mushrooms, paneer, soja proteins, spices, black and green tea, noodles, biscuits, egg powder, tomato sauce, Kashmiri rum, Coca-Cola, and canned mackerel, to cite only a few. Thus, not only is Ladakh not self-sufficient, the share of imported goods and resources to make it into the ‘subsistence economy’ of Ladakhi villages has been steadily increasing year after year.

Lingshed’s changing landscape

Lingshedpas also remember several transformations they have seen over the last few decades: some visible ones – glass windows, metal stoves, or metal sheets used to make victory banners on the roof of the *gonpa* – and other less visible but no less significant ones, such as the new *amchi* system which combines Lingshed’s repertoire of practices and system of value with imported organizational features (Besch and Guérin 2009). The first day of a participatory session organized in Lingshed was dedicated to these transformations (focus group, 11 November 2007). As we gathered in the newly built community hall and sat on the floor along the walls – the men close to the window, the women and youths in a darker corner – people started to reflect on the changes that had happened in their village, and the way they sat was already a sign of change. In Ladakh, the sitting order (*gral*) reflects the social hierarchy: “Where people sit in this *gral* illustrates their place and identity in Ladakhi society” (Aggarwal 2004: 149). As a general rule, monastics sit before laypeople, men before women, higher castes before lower,¹⁶ older families before newer, and wealthier individuals before the less well-off.

¹⁶ People’s status is determined by descent and can be ranked according to four castes (or stratas: see Kaplanian 1981): royalty (*rgyal-rig*), aristocrats (*skudrag*), commoners (*man-rigs*), who represent about 90% of the population, and untouchables (*rigs-ngan*), who are made of three groups: *gara/garba* (blacksmiths), *beda* (musicians), and *mon* (itinerant musicians) (Aggarwal 2004). Although the four caste groups interact daily, the fourth is highly discriminated against as notions of ritual pollution are attached to it. *Rigs-ngan* are prevented from marrying or having sexual relations with members of the other groups and they are not allowed to share cups or utensils (and sometimes water from the same stream) with the

Among ordinary people (*man-rigs*), those with a special function come first: the *goba*, then the *amchis*, *onpo*, and then others.¹⁷ But with the intrusion of a centralized government into village life and the creation of a new administrative hierarchy, people in Ladakh have had to accommodate these new statuses into the existing social order. Hence, functions such as that of headmaster, teacher, doctor, medical officer, government employee, *sarpanch*¹⁸, Sheep Husbandry Department employee, head of the women's association and village committee – and casually, tourists, NGO workers, and anthropologists – have also been incorporated into the existing order. Through a good illustration of internal rearrangement, people moved in the *gral* to create a new sitting order in which 'traditional' and 'modern' hierarchies would cohabit, giving birth to a new and fluctuating hierarchy.

When talking about changes, participants often started by recalling what is colloquially construed as 'traditional culture', namely dress and values (Amchi Nawang, Lingshed, 11 November 2007):

We used to wear hats, a goatskin, when going to the *gonpa*. We could identify sisters-in-law, fathers, mothers, according to that. We cannot anymore. In nine or ten years, a lot of changes have occurred in the way we dress ... When I was a child, I saw women with *hyuk-rdan* (*perak*). For males, it was mandatory to keep the *chuti* (ponytail or plait).

Lingshedpas also remember a time when there was no formal education or healthcare system in Ladakh, and parents used to teach their children Bodhi (Rinchen Dolma, Lingshed, 11 November 2007):

There was no building for school... then it happened in a private house... few children used to come. At that time, fifth-standard passes got jobs as teachers... After, somewhere in the monastery. There was no doctor, no teacher was available

latter. They often live on the village outskirts and are not allowed to become monks or nuns or to cook for monastics. At public and private gatherings, they must sit at the end of the *gral*, below women and children, and are constantly reminded of their status as they are called or referred to by their caste name. Outcastes are at the service of others as they must play for them or repair their instruments, and are paid in grain once a year after the harvest.

¹⁷ Yet, as Aggarwal writes, "the process of sitting is ambiguous and fluctuating, riddled with protesting and persuading, coaxing and contesting, submitting and subverting" (ibid.: 162).

¹⁸ The democratically elected head of a village in the *panchayat* self-government system.

for the trans-Singge La area. We used *markalak* [mud plastered on wooden tables] and pens made of wooden sticks. In terms of school, tremendous development has taken place. The *amchi* system has also developed. Earlier there was only one *amchi* family. Now there are several [seven]. At the *gonpa*, we have *geshes* [educated *lamas*] and *gyudpa*.

Education and healthcare are often the two benchmarks against which people judge progress in Ladakh. In terms of healthcare, the advent of allopathic medicine that is provided free of charge, and the construction of the *haspatal* (a small dispensary with a resident healthworker who is often absent) was a big change. Progress due to healthcare was quite visible in people's life histories as many informants had suffered premature deaths in the family and loss of children at birth, and epidemics would take a heavy toll on the population. People also rely on the traditional *amchi* system and the reading of religious texts by *lamas*; in case of an emergency, the helicopter is called (via satellite phone) and patients are airlifted to the hospital in Leh.

The establishment of a centralized school with buildings and committed teachers is something Lingshedpas take pride in. Yet this has had its own problems, for instance, for parents whose children could no longer look after the cattle or help with cultivation, resulting in an increased workload for those left in the village (Ajhang Thundup, Lingshed, 11 November 2007): "Parents becoming old need to go to the mountain to graze the cattle and grow barley; old people have to do many things." Due to schooling (as well as changes in the economy and the increased need for cash), there were not enough people left in the village to work the land. Some even thought, against all statistical evidence, that the population was decreasing.¹⁹ Education and changing norms also created tensions in terms of filial piety (Ajhang Sonam, Lingshed, 11 November 2007):

Most children think that they should complete their studies and lead a comfortable life. It is their duty to come back to the village for its development and to look after their parents. A child who after his education doesn't want to come back to his village is a cause of shame and disappointment to his parents.

¹⁹ According to the statistics, there were 794 inhabitants in the trans-Singge La *Lok* in 1981; there were 1,251 in 2004.

Literacy has become “an important criterion for determining authority” (Aggarwal 2004: 73). On the political and regional scene in Ladakh, this was exemplified by the contestation of old religious figures of authority, such as monastery abbots as political representatives; in villages in Ladakh, by the contestation of the authority of “uneducated parents” and a growing gap between generations.²⁰

The issue of climatic change was a high preoccupation as it was badly affecting crops (Dorje, Lingshed, 11 November 2007): “We are not getting the snow and rainwater on time anymore.” Heavy rains had created landslides and destroyed mudhouses. The Chadar had become unpredictable, not forming on time and resulting in Lingshedpas being stuck in Leh in March 2007, unable to return to the village. New threats had emerged, such as locusts from China that had appeared for the first time three years ago and badly damaged crops and pastures in Lingshed (as well as in Zanskar and Changthang).

Consumption

In terms of consumption, huge changes had taken place as well, changes that had deeply transformed the livelihoods of Lingshedpas. The first, which was also mentioned in the life histories, was the introduction of government rations (‘Raja’, Lingshed, 11 November 2007):

There was a change in terms of food. Earlier there was no ration system. Gulam Hussain Sahab, DC Tsewang Puntsog [the first DC from Leh], and *Meme* Ishey Tashi introduced the rationing system, which proved to be very successful. We are very happy about it. In terms of food, the situation is much better...

As the life histories indicate, a significant part of the diet in Lingshed consists of government rations of rice, *atta*, and sugar,²¹ to which nearly all inhabitants of Ladakh

²⁰ Education is also a marker of status and social differentiation: during the summer seminar green-white-saffron cockades decorated the chest of state employees and heads of *ama tsogspas* (women’s societies) and red-yellow-blue cockades the chest of those who had been schooled until the tenth class, granting special privileges and the best sitting arrangements.

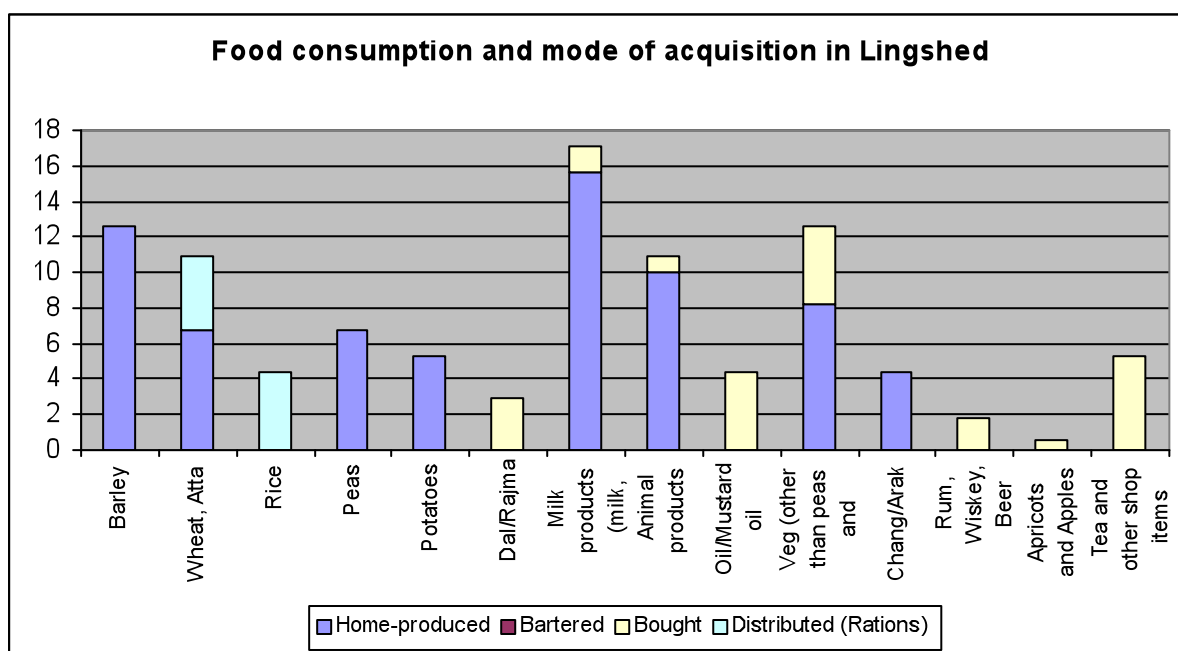
²¹ The government also provides kerosene at subsidized rates.

are entitled. Government rations have been a mixed blessing in Ladakh: they have eased the burden on households, especially for those who had to borrow grain and chronically ran into debt, such as Tsering Angdus and Chozang Kunzes. At the same time, rations have depressed agricultural prices, so that growing grain has become uneconomical and is sometimes abandoned.²² In the case of Lingshed, only its distance from markets and the fact that goods must be carried over long distances have sheltered it from such transformations.

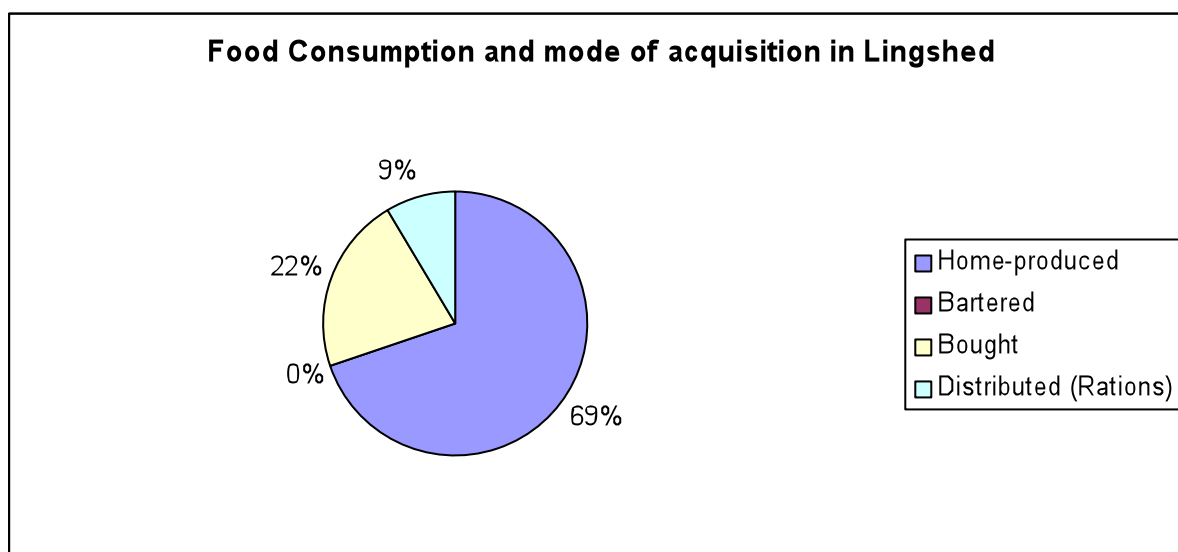
During the participatory session, a food matrix was completed to represent Lingshedpas' food consumption and modes of acquisition (focus group, Lingshed, 11 November 2007). The matrix – the results of which are represented graphically in Figures 3.7 and 3.8 and will be compared to those obtained in on-road locations in Chapter 7 – shows that, if Lingshedpas are effectively self-sufficient at 69%, a significant 31% of their food is either bought on the market or provided through the public distribution system.²³ It shows that wheat, rice, pulses (*daal* and *rajma*), butter, milk, meat, oil, vegetables, alcohol, fruit, tea, and other food items that are bought or provided as rations (partially or in totality) make up an important part of the diet.

²² As a result, numerous fields are cultivated only to avoid the social stigma associated with land left fallow and agricultural resources have been diverted towards more profitable pursuits such as vegetable production for the market or wood plantation. As dependence on agriculture has eased, the economic and symbolic importance of fields has lessened, and what used to be the most essential resource on which life depended is now more easily converted into roads and habitations.

²³ In a survey I conducted in 2004, it was found that 75% of the food consumed was produced in Lingshed while 25% of it was either bought or provided through the distribution system (Demenge 2005). The survey involved 29 households.



3.7. Food consumption per category and mode of acquisition in Lingshed



3.8. Food consumption and mode of acquisition in Lingshed

People also mentioned other changes, for instance in construction, as houses had become better and larger, and now had higher roofs, windows, glass rooms, but also *talus* (small beams to support the roof) and *rdungmas* (big beams that support the *talus*) that were better managed than before. However, as construction wood is not available in Lingshed, it has to be brought from Nierak, one day's walk away across the Chadar. Regarding energy consumption, Lingshed relies mostly on dung and partly on wood that has to be brought from valleys far from the village (often one day's walk away), plus on

solar cookers for hot water, and photovoltaics that provide electricity for lighting, a radio, and sometimes a TV and DVD player. In addition, modest quantities of kerosene are provided through the public distribution system.²⁴ In 2007, a few households were bringing in one or two gas cylinders a year from Padum over the Chadar.²⁵

This new structure of consumption has had a deep impact on social relations, production, and its relation to resources, as what used to be produced, bartered, or exchanged for labour can now be bought. In this process, money has come to assume a fundamental role (Wangchuk, Lingshed, 11 November 2007): “We used to get our tea, butter, salt, *tipi* (hat), *papu* (leather shoes) from our own resources, we produced them. Wheat was our money.”²⁶ Harvey writes that “money flows and commodity movements [...] have to be regarded as fundamental to contemporary ecosystems” (1996: 187); this is also the case in Lingshed. In 2004, Lingshedpas defined themselves as ‘modern’ because, contrary to older generations, they used money: the monetarization of the economy was one of the most fundamental changes to have affected their lives. Money has become omnipresent: from buying food, making donations to the *gonpa*, or paying agricultural labour – although most of the work is still done through labour exchange within the *chutsoh*.²⁷ Rations and their transport are subsidized and therefore have not put a strain on households’ budgets, but other expenditures have in some way. This has also had consequences for livelihoods, as in Lingshed a monetary income has become a necessity.

Production

Changes in consumption are met with changes in production. Some noted that the surface of fields under cultivation had decreased: this was attributed to changes in the

²⁴ About 49 l of kerosene per household or an average of 8 l per person per year (Demenge 2005).

²⁵ In 2004, no family in Lingshed was using gas cylinders.

²⁶ Yet, as Besch and Guérin argue, monetarization and market relations do not displace existing social relations but “remain strongly embedded in social, cultural and political foundations” and undergo a process of hybridization in which “‘traditional’ ways of socialization evolve and transform themselves by incorporating outside elements” (2009: 3).

²⁷ The *chutsoh* is central to the village’s organization. It constitutes a group of about three to ten households who exchange work, celebrate religious events, and assume responsibility for organizing village celebrations. Currently, there are seven *chutsohs* in Lingshed, based on different clusters of houses whose delimitation seems mostly geographic.

climate – less snowfall in winter, resulting in less water – but also to labour shortages. Oddly enough, the fact that rations of rice and wheat had replaced production was never mentioned. People also mentioned that vegetable growing had developed, although at 10 kg per person per year (mainly potatoes, turnips, and onions), it remains low compared to on-road locations.

People also specified that some of the changes they had observed elsewhere, and of which they disapproved, had not happened in Lingshed: contrary to Leh, they did not build houses on their fields. “We need the fields for food” and “fields are like depositing money in a bank” (Sonam Wangtak, Lingshed, 11 November 2007) were two interventions that highlighted the still primordial role of fields in Lingshed’s economy as productive capital and savings to fall back on in times of crisis. However, fields are also sold and exchanged in Lingshed, although the practice is taboo. Fields in Lingshed are also a source of obligation, but as labour scarcity make it difficult to cultivate the whole area owned by households, land is more easily divided between heirs than in the past.

Thus, changes in production are happening in Lingshed, although at a slower rate than elsewhere in Ladakh. For instance, hybrid varieties and chemical fertilizers are hardly used: everyone grows local varieties of grain but only 10% of households had tried high-yield varieties (HYVs) and only one household had used a very low amount of chemical fertilizer (Demenge 2005).²⁸ Rather than linking this to difficulties in transport, Lingshedpas explained it in terms of choice: they had tried but HYVs and fertilizers had required more water, yields had started decreasing after a few years, and the soil had become hard and infertile. Another reason seems to be that, unlike on-road locations, people in off-road locations have a large quantity of livestock that provides organic manure in sufficient quantity. On average, there are 96 yaks/*dimo*, 3 *dzo/dzo-mo*, 34 donkeys, 38 horses, and 298 sheep and goats per 100 inhabitants; this represents a total of 469 animals per 100 inhabitants, which is more than twice the number of animals owned by households in on-road locations. Differences in production have a tremendous impact on consumption and therefore on livelihoods.

²⁸ Note that, in spite of the absence of chemical fertilizer use, yields were on average much higher in the trans-Singge La *Lok* than in Alchi-Saspol (ibid.: 73-74; see also Mankelow 2003 and Osmaston 1994a for a thorough discussion on agricultural yields in Ladakh).

Livelihoods and well-being

HH	Cash-earning activities and associated income (Rs) ²⁹					Total income
LLin1	Trekking/ horseman	9/10,000	Weaves wool	7/800		9,700/ 10,800
LLin2	Trekking/ porter	7,500	Sells vegetables to school	2,800	Shop 3/5,000	18,300/ 21,3000
LLin3	Contractor	7/12,000	Sells vegetables to school	2/3,000	Trading 2,000	(Formerly trekking) 11,000/17,000
LLin4	Trekking	15/20,000	Amchi/Onpo (husband)	13,500	Trekking (son) 10,000	Amchi (daughter) 6/7,000
LLin5	Govt- employed (husband)	50,000	Trekking (son)	10,000	Teacher (daughter) 36,000	44,500/50,500
LLin6	Lama	?				96,000
						?

3.9. Livelihoods and incomes in Lingshed

In Lingshed, most life histories show an improvement in well-being but, in general, improvements have remained slow and marginal. The main exception is Chozang Kunzes (LLin5): by cumulating several livelihood activities – agriculture and herding, work as a government employee (Rs50,000) and horseman (Rs10,000), and teaching (Rs36,000) – Chozang Kunzes's family has become relatively prosperous. Both government jobs bring in a steady income and her household has seen a steady improvement in well-being so that they are also more immune to shocks. This situation also explains the high disparities between low and high incomes: for instance, there is a tenfold difference in monetary income between household LLin1 and household LLin5. Such stable and all-year-round incomes are scarce in Lingshed and limited mostly to government jobs. They are the main cause of income discrepancies between richer and poorer households, with important consequences for households' well-being and resilience.³⁰

In all other cases, improvements in well-being have remained slow and marginal, and people have remained vulnerable to shocks. In two cases (LLin2 and LLin3), informants judged that they had seen no improvement in their life – in one case, a blacksmith who

²⁹ Informants might downplay their real income so that real figures might be greater than those given here.

³⁰ Alternative explanations based on Shanin's work (1972), Chayanov's biological cycle of growth and decline of family units (1966[1899]) could be given. However, employment remains the preponderant explanatory factor to income inequalities.

has to face caste discrimination and, in the other case, a rich landowner whose prestige and relative wealth have eroded as his attempts to diversify his sources of livelihood have not been successful. Tashi (LLin3) was one of the biggest landowners and richest households in Lingshed, contributing as much as 35 *khals* of grain in donations to the monastery.³¹ Tashi got rid of most of his land, when he and his wife could no longer cultivate it, and diversified his activities: first as a trader, a long-existing activity, and second as a contractor, a very profitable activity in most places in Ladakh. In Lingshed, however, it is not that profitable. He does not face much competition since he is the only contractor in the region but he has to borrow every time to buy the machinery and construction material required, pay his workers, and transport all the material to Lingshed before he receives the first returns on his investment. In bad years, Tashi even loses money. A reason for sluggish income growth and marginal improvement in well-being seems to be that, in Ladakh in general, the need for cash has increased, but in Lingshed the availability of income-generating activities has not followed the rising trend.

Livelihood activities other than agriculture are necessary in Lingshed, new options have arisen, but these remain limited. Table 3.9 above is an inventory of people we met as part of the case studies and their corresponding income. In all cases but one (LLin6, a *lama*), tourism-related activities – jobs as guides, horsemen, porters, or cooks – figured or had figured in their portfolio of livelihoods. Hence, most Lingshedpas depend on these highly seasonal and fluctuating activities (a point developed further in this chapter) that are also at the bottom of tourism-related activities in terms of wages.³² Next to them figure petty commercial activities – such as selling vegetables to the school or *gonpa*, weaving *snambu*, or trading butter and animals with neighbouring villages; existing activities such as *amchi*; and new activities such as running a shop (there are four shops in Lingshed), working as a contractor (one in the Singge La *Lok*), and most of all a few government jobs (at the education or sheep husbandry departments). Other activities practised in Lingshed but not presented here include: working as a medical officer or pharmacist (one per village), working as a cleaner at the

³¹ The minimum in Lingshed is 6 *khals* per household but donations and contributions are historically defined, proportional to the size of the land. They can also be voluntary. By giving more to the *gonpa*, a family or individual acquires merit (see Gutschow 2004).

³² Whereas a tourist can pay up to USD200 per day for a trek booked through an international agency, a horseman receives Rs200 a day per animal, and a cook or porter only Rs150 to 200.

dispensary, cooking at the school (two), running a parachute tea-stall during the trekking season, and working as a telephone operator for the only satellite phone available in the whole Singge La Lok.³³ Working on others' fields (paid in kind or in cash at Rs150 per day) is also an option, although the system of reciprocal labour is still prevalent. In any case, improvements in income and well-being are often due to a plurality of livelihoods in one family.

The paucity of livelihood opportunities explains the marginal improvements in people's well-being. People depend largely on agriculture and local resources, as well as on food rations and scholarships for education. No household is entirely self-sufficient and, in any case, the need for cash implies that an additional livelihood is necessary. In general, people are quite vulnerable to shocks such as disease and death in the family, resilience is low, and recovery quite slow. Any illness is not only an additional source of expenditures, but it impairs people's ability to work and therefore to earn an income. The two exceptions are Lama Sandup (LLin6) – who “does not feel very affected by worldly problems” (Lingshed, 15 November 2007), incurs little expenditure as most of it is taken care of by the monastery, is paid for his religious services, and saves for pilgrimages – and Chozang Kunzes, whose situation has already been discussed. Most households do not have any savings; although in some cases their income might allow saving, they choose to spend on religious activities and symbolic capital instead.³⁴

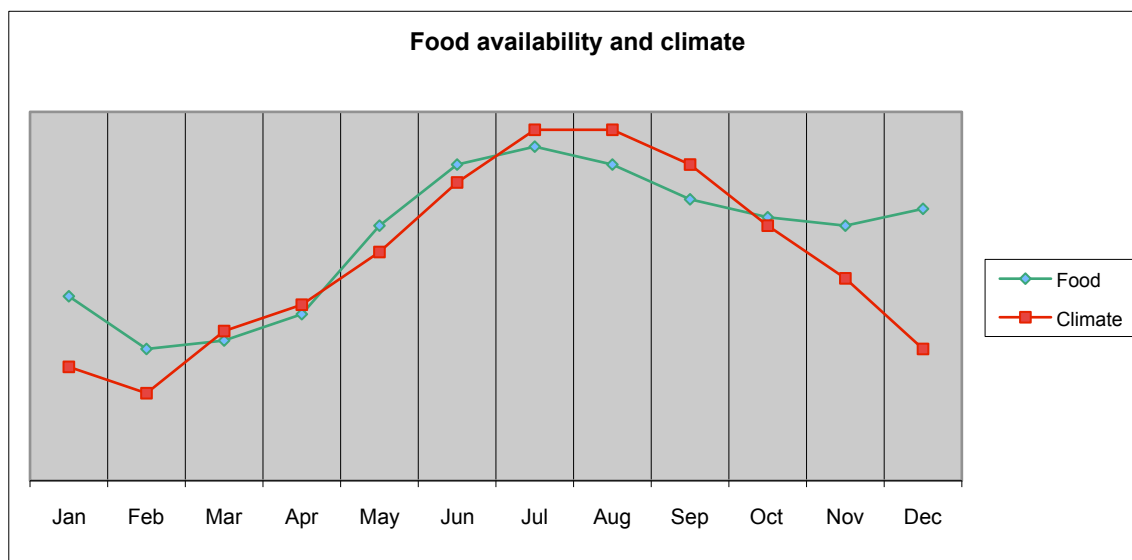
Seasonality

Another problem confronting Lingshedpas is seasonality. People's well-being is affected by climate, food, workload, expenditures, and income – parameters that fluctuate seasonally (see Figures 3.10 to 3.13). Consensus on the climate in Lingshed (and generally in Ladakh) is almost unanimous (see Figure 3.10). From late spring to

³³ The army, whose stationed personnel in Ladakh is said to equal or even exceed the local population (van Beek 2001), is a big employer in the region but curiously enough not in Lingshed where it only employs a few youths. Construction takes place in mostly summer and is only done by Nepali coolies (although a Nepali named Bal Bahadur stays in Lingshed all year round) as Ladakhis are either busy working in the fields or prefer working as guides and ponymen for tourists, which brings higher profits. Nepalis are also employed as coolies in the fields because of labour shortages.

³⁴ Some argue that there is in Ladakh an ethic of shared poverty and there exist levelling mechanisms, such as donations to the monastery and sponsoring of religious and village events (Scott 1976; Nash 1961 in Keesing and Strathern 1998; see also Pirie 2002).

October – the agricultural season – the weather is warm and clement, and praised by Lingshedpas. Arctic winters with extremely low temperatures (dropping as low as -10°C to -40°C depending on region and elevation) tend to be resented.



3.10. Food availability and climate³⁵

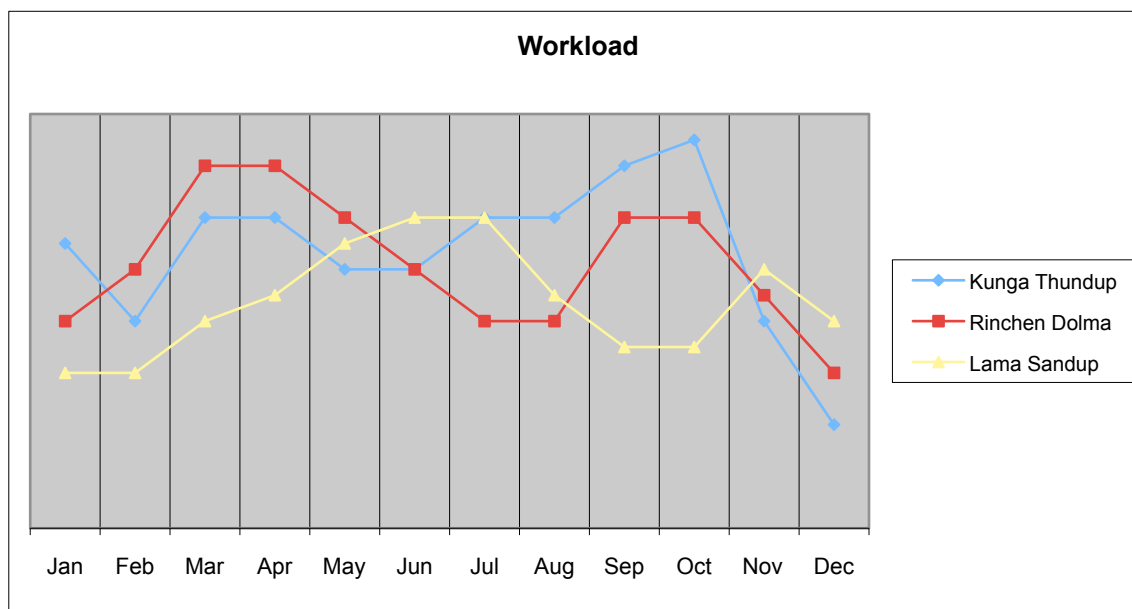
As noted by my participants, the availability and quality of food depends mostly on the climate (Figure 3.10). Fresh vegetables, particularly peas, are available most of the year, but during winter their diet is reduced to barley, wheat, and rice, along with few highly valued potatoes, turnips, onions, and dried peas, and of course butter. This improves around *Losar* with meat consumption.³⁶ Although food is always available in sufficient quantity, the scarcity of fresh vegetables in winter matters more – in terms of comfort but mostly in nutritional terms.³⁷ Malnutrition levels are not catastrophic but they do exist. This might be improved by the road (although the prices of imported vegetables in winter are prohibitively high) and more importantly by increased vegetable production, as happens in other villages. In winter, the extreme cold forces people to shelter in the winter kitchen, the hearth of the house. Houses are poorly insulated as a large opening in the roof is made to expel smoke from the stove, and fuel (wood, dung, kerosene, and

³⁵ For food availability and climate, the four calendars were aggregated into a single curve, as differences between them were minimal.

³⁶ Meat is consumed during celebrations, and culling flocks is important to reduce fodder consumption.

³⁷ Some children in Lingshed present signs of nutrient deficiency and anaemia (Dr Katpa: personal communication). The low consumption of vegetables is also due to eating habits. Other villages, such as Domkhar Gongma and Kurambik, which are situated at a similar elevation, cultivate and consume a wide variety of fruit and vegetables and it is possible to store them. One household in Lingshed used such methods and consumed green leaves the whole winter. In general, figures for vegetable consumption were five times lower in Lingshed than in Alchi.

sngalo, a yellow plant found on the slopes around Lingshed) is scarce. Proximity also increases the rate of disease transmission, while the smoky atmosphere provokes respiratory and eye diseases.



3.11. Workload

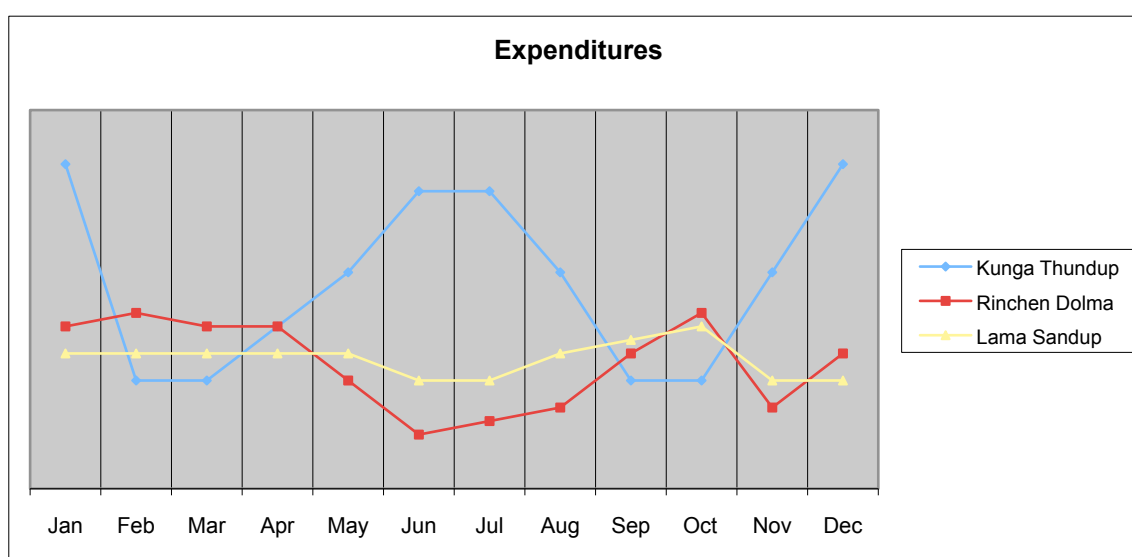
Workloads (Figure 3.11) vary seasonally but also according to sex and occupation. Since agriculture still provides for the majority of people's needs, labour requirements are generally concentrated around March/April (ploughing, spreading manure, sowing, and watering) and September/October (harvesting, threshing, winnowing, roasting barley, and grinding). This is true for laypeople but not for the monastic population, whose involvement in agricultural activities is minimal³⁸ – although nuns generally help their families and work with them in the fields (Gutschow 2004). Men who are involved in tourism as porters, horsemen, guides, and cooks – i.e., the large majority of men in Lingshed – see their workload increase twice in a year: during the trekking (summer) and Chadar (winter) seasons. The effects of workload on people's well-being are diverse and contradictory. On one hand, higher workloads are synonymous with higher incomes (see Figure 3.13)³⁹ and a larger workload is a sign of economic activity with a positive influence on incomes and livelihoods. On the other hand, periods of high

³⁸ *Lamas'* busiest periods correspond to ritual seasons – May to July and November to December – and vary inversely with the agricultural calendar. *Lamas* also work at the monastery's tree plantation, and this work is concentrated around May to July.

³⁹ For instance, harvest time, working for tourists, or performing rituals translate into an immediate income (in cash or in kind); spring work in the fields or transporting goods for a shop is an investment for later gains.

workload are assessed negatively in comparison to periods of leisure that can be spent praying, performing *pujas* (rituals), and making merit.

Expenditures (Figure 3.12) also depend on people's activities: they are higher for Kunga Thundup (LLin2), who has to buy stocks for his shop; and lower for *lamas*, whose subsistence is largely provided for by the monastery. Expenditures are also seasonal: they are higher in summer due to donations and payments for rituals to the monastery (resulting in higher incomes for *lamas*), and in December/January because of *Losar*. Those like Rinchen Dolma (LLin4), who exhaust their stocks by the end of winter, must then purchase food, firewood, and fodder from Leh or from other fellow villagers.⁴⁰ In Lingshed, going to the market takes time, and all three informants buy goods and clothes at the end of the agricultural season.

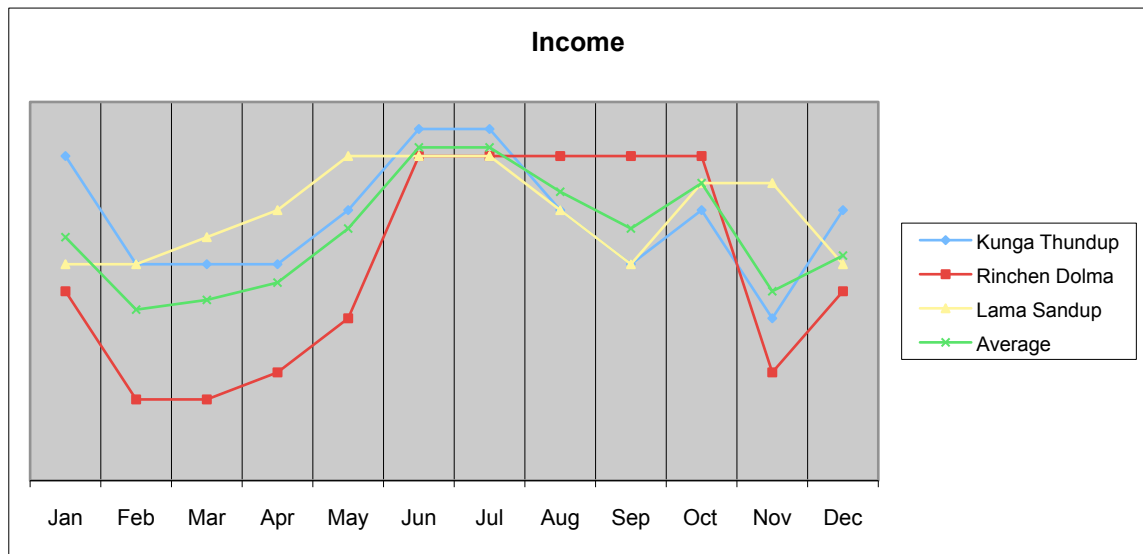


3.12. Expenditures

Incomes (Figure 3.13) – in cash or in kind – fluctuate a great deal and are concentrated around three periods: the trekking season (June to August), the harvesting season (September to October), and Chadar time, during which men work as porters and guides and families host tourists at home. Income earning touches a low in February to April, and in September and November. For *lamas*, incomes are mainly concentrated around ritual periods: *Kangyur/Stangyur* from May to July, and *Chossil/Rkansol* in

⁴⁰ Her husband is an *amchi* and might consequently have less time to work the fields and gather wood and fodder for winter.

October/November. In any case, as a result of fluctuations in climate, food availability, workloads, expenditures, and incomes, people's well-being also fluctuates seasonally.



3.13. Income

What are the elements of Lingshed's isolation?

As this chapter tends to show, the meaning of 'isolation' in Lingshed is more complex than what the term suggests. Lingshed's experience of isolation is widely ambivalent: the village is isolated at the same time as it is connected. Also, isolation has several fluctuating dimensions that contribute to shaping people's experience of it.

In Lingshed, isolation cannot really be described as physical. In spite of the physical location of the village, i.e., off-road and 'remote', and except for short periods in early and late winter, this chapter brings evidence of the high mobility of Lingshedpas. By linking the first part of the chapter to the second, it appears that practices of mobility, consumption, production patterns, and livelihoods are all linked. In Lingshed, imported items, such as goods, food, and rations, must be transported and therefore imply movement. Productive activities such as herding or gathering resources over an extensive area involve considerable journeys, as do livelihood activities linked to trekking and tourism. Transport and mobility are often based on the use of pack animals and involve long absences for men, in turn affecting choices and means of production.

Mobility is gendered but, as Chapter 7 will show, this is also the case on the road. The absence of roads does not seem to affect mobility because when people need to move, they do so, irrespective of whether or not there is a road.

Also, Lingshed is not insulated from the changes that have transformed Ladakh in the past and continue to do so: all sorts of institutional, organizational, cultural, and material transformations produced by multiple factors and influences have taken place and reshaped the village and its people. The absence of a road might cause partial resistance to change, partly slowing down its propagation, but in any case it does not isolate the village from change. People, goods, news, and ideas continue to circulate on trails, modelling Lingshed into the incredibly hybrid place it has become. It is also evident that Lingshedpas do not live in autarchy. Like the rest of Ladakh, the village has a land-based economy and Lingshedpas depend largely on local resources – fields, pastures, water, cattle, manure, and wood. Yet they are not self-sufficient either: imported food and resources (including money) are equally important to the village's economy and to the lives of Lingshedpas. Lingshed is integrated into several socioeconomic networks through which goods, people, and money transit, and from which the village derives a significant part of its resources.

So how is isolation experienced? Lingshedpas do face economic difficulties. Consumption has increased, production and livelihoods have changed but people suffer from a paucity of livelihood opportunities. Moreover, most livelihoods are based on agriculture and tourism and remain highly seasonal. Incomes have not kept up with increases in consumption and, as a result, people's well-being and resilience have tended to stagnate. These difficulties are partially linked to Lingshed's distance from administrative centres and markets, and problems of access, so that in economic terms Lingshed is isolated.

Perhaps more than economically, isolation is politically experienced, as the absence of a road is perceived as a consequence of political marginalization. Isolation is a subjective and relational concept: it depends on "how rural people (and researchers) experience, imagine and represent their relationships with state, market and wider society" and "how they feel themselves experienced, imagined and represented by 'outsiders'" (Wilson 2004: 529). As mentioned previously, the absence of a road contributes to

isolation, as for rural populations “to live off-road is to be invisible” (Porter 2002: 291). Lingshedpas tend to perceive the absence of roads as a consequence of marginalization and neglect, and this feeling is epitomized by particular events: the cancellation of the Dalai Lama’s visit in August 2007 – which I referred to in the introduction to this chapter – was one of them. It brought back to the surface the feeling of living at the margin and constant neglect by the government, and with it the issue of roads. For Lingshedpas, the reason behind the cancellation of the visit was “clearly political” (Lama Tsewang, Leh, 18 October 2007), and the same cause explained the absence of roads: “We have always backed the Hill Council,⁴¹ but the Hill Council is weak. [...] For the same reason, the road under construction to Photoksar has stopped last year: the Singge La *Lok* has always been neglected, they want us to remain backward.” Thus, backwardness and the absence of roads are perceived as politically motivated. If the absence of roads contributes to a feeling of isolation, the absence of roads is also the consequence of political isolation. The struggle for a road is also a struggle for political inclusion.⁴²

By decomposing ‘isolation’ into different dimensions, it becomes clear that the situation of Lingshed can hardly be described under what now appears as an ‘umbrella’ concept. Isolation is experienced multidimensionally. Lingshed is not physically, socially, or culturally isolated, given the mobility of its inhabitants and the numerous exchanges that take place between the village and its environment. Yet Lingshed can be said to be economically and politically isolated, although the road is both a cause and a consequence of this isolation.

⁴¹ The Ladakh Autonomous Hill Development Council (LAHDC) is the local government. It has limited executive powers and consists of 26 elected members who represent their constituency, and four nominated members who represent women and minorities. At that time, the two parties represented on the LAHDC were the Ladakh Union Territory Front (LUTF) and the Congress Party who had just left the LUTF coalition.

⁴² Moreover, because isolation in Lingshed is political, the solution to it resides in politics. As a lama in Lingshed told me, “Every family should send one person to Leh, and we should hold a protest at the Hill Council [...]. We should camp there and ask, put pressure on the government. One month, two months. Two-hundred people camping there will have an influence.” Having roads built also requires influence over political processes. As a Lingshedpa once put it during our participatory session, questioning the primacy of roads: “Schools are more important than roads: if schools develop our children will become engineers, doctors, and respected officials, they will be appointed on their seats, and the road will automatically come. [...] Without fingers, one cannot climb rocks [Ladakhi proverb: *Lakdum draga til maldan*]” (anonymous, Lingshed, 11 November 2007). I deal with this aspect in the next chapter.

Conclusion

This chapter called for a careful examination of experienced aspects of isolation in Lingshed and for a redefinition of the term in relation to off-road situations. The picture that emerges is a contrasted, complex, and ambivalent one, as isolation is multidimensional and contingently and unevenly experienced. Far from being physically isolated, self-sufficient, and culturally insulated, we see that Lingshed is connected to the rest of Ladakh and the country through all sorts of trade and networks through which people, resources, goods, money, and ideas circulate. We also saw that people in Lingshed are relatively mobile and that practices of mobility are embedded into wider sociocultural practices and are instrumental in maintaining networks and rights of way. Economically, the situation of the village can be described as one of interdependence with the world and surrounding environment, but Lingshedpas are also confronted by a lack of livelihood opportunities. This situation, which is partly due to the remote situation of the village, results in no or only incremental increases in well-being, and in low resilience to shocks, disease, or seasonal hardships. Politically, Lingshedpas also feel isolated, but isolation is contingently experienced and the absence of a road is only one of its determinants.

Considering separately the several components of experienced isolation makes it easier to comprehend the situation and problems faced by off-road villages like Lingshed, but it also casts doubts on the idea of roads as a unique solution to the problems faced by Lingshedpas. A road to Lingshed will certainly affect people's mobility but not necessarily increase it. It will affect consumption, production, and livelihoods, factors that will also change mobility needs. The road will certainly affect the economy of Lingshed but its effects are likely to be ambiguous and in any case adjustments will take time. Politically, it will also bring Lingshed closer to the capital, easing access to administrative staff and officials, and also act as a symbol of inclusion. It is difficult to predict what changes the road might bring to Lingshed at that stage: for this, one has to look at the experience of off-road villages, which is the subject of Chapter 7.

The idea of this chapter is not to deny the fact that Lingshedpas can feel isolated and that Lingshed might require a road: for all the reasons enumerated above, Lingshedpas do

want a road and there are serious arguments in favour of it, notably in terms of access to health, education, markets, and government services. But rather than taking Lingshed as ontologically isolated, I have tried to show how the way in which isolation is experienced differs from the way it is manufactured, in order to better understand the situation of off-road locations. The construction of isolation around off-road locations, the lack of definition of the concept, and its reduction to a single dimension – its physical one – leads to several misconceptions, hence, perhaps that roads, as physical infrastructure, should overcome issues linked to physical isolation. But isolation is rarely physical: it has other dimensions that are not always taken into account, and that may require other or additional interventions; moreover, the potential effects of roads can be misconceived.⁴³ In the next chapter, I will show how isolation is manufactured and Lingshed constructed as an object of knowledge – a remote, isolated, poor, and backward village – that, *in fine*, requires the construction of the road because of these characteristics.

⁴³ This in turn might explain why, as Njenga and Davis write, “past investment in transport has neither helped unlock the isolation experienced by many populations” (2003: 221).

Chapter 4. Fighting for the road

United around the road and manufacturing isolation in Lingshed

The previous chapter left us with a contradiction. Off-road locations are associated with a lack of mobility, inaccessibility, and isolation, and Lingshed is presented as “backward”, “underdeveloped”, and “virtually living in isolation” (Government of J&K 1996: 8). Yet, on closer examination, it appears that Lingshed is not isolated, self-sufficient, or culturally insulated, but incredibly connected and its people are highly mobile. A second contradiction is that, in Lingshed, people largely seem to promote this rhetoric of unconditional isolation and backwardness. Why are off-road locations depicted as unconditionally isolated? Why do Lingshedpas buy into this rhetoric? And what are the effects of this narrative?

In this chapter, I look at how people collectively fight and mobilize material and discursive resources to have a road built to their village. I argue that the justification for road construction is based largely on a manufactured notion of isolation, which significantly differs from the way it is experienced. The rhetoric of isolation has two effects: it builds the case for road construction at the same time as it generates consensus among people and unites them in favour of a single road project.

The first part of this chapter looks at how isolation is manufactured in Lingshed and what its effects are in terms of road construction. The second part looks at the tumultuous history and politics surrounding the construction of two roads to Lingshed: the Zanskar Highway and the Photoksar road.

1. The manufacture of isolation and backwardness

‘Isolation’ is a critical concept. As mentioned in the previous chapter, it designates a state of separation between persons or groups. According to this definition, Lingshed might be remote but, apart from limited periods during which none of the three seasonal routes are open, the village is not isolated. I have noted the subjective, multidimensional, and contingent nature of isolation. Isolation is also relational: it is about experiencing and being experienced, it is about imagining and being imagined (Wilson 2004). As I argue here, isolation is not a fixed and given attribute but can be fluctuating, manipulated, historically contingent, and constructed.

Officially, Lingshed is on the margin of Ladakh, itself on the margin of India. It is the last village in the Leh district before Zaskar (district of Kargil) and is remote from any administrative centre. At the same time, Lingshed is a central place in the Singge La *Lok*: it is home to one of the most important monasteries attracting pilgrims from the whole region and Zaskar; its centralized school hosts children from the whole area; and it falls in the middle of one of the most popular Ladakhi trekking circuits offered by most local and international agencies. Lingshed is also a hub for NGOs, with more than 15 of them working on different aspects ranging from solar cookers and photovoltaics to the nunnery, nutrition, *amchi* medicine, health, and education. Taking a more ‘decentralized’ point of view, Lingshed is not really isolated: far from being situated on the margin, Lingshed is a centre in its own way.¹

So why are places like Lingshed univocally depicted as ‘isolated’? In the transport literature, the concept of ‘isolation’ is often used in more relative terms. As Barwell explains: “If a rural area cannot be easily reached, if people living in the rural area cannot easily travel, if the flow of goods and services in and out of that area is physically difficult, unreliable or expensive... these are characteristics of isolation” (Njenga and Davis 2003: 221-2). Here again, ‘isolation’ emerges as a vague, highly subjective, and flexible concept. It could be used to describe a host of situations and both on-road and off-road locations. Moreover, given the characteristics of off-road

¹ Similarly, as Asad (2004) argues, depending on whose position is taken as referential, notions of centre and margins are very relative: if citizens can be imagined as margins of the state, from the point of view of citizens it is the state that is imagined as the margin.

villages like Lingshed, one might wonder whether the concept of ‘remoteness’ would not be more appropriate. Would it not be more faithful to the situation and problems faced by off-road villages? The main difference between the two terms is their effects. As I argue here, if a place is ‘isolated’, then it needs a road.

By analogy with Mehta’s work on scarcity (2005), I have mentioned the two aspects of isolation: experienced and manufactured (Chapters 1 and 3). Whereas the first is grounded in the experiences of people, the second refers to “received wisdom” and “narratives”. As Mehta says about scarcity, its manufactured aspects are constructed and generally used to legitimize controversial external interventions – for instance, in case of water scarcity, a dam – (ibid.: 239) that may also be endorsed by people or resisted. The same can be said about ‘isolation’. It can be thought of as a “central organizing concept” that “presupposes a central, unquestioned value, with respect to which the different legitimate positions may be arrayed” (Ferguson 1994: xiii). ‘Isolation’ is a powerful concept that requires interventions and is used as a rationale for the construction of roads. In the development literature, roads are built to increase “connectivity and mobility” (World Bank: 3), to “unlock the isolation experienced by many populations” (Njenga and Davis 2003: 221), or “to set villages free from the handicap of isolation and deprivation of accessibility” (Ministry of Rural Development and Planning Commission 2006: 94). The fact is that labelling a village or region as isolated or even inaccessible strongly suggests that what it needs is a road.

One might want to look closer at the construction of isolation and the relationship between power, knowledge, and the consequences of discourse. For this, let us follow part of the argument derived from Foucault but masterfully advanced by Ferguson in the case of an integrated development project in Lesotho (Ferguson 1994).² Ferguson is interested in ‘what the development apparatus does’. He argues that development institutions generate a discourse in which an object of knowledge is constructed, thus creating “a structure of knowledge around that object”. “Interventions are then

² At the global scale, the ‘invention’ of development as a central organizing concept and discourse and the creation of its corollary – underdevelopment – have been discussed and popularised by Sachs (1992), Escobar (1995), Rahnema (1992; 1997), Esteva (1992), and others. The invention of development not only organized the world into two categories, i.e., the developed and its “inverted mirror” the underdeveloped, but also created an object to be developed, with the programmes, institutions, and development experts that followed. As Moore (1999) shows, such structuring discourses and programmes are not readily imposed and accepted by people but re-appropriated and “renegotiated”, producing unplanned consequences and their very own forms.

organised on the basis of this structure of knowledge” and create their own (unintended) effects (ibid.: xiv).³ What interests us here is how the representation of a complex reality as a simplified construction is essential to building the case for intervention. For instance, Ferguson shows that the people of Lesotho must be constructed as “*aboriginal*, not yet incorporated into the modern world, so that it can be transformed by roads and infrastructure, education [and] the introduction and strengthening of the cash economy (as against the ‘traditional subsistence sector’)” (ibid.: 71). Hence, the way in which the target population is constructed is instrumental in justifying the development intervention.⁴

To return to the case of Ladakh, one cannot easily dismiss the thought that remote villages such as Lingshed might be constructed as ‘isolated’ objects. The manufacturing of Lingshed as isolated (and backward) would thus make the point for better inclusion through all sorts of interventions, including road construction. The questions then are (1) how is isolation manufactured, and (2) by whom. Regarding the second question, contrary to the case advanced by Ferguson, one could already specify that it is not the act of any external, centralized agent that leads to the manufacture of isolation; the process is much more diffuse and is the intended as well as unintended consequence of the work of many agents, including Lingshedpas themselves. Let us first deal with the first question: how isolation is constructed in Lingshed.

At this point, a parallel with how Ladakh became tribal and backward illustrates the constructed nature of identities, how identities can be instrumentalized, and how they structure society and politics. In Ladakh, development programmes implemented by the Government of India have been largely based on the popular perception of Ladakh as backward and underdeveloped, and of Ladakhis as ‘tribal’ (Aggarwal 2004). However, as Aggarwal writes, “Ladakhis had become ‘tribal’ [...] not through some fixed and traditional identity, but after lengthy petitions and political negotiations” to access

³ Ferguson further argues that the development apparatus acts as an “‘anti-politics machine’, depoliticising everything it touches [...] all the while performing [...] its own pre-eminently political operation of expanding bureaucratic state power” (ibid.). Although the second part of the argument is also relevant to the case of road construction, I will focus here on its first part.

⁴ Moreover, more than merely building the case for intervention, such discursive constructions sometimes shape and transform people’s identities and practices, as people change to conform to the idea that is made of them. For instance, Sundberg shows that discourses built by NGOs regarding how local people should relate to the environment were further appropriated by local groups that drew on that discourse to reinvent “localized identities to assert rights to space, place, and livelihood” (2003: 63).

benefits and reservations accruing to special categories of caste and tribe (ibid.: 11). It is evident that Ladakhis, with their rich culture and history, cannot readily be characterized as “tribal” (van Beek 2001). But as they have long felt discriminated against by the Government of J&K, claiming ST status and Union Territory status was perceived by the elites as a way to balance this injustice and claim special treatment.

Initially campaigning for recognition as ‘backward classes’, Ladakhi elites later turned their demands to ST and Union Territory status (ibid.: 540). The campaign soon took on a communal orientation, sometimes marked by violent outbursts between Buddhist and Muslim communities. Against what it perceived as the domination of Muslims from Srinagar, the LBA – one of the main political forces in Ladakh that wants to represent Ladakhi Buddhists’ interests – started a boycott against Kashmiri-run businesses, which soon transformed into a boycott against the Sunni community of Ladakh and finally against the Shia community when the latter refused to back the LBA’s demands. The “Social Boycott” lasted three years, from 1989 to 1992, and was fiercely enforced by the LBA, preventing Buddhists from interacting with Muslims and pitting them against each other. It gave rise to numerous demonstrations that degenerated into riots and led to the death of four demonstrators in 1989; an emergency was declared in the state in 1990.

The strategy of identity politics in Ladakh proved successful. Following demonstrations in 1989, eight groups totalling 89% of Ladakh’s population were officially recognised as STs.⁵ In 1995, Leh district was granted Hill Council status, a solution crafted on those already implemented in other ‘tribal areas’ such as Assam, Mizoram, and Jharkhand.⁶ The same communal strategy remains in use for Union Territory status. The LAHDC, adopted as a compromise for Union Territory status, was justified on the basis of “Ladakh’s unique identity”, although this identity “remains largely unspecified in the acts and speeches of the officials” (ibid.: 543). The uniqueness of Ladakhi identity was largely constructed and conceals the fact that the people of Ladakh are not

⁵ The eight groups – Balti, Bada, Bot, Drokpa, Changpa, Gara, Mon, and Purigpa – draw loosely on non-exclusive and often overlapping racial, regional, and caste criteria that artificially fix identities and negate their fluidity. Those excluded were largely Argons or Sunni Muslims, descendants of migrants and merchants from Yarkand and Kashmir who had settled and married in Ladakh and had lived there for generations.

⁶ Kargil initially refused, partly due to its stronger links with and dependence on Srinagar; it only accepted the Hill Development Council in 2003.

homogeneous but divided along regional, linguistic, class, caste, and sectarian lines that often cross religious communities' boundaries.⁷

Historically, Ladakh had already become 'marginal' and 'isolated' with its inclusion as a border district of India and the closing of its borders with Pakistan in 1947 and Tibet in 1949. From being the centre of trans-caravan trade, an important tributary of the Silk Road, and the "Crossroads of High Asia" as it once was (Rizvi 1996, 1999, 2005), Ladakh slipped into the margins and became remote, isolated, and backward (LAHDC Leh 2005). Constructing Ladakh as 'tribal' went one step further. Noting the structuring effects of classifications over identities, Aggarwal writes that, "by conferring tribal status, the Indian state simultaneously rendered border subjects 'backward' and justified its territorial hold on them" (2004: 41). It was also self-structuring as, "for Ladakhis, tribalization was a radical step in constructing their political and economic identity" (ibid.). Tribal identity was both superimposed and claimed by Ladakhis. This illustrates at the scale of Ladakh how a people can be constructed as an object of knowledge in order to build the case for a certain type of intervention. In the end, it also structures Ladakhis' self-perceptions.

Interestingly, notions of 'isolation' and 'backwardness' are generally tightly linked: Ladakh is depicted as both 'isolated' and 'backward'. Porter (2002) notes that, in sub-Saharan Africa, people living in off-road locations are often construed as "bush people". Similarly, in Ladakh, the notion of backwardness is often attached to people living in remote, unconnected areas. The further one moves away from Leh and the road, the more people become 'backward'. Hence, Lingshed was often referred to me or in the media as "the most backward area in Ladakh" while "backwardness" is also claimed by villagers of Lingshed (*Daily Excelsior* 17 January 2007).⁸ Mehta observes how the notion of scarcity in a village in Kutch is accepted by a process involving "the fusion of inward- and outward-looking perspectives" (2005: 184). Hence, "comparison [with the outside] has led to the creation of narratives of the area's misery and backwardness"

⁷ Against any sort of primordialism, van Beek argues that identities in Ladakh were created and articulated mainly around the notion of being Ladakhi and Buddhist. This "identity fetishism" tends to divert attention and solutions from the real problems, which in Ladakh are mostly due to "the dislocating effects of commodification and the undermining of livelihoods and power" (1996: 30-1). As a result, the fundamental issues and contradictions remain unresolved.

⁸ As noted in the previous chapter, in a letter to the chief minister of J&K, the councillor Sonam Dorje writes of his villages as "remote and backward" (Priority Demand for DSPT and Telephone, 17 January 2008).

while “outsiders also reinforce the narrative that Kutch is a very backward area that needs help from outside.” Similarly, different processes seem at work in the construction of isolation and backwardness in Lingshed. One can identify three: (1) the imposition of a label by outsiders, (2) auto-categorization in relation to the outside world, and (3) the conscious instrumentalization and politicization of isolation.

In Lingshed, the construction of isolation seems to result partially from the imposition of a label by outsiders: visitors, NGOs, and government officials. Few government officials ever visit Lingshed and the Singge La *Lok* and, if they do, it is often by helicopter. Yet Lingshed is constructed as “backward” and isolated in the official discourse. Journalists depict the region as “one of the most isolated areas in the world” (Suri 25 August 2002). Tourists to Ladakh also tend to think that its people are backward. Norberg-Hodge explains the ethnocentric process through which foreign tourists tend to “see Ladakhi culture from the outside and [...] view it out of the experience of their own culture and economy” (2000: 95). They do not necessarily understand the different role that money plays in their own society and in Ladakh; they tend to think of people as “poor” and they implicitly or explicitly show it. The same phenomenon occurs in Lingshed, perhaps augmented by the fact that many people go there precisely because they see the region as so ‘isolated’ and remote.⁹ Similarly, many NGOs and volunteers come to Lingshed carrying in their projects the same vision of poverty, isolation, and backwardness. This is the case for instance when, armed with money and good intentions, they declare they want to “free this region from its isolation caused by the Himalayan climate” (Tibetan Development Fund).

This view is also maintained by people native to the Singge La *Lok* but whose education, life outside the region, and status as government-employed teachers would partially qualify them as ‘outsiders’. Because of their good intentions, they tend to portray the region as isolated and backward. For instance, in the newsletter of the Youth Association of Trans Singgela Area (Angchuk 2006), a journalist presented a film made by the Singgela Vision Group that claimed to be “the voice of the rural people”, “otherwise [...] innocent and voiceless”. The same view prevailed in the discourse

⁹ I must admit I first selected Lingshed for my study partly because it was the most ‘remote’ village on the map.

prepared by a teacher for the Dalai Lama's visit to Lingshed in August 2007 (anonymous):

[...] Your Holiness, it is an immense pleasure to receive you here and our dream has come true which we have been seeing of the last many years. Although, ours is a remote and inaccessible area of Ladakh, having lagged behind in every modern development [*sic*].

During this event – and for a full week of prior teaching and celebrations – the traditional Ladakhi costume was imposed (see Illustration 4.1). Seeing a whole village in their most beautiful traditional attire was a formidable sight. It was certainly a mark of respect for estimable guests such as Khensur Jhado Tulku Rinpoche and His Holiness the fourteenth Dalai Lama, but such practices also participate in the construction of “traditions” in Lingshed and perpetuate its image as “untouched by modernity”: traditional for some, backward for others.

At the same time, the construction of isolation in Lingshed is also due to the more psychological process of auto-categorization in relation to the outside world. At a time when two to three weeks were necessary to cover the distance separating Leh from Srinagar or Manali, it is unlikely that Lingshedpas felt particularly isolated. Now that Leh is only a day's drive from Srinagar or even a 1.5-hour-flight from Delhi, Lingshedpas are more likely to feel isolated in comparison. When Lingshedpas are in regular contact with foreigners who travel from the other side of the world to holiday in Ladakh and live in a society where hyper-mobility has become the norm, isolation is even more likely to be felt. This points to the very relative nature of the concept of isolation. Symbols of mobility have also become symbols of progress and in 2007/08 the symbol used by the LUTF on every poster and ballot paper was that of a plane. As Sachs puts it: “Against the backdrop of a slow and sedentary society [...] the Utopia of acceleration could appear as the signal of a bright new world. Where mobility is tiresome and exhausting, mechanized transport appears as a promise to paradise” (1999: 201). But in the case of Lingshed, society is not “sedentary”.

Some people in Lingshed have never been to Leh or seen a road or an engine-powered vehicle, except perhaps on one of the televisions that have entered the life of the village

over the last decade. Many people see the road very occasionally, like Chozang Kunzes (whose story was reviewed in the previous chapter) who went to Leh for the first time in 1987 to see the Dalai Lama. She remembers being very afraid as it was the first time she had travelled in a truck. Hence, it is likely that the road might embody the future. In this context, villagers are likely to accept the idea of a road as a symbol of modernity and its absence as a sign of isolation and backwardness. One might also note the change in referential induced by the highest intrusion of the state in village life. From the point of view of Lingshedpas, places like Jammu, Srinagar,¹⁰ or Leh might have been marginal when their role was marginal. As the state's involvement in the lives of Ladakhis has increased, regional capitals have become central and Lingshed has slipped into the margins. These examples point to the subjectivity of the notion of isolation and to isolation as a consequence of sociohistorical processes rather than a physically given reality.

Whereas these two processes of the construction of isolation are largely diffuse and unintentional, the third is intentional and coordinated. It corresponds to a purposive instrumentalization of the notions of isolation and backwardness. Externally, agencies involved in road construction depict Lingshed as isolated to justify road construction. For instance, in a road construction proposal, the Overseas Economic Cooperation Fund (OECF) fact-finding mission describes the region of Lingshed as “possibly the most backward and underdeveloped in the district”, where people are “virtually living in isolation” in order to build the case for the Chadar road (Government of J&K 1996: 8). Internally, such isolation has been mainly manufactured and orchestrated by influential and venerated people in the first place. It has also spread in a more diffuse way among the population, creating “narratives of [...] misery and backwardness” (Mehta 2005: 184). Such strategies have been successful in attracting funds, programmes, and sponsors at the same time as they have reinforced Lingshedpas' self-image. Undeniably, these programmes have benefited them but what interests us here is how isolation was consciously manufactured in the first place.

¹⁰ Jammu and Srinagar are, respectively, the winter and summer capitals of J&K.



4.1. Women wearing the *perak* in Lingshed

The first time I went to Lingshed in 2004, visitors were welcomed by a banner at the entrance to the village presenting it as “remote and underprivileged” and requesting their help. In November 2007, a day after my arrival, a neighbour came to meet me at my friend’s place: he could not speak English but handed me an old, stained handwritten letter that said in broken English that they were a poor and backward family and crucially needed clothes and money. He said he showed it to “nice tourists like [me]” (anonymous, Lingshed, 8 November 2007). However, as my stay progressed, I must say that I did not encounter any such further attempts and Lingshedpas were more inclined to display wealth and generosity than poverty, which I took as a positive sign of my integration. Yet ostensible demonstrations of isolation, backwardness, and

poverty show how these notions are intentionally constructed and instrumentalized to meet specific ends.

Similarly, one could talk about the institutionalization of backwardness and isolation when one reads that the councillor of the Trans-Singge La area “has appealed the Chief Minister to ameliorate the sufferings of most backward Lingshed constituency [*sic*]” (*Daily Excelsior* 17 January 2007). This phenomenon has been observed by other researchers who note that “Lingshed therefore presents the somewhat surprising image of one of ‘the most remote villages in Ladakh’, merging a crowd of more than 15 PVOs and NGOs and their accompanying projects” (Besch and Guérin 2009: 164). As they further observe (*ibid.*):

Lingshed has much better medical and educational facilities than the surrounding villages and the people have turned their attention towards the incoming foreign help. As many of the local speakers would remark during the ‘General Seminar’, to be ‘underdeveloped’ and to live in a ‘remote area’ has generated problems, which are said to mainly need and depend upon foreign financial support for their resolution.

The following text, written by a person who managed to attract considerable funds to the village, exemplifies even more the conscious manufacture and instrumentalization of isolation and backwardness:¹¹

Lingshed is one of the most remote areas of the Ladakh region of Northern India. [...] Unfortunately, the Lingshed area is also one of the poorest and most isolated areas in India. Almost all the people are poor and their standard of living is very low. There is no electricity or communications or modern health and sanitation services.

The situation is made worse by the fact that there are no roads for motor vehicles leading to the Lingshed area. [...] Moreover, the trip to Lingshed from the closest village of Wanla takes four or five days under the best conditions, and the winter snows close the roads and passes entirely for six months of every year. [...] In

¹¹ Geshe Ngagwang Jangchup, ‘Lingshed Nunnery Project’, <http://www.gruntose.com/asynchronous_school/lingshed/ling.html>, accessed 18 March 2009

addition the soil is weak and the growing season is very short, the local farmers work hard for limited crop yields and the people suffer greatly from starvation and malnutrition. As a result of their poverty and isolation, the people of Lingshed desperately need nutritious food, agriculture to improve crop production, forestry science to supply fuel for cooking and heating, not to mention the most basic necessities of modern life, such as electricity, medical supplies, and so forth. [...] In the entire Lingshed area there is no hospital, clinic, or resident doctor or nurse versed in western medicine. There are doctors of Tibetan medicine in the area, and the people depend heavily on their traditional diagnoses and herbal medicines. But due to the prevailing poverty, the people for the most part cannot afford the services of these doctors [...]. Many people, young and old, die in Lingshed due to these deplorable conditions.

It goes without saying that many of the elements in the above narrative would be rejected by Lingshedpas themselves. This caricatured, over-exaggerated, and almost naive depiction of Lingshed as “one of the poorest and most isolated areas in India” is as grim as one could possibly imagine. It is a powerful example of the “narrative of misery”, whose purpose could not be more explicit and is perhaps the finest example of how the notion of isolation is consciously manufactured and utilized. It exemplifies how a complex reality can be simplified and constructed into an object of knowledge – a poor, remote, backward, and isolated Lingshed – to build the case for intervention.

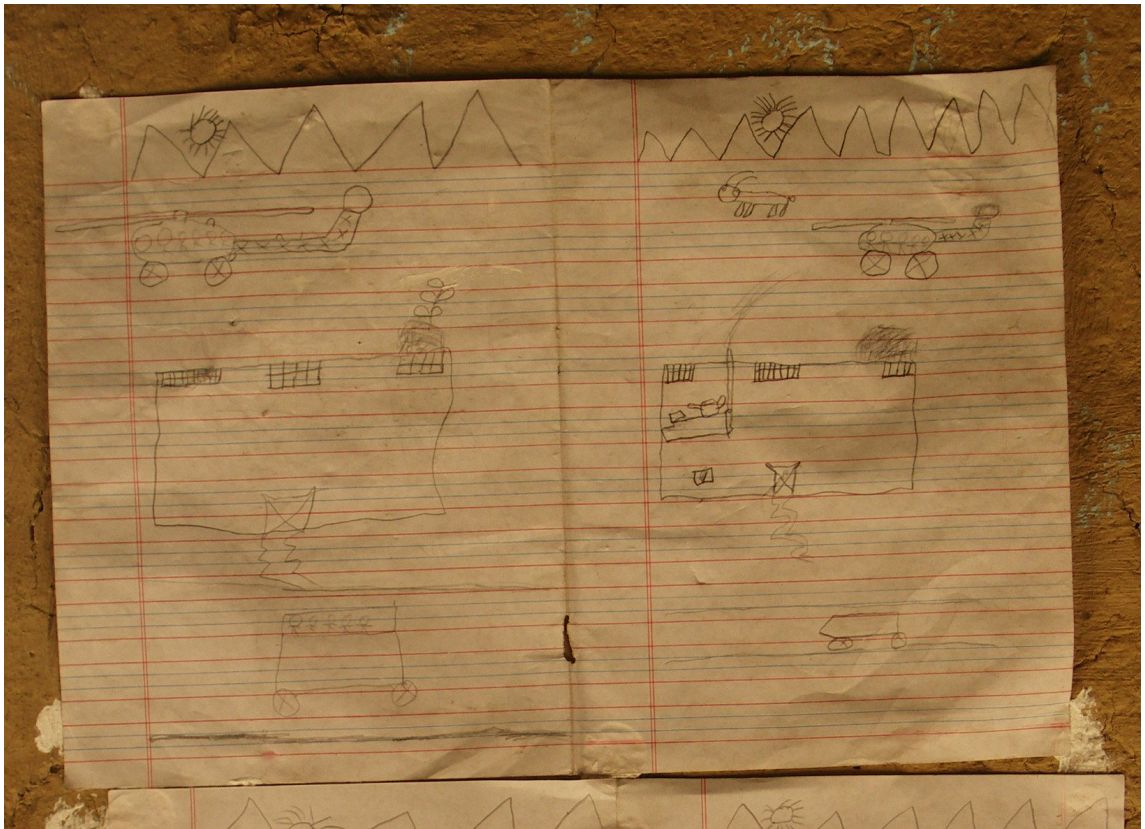
In fact, the purposive manufacture of isolation in Lingshed only echoes the manufacture of identity and backwardness at the scale of Ladakh. As van Beek observes: “Seeking support on the outside was in part based on a representation, officially sanctioned, of Ladakh as backward and poor, yet also a particularly unique, rich, ancient culture; a depiction of the Kashmir Government as inherently communal and anti-Ladakhi, and Ladakhis as innocent victims” (1996: 33). The problem and its solutions were relatively simple to grasp. A simplified construction of Ladakhis as a unified people with a unique culture was also necessary to transcend divisions, manufacture consensus, and create political momentum for ST status and political autonomy. The presentation of “internal unity,” writes van Beek, “required the suppression or at least ignoring of differences of class, religion, religious affiliation, gender, etc.” (ibid.: 33), and this was done through the construction of a single homogeneous identity. Similarly, the manufacture of

isolation and backwardness as affecting Lingshedpas in their totality – and of a road as the solution – also serves to manufacture consensus.

In Lingshed, isolation is experienced (as seen in Chapter 3) but is also manufactured through the three processes identified above, disguising the way in which Lingshedpas deal with isolation, mobility, and connectedness on a daily basis. This construction of isolation builds the case for interventions and among them for the construction of a road to Lingshed. In this context, the road acts as a symbol of modernity and a cure for all evils faced by Lingshedpas. Just like a dam and the promise of irrigation in the “water-starved” region of Kutch, a road and the promise of mobility in an isolated village of Ladakh also “remains an icon of prosperity, progress and ‘development’” (Mehta 2005: 273). Roads symbolize “the future” and for Lingshedpas they are the “top priority”. As Tashi Angdus puts it (Lingshed, 11 November 2007): “The road is a very first priority; without roads, we cannot have development.” The construction of isolation participates in the creation of a culture of suffering and builds the case for roads. It also seems to manufacture a common reading of the solution to Lingshed’s problem of isolation and, as Lingshedpas say: “We have to remain united for roads.” That “all the Singge La *Lok* people should stand united to get the road” (anonymous, Lingshed, 11 November 2007) arose several times in our conversations. The manufacture of isolation certainly builds a consensus around the need for a road.

There were few people to challenge the need for a road to Lingshed or to advance the view that the road could have harmful consequences for the village. For instance, it was said that perhaps “tourists will not come when there is a road” or that one did not know what the road’s consequences might be: “We can’t say because there is no road.” An informant also cynically cast doubts regarding the near-completion of the road: “I don’t expect I will see the road” (Chozang Kunzes, Lingshed, 12 November 2007). Finally, as we saw in the previous chapter, participants also questioned the priority of roads on the grounds that education was more important than a road since a road without education is useless (‘Without fingers, one cannot climb rocks’). Yet, overall, and despite the diversity of problems faced by Lingshedpas, when asked what their priority was, “the road” was a nearly unanimous answer. The manufacture of isolation also seems powerfully able to manufacture consensus. This is all the more necessary given that, as the next section shows, the greatest threat to road construction is division. It is even

more important since, as I argue in Chapter 5, road construction is often a very divisive process.



4.2. Tsering Stobdan's drawing on the wall of his house showing Lingshed, his house, a helicopter, and the road in the foreground

2. Mobilizing for the road

How do socio-political processes affect road construction and the transformation of the material landscape? "Road projects can garner state legitimacy" (deGrassi 2005: 55). If we think of the piece of dirt track I described in the introductory chapter, what could be its *raison d'être*? Its usefulness on a daily basis is non-existent and its aberrant position does not escape the notice of Lingshedpas. In fact, establishing legitimacy might well be its only role. In Lingshed, I questioned inhabitants on this road portion (see Illustration 4.3; focus group, 12 November 2007):

A villager - It is a link road to [the] Chadar, but the engineer did not have the instruments to measure from where it should connect to the main road. [...] They

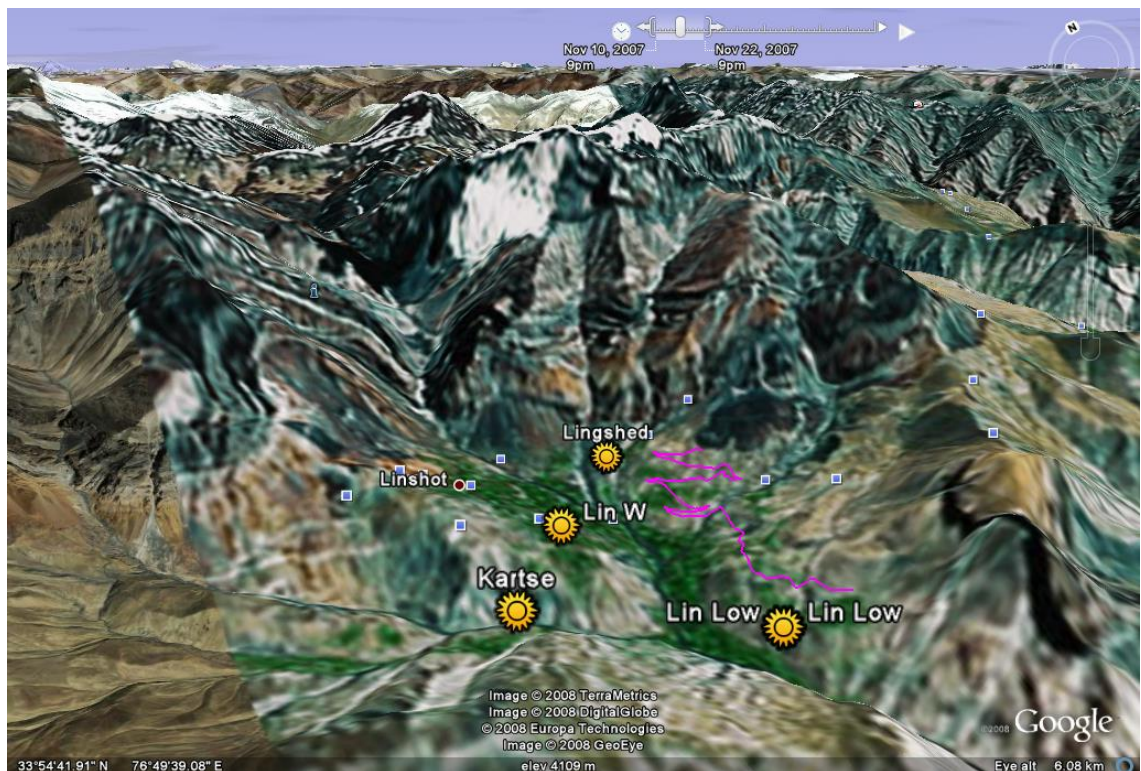
have just built this, last summer, without connecting it. After that, they will do the survey.

- But this piece of road is connected to nowhere, isn't that strange?

[Laugh]

Another villager - We also find it very strange.

Tillingpa Ajhang - The engineers told us that it is difficult to build the road in the gorge for the time being. We feel like the government and engineers are giving us this like they would give candy to a child.



4.3. The road in Lingshed

Roads are both a response to and a means for political pressure (deGrassi 2005), so that road construction is often at the centre of the eminently political game – played between the state and its representatives on one side, and villages and their representatives on the other – in which people's hearts and minds have to be won (Skeldon 1985).¹² People have demands and the government answers these by building roads, except that in this

¹² The tunnel under the Rothang La on the Manali-Leh Highway is another illustration of how roads can garner legitimacy as they tend to be highly symbolic works to which politicians want to attach their name. The Rothang tunnel was first proposed by Prime Minister Rajiv Gandhi in the early 1990s; Prime Minister Atal Bihari Vajpayee laid the foundation stone in 2002; and Sonia Gandhi laid it once again in June 2010, when work on the tunnel was effectively started (*Times of India* 6 June 2010).

case the useless piece of dirt track was not what they had asked for. This is perfectly expressed by Tillingpa's comparison of "candy to a child". This political game is also the first way in which people influence road projects.

In general, roads in Ladakh are not "given" to people. People have to mobilize, produce tremendous effort, and ask for them. As a man in Lingshed once told me (anonymous, 11 November 2007):

- ... Now, they are talking about building a road there. [...] We can hope [...] we have to do every effort for that, or we'll lag behind. Our parents faced many difficulties, we are facing the same and if something is not done, our children will also suffer. [...] The public is being misled by politicians, but we have to remain united for roads.
- What is the first thing you should ask from your government, the most needed thing for the village?
- Road. Top priority: road (*jeep lam*). No road, no development.

The previous extract from a conversation with Lingshedpas suggests that there is nothing automatic about road construction: road construction might be directed partly from above but having a road built requires "every effort"; it requires determination and, for that, people "have to remain united". If isolation and the absence of roads are political, road construction is also a consequence of politics: it requires mobilizing people's resources and means in favour of road construction, and the manufacture of isolation is one of them.

At a meeting in October 2007 in Domkhar and Takmachik,¹³ I witnessed such an episode as local politicians on an official visit to the Lower Sham area gathered in a community hall to meet their constituents. The delegation consisted of five people: the member of parliament (MP) representing Ladakh in the national parliament, the CEC, the local councillor, another campaigning politician, and interestingly the chief executive engineer (EXEN) of the PWD – an engineer from Jammu. The community hall was packed with 300-400 villagers and each of the four politicians addressed the crowd, one after the other. People made requests – many of which concerned new roads

¹³ These two villages are situated, respectively, on the right and left side of the Indus, 16 km downstream from Khaltse.

– to which the four politicians responded with promises. The chief EXEN did not speak or intervene in any of the discussions, but how could he? He spoke Urdu while all the speeches and discussions were in Ladakhi. He sat quietly next to the other four: just like a symbol of promises of future roads, he was there to take action on these promises and his non-objection might have appeared as though the promises had been tacitly agreed to.



4.4. Roads and state politics¹⁴

When I met the chief EXEN again four months later (Khaltse, 8 January 2008), the process could not have been expressed in clearer terms. We talked about the meeting and I asked him why so many roads were being built in the district at the same time. His answer was: “Every MLA, MP, councillor wants to please his constituency. They promise roads to please people. [...] Every house, everybody wants the road to his/her doorstep.” An engineer who had recently retired from the PWD (Leh, 22 July 2007) had also told me how road projects were always sanctioned at the time of councillor elections, fitting well within the electoral calendar. As Illustration 4.4 above shows in a humorous way, for the insurrection-torn valley of Kashmir, the question of roads is

¹⁴ Source: Greater Kashmir 12 March 2008

central to local politics as promises of roads garner votes.¹⁵ This in turn contributes to the development of the roadscape: to its shape as well as the speed at which it advances (see Chapter 2). Because councillors want to “please their constituency” and promise many roads, as the chief EXEN confided, roads are built in every village, “funds are distributed by the piece-meal”, and efforts are diluted. This explained why “more than a hundred” roads were under construction in the Khaltse block and “innumerable” roads in the Leh block. As a result, efforts cannot be focussed on priority projects and progress on each road is very slow. Yet, with innumerable roads under construction, the purpose of creating legitimacy through road construction is successfully fulfilled.¹⁶



4.5. A signboard in a Muslim area of old Leh (January 2008)

¹⁵ Note that, in this political game, the size of constituencies is crucially important: large villages represent more votes than smaller ones. Just as eligibility standards of state road development schemes (such as PMGSY) privilege larger clusters of population over smaller ones, so do politics.

¹⁶ This process is fully encouraged by the system since “priorities of elected representatives, including MPs and MLAs, are expected to be duly taken into account and given full consideration” (Ministry of Rural Development 2004). Local representatives inform villagers of road construction plans and intervene in the finalization of alignment (Faith/CES 2008). Finally, people are reminded of the paternity and involvement of organs of the state in road development through signboards (see Illustration 4.5). The conspicuous involvement of local representatives at every stage of the process grants the opportunity to establish their legitimacy.

People ask for roads but they do not accept just any road, and roads often divide people. People are not simply recipients of road schemes: they actively decide which roads are good for them and which roads should be opposed. For instance, in the Markha Valley, situated upstream of Chilling and on the right bank of the Zaskar River, the construction of the road that had stopped for some years restarted in 2008 as a PMGSY-funded project; but because trekking on this immensely popular circuit is the area's main source of income, the construction of the road divides the valley into two camps: the pro- and the anti-road.¹⁷ Another illustration is the proposed construction of a direct road on the plain of Zaskar from Zamgok on the bank of the river to Yulsum.¹⁸ Presently the road goes through the village of Karsha but the proposed road would bypass the village: Karshapas feel that, if the road were built, Karsha would become neglected. As they own the land on which the road is supposed to be built, they are blocking its construction and use every available means to oppose it.

In Ladakh, road construction requires constant monitoring and intervention on behalf of the population. The case of road construction in Lingshed is an interesting illustration of this. At the moment, Lingshed is still "isolated", being a three-day walk from any road. Two roads that will link Lingshed are under construction: the Chadar road along the gorges of the Zaskar and the Photoksar road across the passes. Both roads have long and complicated stories that illustrate road politics. The Chadar road – which will connect Nimmu to Padum and Darcha and provide all-year-round access to the villages of Lingshed, Nierak, Yulchung, and Skiumpata – has always been a very political project. It is associated with demands for autonomy for Zaskar (Gutschow 2004: 33) and some hoped (or feared) that the road would allow Zaskar's administration to be shifted from Kargil to Leh (Mankelaw 2001).

Controversies surrounding the construction of the Chadar road must be understood in the context of Ladakh's divided administrative structure and the communal issues that plague its politics. Administratively, Ladakh is part of the state of J&K, where key political and administrative roles tend to be held by members of the Muslim (Sunni)

¹⁷ This is similar to the road up the Kali Gandaki to Muktinath in Nepal, which is to be completed up to Chame and Manang by 2012. The 15-20% of local people who make their money from tourism firmly oppose the road while those who are involved in agriculture or work overseas desperately want it (Todras-Whitehill, 21 March 2010).

¹⁸ "Three villages" is probably a contraction for Rinam, Pishu, and Pidmo, the three main villages on the left bank of the Zaskar.

population, which accounts for a little more than half the state's population.¹⁹ The two districts of Kargil and Leh were carved out of the single district of Ladakh in 1979: the division was made for administrative reasons but several sources in Ladakh attribute it to communalism as Kargil is mainly Muslim while Leh is mainly Buddhist (Kaplanian 1981).²⁰ Zaskar, administratively a subdivision of Kargil district, has a population of 12,000, of whom 95% are Buddhists and the remainder, mainly located in Padum, are Sunni Muslims (Gutschow 2004: 30).

This complex situation of multiple minority enclaves integrated into majority wholes helped create conditions in which each religious minority could blame the dominant one for the relative neglect and marginalization experienced by people in their respective sub-district, district, or state. Hence, despite religion being just one element of people's identities and discrimination being equally felt by both Muslims and Buddhists in Ladakh and Zaskar, political leaders saw in religion a way to mobilize masses. As a result, politics and society became heavily divided along communal lines: Buddhists against Muslims, Shias against Sunnis and, at the state and national levels, Muslims against Hindus. The fact that communalism came to dominate politics in Ladakh and Zaskar despite centuries of peaceful cohabitation²¹ was not inevitable and "hardly reflects a primordial split between Buddhists and Muslims" (Gutschow 2004: 32). In fact, the boycott imposed by the LBA was highly resisted by the population. Communalism-based strategies were guided by two factors (van Beek 1996, 2001): first, the belief that national and state politics were communalist and the early experience of having been cast by authorities as two homogenous religious communities; and second, the presence of deep divisions within society (according to class, caste, region, language, sect, and faith, which often transcended religious lines) that religion offered to cement. Religion would suppress divisions, allow the mobilizing of people, and project an impression of unity. In the end, communal struggles and the fact that they were successful have only reinforced communal divisions. Like the rest of

¹⁹ The Kashmir Valley is 99% Muslim and represents more than half the entire state's population, while Jammu is 66% Hindu.

²⁰ The Leh and Kargil districts are similarly populated (respectively, 117,000 and 115,000 inhabitants) and religiously heterogeneous. Leh district is Buddhist-dominated (Buddhists account for about 80% of the population, the remainder being mostly Sunni and Shia Muslims) while Kargil district is Muslim-dominated (Muslim Shias form about three-quarters of the population, the remainder being mainly Buddhists).

²¹ Interfaith relationships were characterized by a high level of tolerance: for instance, intermarriages were frequent, so that many households in Ladakh and Zaskar had both Muslim and Buddhist members.

Ladakh, Zaskar also had its fair share of agitation and violence, skilfully utilized by leaders to further their demand for autonomy. It is in this context that the Chadar road inscribes itself.

In the village of Chilling,²² *Meme* Skarma remembers that the road to Zaskar had been sanctioned by the state government about 30 years ago (in 1971 or 1979, according to the information I could get from engineers in Leh) but was later cancelled due to Muslim-Buddhist rivalries (Chilling, 15 September 2006). Zaskar is administered by the government in Kargil but if a road to Zaskar were constructed from Leh, it was thought that Zaskar might then come under Leh's jurisdiction. At the same time, a road was being constructed from Kargil to Padum, the capital of Zaskar.²³ The construction of two concurrent roads to Padum was seen as a struggle for influence between Leh and Kargil, and a confrontation between Buddhists and Muslims for control of Zaskar. Therefore, an MLA from Srinagar, whose name *Meme* Skarma had forgotten, cancelled the Chadar road project in order to preserve Kargil's control over Zaskar and its influence within Ladakh. People in Chilling had to mobilize for the construction of the road to restart. The road reached Chilling at the end of the 1980s and since then has slowly progressed towards Zaskar.²⁴

Could the extension of the road network lead to a restructuring of the administrative map of Ladakh?²⁵ It might have done so in 1979 when Ladakh was divided into two districts: as the road from Kargil to Padum was then near completion, it might have contributed to the decision to bring Zaskar under the jurisdictional control of Kargil rather than Leh. However, as some people observed, it was very unlikely that the district borders would change again were the road completed: it would mean redesigning the administrative map according to communalist lines, which would be contrary to the state's ideal of secularism and threaten its unity, given the secessionist issue in Kashmir.

²² Chilling is situated on the Zaskar River, 29 km upstream and south of the Indus. It counts six families, totalling 35 inhabitants. The village is renowned for its craftwork, as all men are *sergar* (goldsmiths/coppersmiths). It is also one of the construction sites of the Zaskar road.

²³ The Kargil-Padum road was completed in 1980 and now provides access to Zaskar for four months a year.

²⁴ According to *Meme* Skarma, villagers would have written personally to Rajiv Gandhi, who later re-sanctioned the project.

²⁵ After all, the question is very legitimate as administrative borders are often linked to the available transport technology and infrastructure at a certain time. For instance, departments in France were drawn in such a way that the chief town could be reached from any part of the territory in less than a day on horseback.

However, in Zaskar, people were also divided between seeing their relative autonomy broken and being brought closer to Leh or Kargil. Zaskar is 95% Buddhist but historically linked to the Suru Valley and Kishtwar and governed by Kargil. In Zaskar, both Buddhists and Muslims claim that they have a distinct identity – Zanskari – that transcends religious particularities. In this ambiguous context, the road has a highly symbolic value.

Many people in Zaskar would have preferred a road to Leh rather than one to Kargil, and are looking forward to the completion of the Chadar road. Distrust has long dominated relationships between Padum and Kargil, and as a PWD engineer admitted: “Zanskaris wanted the road to Zangla to be built by BRO because they had no faith in Kargili contractors and engineers” (anonymous, Padum, 18 August 2007). Even the Sunni Muslim population feels it has very little in common with the Shias of Kargil. As a Muslim contractor in Padum told me (17 August 2007):

People in Kargil are not good to us. Their government does not spend any money here [...]. Everything is missing. Zaskar will never be a priority for Kargil. There is nothing in hospitals, no medicine... Electricity never works: we had one month of electricity this year. We have no transport, no communications. The phone barely works. Really, they don't care about Zaskar.

As the Chadar road is under construction, some fear that the state government will again oppose it: “Srinagar doesn't want Zaskar to be connected to Leh, because of political influence, cultural influence, and so on. They prefer Zaskar to be isolated, and attached to Kargil” (anonymous, Padum, 18 August 2007). Moreover, if Zanskaris in general want to see the road completed, the demands for the Chadar road are spearheaded by communalist Buddhists, who associate it with demands for autonomy from Kargil and for a separate voting constituency in the state assembly (Gutschow 2004: 33).

At the same time, opposition to and fear concerning Leh and the road also exists among the Zanskaris, regardless of religion. Zanskaris have always considered themselves “independent from Central Ladakh” (Crowden 1995: 278). As one participant from Padum put it: “We don't want to be with Leh. They are advanced, they think we are backward. We have our own identity” (anonymous, 18 August 2007). Others told me

that the Zaskar axis would increase competition, that Zaskaris would lose their peace of mind, and that their culture already under siege would further decline. As this discussion shows, the road has political and symbolic dimensions that lead people and the local government to either support or resist it. The road is interpreted within struggles based on communal lines, fuelled by people's desire for inclusion or, on the contrary, rejected for fear of losing autonomy.

Until 2001, the Chadar road was being built by the PWD, officially to connect remote villages to Leh and Padum. As exposed in Chapter 2, after the Kargil war (1999), the strategic importance of the road was acknowledged and in 2001 the project was handed over to BRO. From being a civilian project, the Chadar road became a military one. Another reason, according to some of my participants, was the fact that BRO had more funds, means, and knowledge, and therefore the road could be completed in less time. Still, it seems that the road did not lose its communal significance since Muslim leaders were absent from the celebrations inaugurating the road's construction in 2002 (Gutschow 2004: 33). A few years later, most people had become disenchanted and the general opinion in Ladakh and Zaskar was that BRO was much slower than the PWD. In 2002, the initial target for completion was 2011; in 2009, BRO applied for a 12-year extension (Leh, 22 July 2009).

In December 2007, the construction of the Chadar road was once again threatened. Ambika Soni, the central government's minister of tourism, raised some concerns with the chief minister of J&K about the construction of the Zaskar road. Soni asked the chief minister to reconsider the project as the road would "endanger a vast stretch of wilderness" and "a virtual paradise for adventure tourists" (Bajeli-Datt 24 December 2007).²⁶ Inhabitants of the Singge La area who are fervent advocates of the road consider it "a right": their response – through their proactive councillor – was rapid and straightforward. In a memorandum dated 14 January 2008 sent to Ambika Soni and 11 other personalities of the Ladakhi, state, and national governments, Sonam Dorje, councillor of Lingshed's constituency, addressed the minister's concerns and restated the importance of the Zaskar road for its inhabitants (Sonam Dorje, Leh, 17 January

²⁶ Soni was merely passing on concerns raised by foreign travel companies and agents who said they were "heartbroken to see the road being built along its canyon". "If the road comes up, they said, the last great wilderness area will be lost to India" (ibid.). The news was disseminated in newspapers and on TV and radio in Ladakh.

2008). As he wrote, foreign travel agents were only considering their own interests and were not concerned with “the inhabitants’ problems nor interested in development of the regions.” “The construction of Zanskar Chadar Road is the dream of the thousands of inhabitants for long-term and future development” and is necessary “for the benefits for the remotest and [most] backward [villages] in the entire region of Ladakh [*sic*].”

This episode, which opposes diverging interests, is fundamentally about different constructions of the environment: nature and wilderness on one side versus the road as a symbol of modernity, development, and progress on the other. In the first case, the road is incompatible with the very idea of nature and wilderness, from which humans should remain absent or at least “traditional”. For tourists and trekkers in Ladakh, the landscape should remain pristine and unspoiled by roads, symbols of environmental and social destruction.²⁷ For Ladakhis and Zanskaris, the gorges are not wild but “intimately” known (Crowden 1994: 291), travelled in winter, and used for grazing yaks and collecting wood. Far from spoiling the landscape, the road will just spare them the drudgery of walking, ease travelling through the gorges, and connect the region all year round. According to the narrative previously discussed, the road will bring socioeconomic development to populations that are not “traditional” but “backward”. The question of whether or not a road should be built becomes a question of landscape construction. The state has a project but people have different conceptions of the landscape, which determine how the environment should be transformed and whether or not the road should be built.

Not only do people impose their own conception of the landscape, they also reinvent the rationale for the road. It might be built for strategic purposes but Lingshedpas bring its potential socioeconomic effects to the fore, justifying it in terms of “right” and “development”. They actually build on the roads and development discourse, and on the notion of roads as a “basic human right”, which is reminiscent of both the latest road literature and PMGSY guidelines (see Chapter 2). The promises of “long-term and future development” only echo statements by Lingshedpas that “the road has become a

²⁷ Roads would mean “the end of a civilization” as a trekker once told me (August 2007). Also, tourists passing through Lingshed in summer often candidly ask villagers: “But why do you need a road?” (Sonam Dorje, July 2009). For trekkers and rafters, the Zanskar gorges are wild and largely unknown, which might participate in this sense of adventure, providing a feeling of being the first or one of the few privileged to penetrate such territory.

basic need” (Thundup Namgyal, Lingshed, 12 November 2007) or “a fundamental need” (Kunga Thundup, *ibid.*).²⁸ Therefore, the struggle for a road is also a struggle over the meaning of the road, in which the state’s road and development discourse is re-appropriated, and people give the road a different rationale.

Hence, the tormented story of the Chadar road shows that roads in Ladakh are often built as a consequence of intense lobbying that involves a plurality of agents with divergent interests. Road construction is not a continuous project but a long and intermittent process whose progress is largely determined by sociopolitical processes and bargaining. These stories show that people do not wait passively for roads to be built but that their involvement is essential to the advancement of road projects. Also, roads are not neutral because they are socially and politically embedded into a wider historical context: road construction inscribes itself into existing struggles, such as communalist issues and demands for autonomy. Roads also trigger new debates regarding the construction and interpretation of the landscape and the meaning of the road, debates whose stakes are both symbolic and real since they determine whether or not the road will be built and for whom.

The second road to Lingshed, which is under construction, is the 42-kilometre-long Phanjila-Photoksar road, which will later be extended by another 55 km from Photoksar to Lingshed. It is an extension of the road to Wanla that was completed a few years ago. According to engineers in Leh (anonymous, 24 July 2007), the construction of a road from Photoksar to Lingshed was too costly to be included in the state budget.²⁹ Between 2004 and 2007, not more than 1 km of this road was built.³⁰ the project had been stopped and an engineer told me that they were waiting for BRO to complete the road through Chilling along the Zanskar; from there they would open a link road to Lingshed. In 2007, the road was a highly contentious matter between the Hill Council in

²⁸ In a way, this illustrates development as a “discourse of entitlement” – by opposition to development as a “discourse of control” imposed from above – which I referred to in Chapter 2 (Moore 1999: 673).

²⁹ In 2006, the then J&K minister for power, Nawang Rigzin Jora, said that the cost of the road was too important to be included in the district plan and the project had been submitted to the central government (*Daily Excelsior* 21 June 2006). The estimated cost of the road from Phanjila to Khaltse is Rs8.86 crore (PMGSY 2008; Khaltse 8 January 2008) while the total cost of the road from Phanjila to Lingshed is a staggering Rs26 crore (*The Daily Rising Kashmir* 5 November 2008). Compared to that, the total budget for road development in the 2008/09 district plan was Rs11 crore or a total of Rs22.8 crore for roads and buildings (LAHDC Leh 2008). (Note: a crore is equivalent to 100 lakhs or 10 million).

³⁰ As my GPS was unable to function in the narrow gorges, I can only give an estimate of the distance.

Leh and the people of Lingshed. At the same time, contradictory messages were being sent: on 12 August 2007, the minister for roads and building laid (again) the foundation stone of the remaining 39 km of road (ANN Kashmir 13 August 2007).³¹ During late autumn 2007, Lingshed received the news that the construction of the road had restarted. As we walked out of Lingshed through the snow in January 2008, my companions and I effectively found the road tarred until Tango Bridge, 4 km after Phanjila in the direction of Photoksar.

What had happened was this: the road was initially built by the PWD with limited district funds and therefore progress had been slow. A request was made to build the road to Photoksar under PMGSY and in 2004 the 42-kilometre-long project was sanctioned (Sonam Dorje, Leh, 17 January 2008). The tender was first awarded to a contractor but due to a procedural irregularity, it had to be cancelled.³² After a second bidding process, it was allocated to another contractor but he and the PWD disagreed over the period of completion.³³ A third disagreement took place, this time between the villages of Photoksar and Hanupata: the initial plan had been to build the road through Hanupata, therefore connecting the maximum number of habitations to the road network. But the people of Photoksar later decided that a road in the other valley through Machu and Haskuta (where the people of Photoksar have fields and trees) would be a better option for them in practical and economic terms. They lobbied the Hill Council in Leh but this infuriated other villages and their representative Sonam Dorje (who accessorially represents the interests of both Photoksar and Hanupata) who had to act against the risk of disunion. As he told them (*ibid.*): “You had to tell the government before. If you change the road, the people from Hanupata will oppose it and the whole project may be cancelled. It is better to ask [for] a road through Haskuta in a few years, not now.”

During summer 2009, Sonam Dorje informed me that tremendous progress had been achieved on the Photoksar road, although the initial target had not been reached. The

³¹ Years after the road had been started: the foundation stone marks the beginning of construction under the PMGSY scheme.

³² As per regulations, at least two contractors must bid for the tender to be valid, out of which one has to be local. The first time, only one contractor from Kashmir applied.

³³ PMGSY rules stipulate that road projects must be completed in one year, which was impossible in the case of the Photoksar road given the terrain, length of the road, and seasonal constraints (Khaltse, 8 January 2008).

road was now drivable until Hanupata and would soon be drivable until the Sisir La once a bridge had been constructed.³⁴ After that, Sonam Dorje was confident that the proposal to construct the road from Photoksar to Lingshed would be sanctioned. A survey of the 57 km separating Photoksar from Lingshed had been conducted in 2006; they would just have to lobby the government, engineers, and contractors for the second part to be built. They also had to oppose BRO's involvement in the construction of the road from Photoksar to Nierak, preferring the PWD instead.³⁵ People from the Singge La *Lok* had to mobilize once again, putting a halt to the development of the "strategic road network". As Sonam Dorje put it, "We don't want [BRO] because BRO is very lazy. Now BRO says they will require another 12 years to complete the Chadar road. PMGSY and PWD are much quicker" (Leh, 22 July 2009). However, BRO had made some progress on the southern part of the Chadar road, on the Zangla side. People of the Singge La had applied for the construction of a 20-kilometre-link-road from Zhingchan Sumdo (opposite the present end of the Chadar road) to Dibling. The project was currently under survey, funded by the PWD district fund. Later, they would apply for another road to be built from Lingshed Sumdo to Lingshed, another 10 km upstream.

As these episodes in the construction of the Chadar and Photoksar roads show, road construction in Ladakh is quite erratic and faces numerous obstacles. The biographies of these two roads illustrate "the explicitly sociocultural character of interactions between individual humans and the environment" (Nyerges 1997a: 10), as sociopolitical negotiations and practices impact on the material landscape. Of course, the progression (and trajectory) of the road depends on geophysical, climatic, and technical factors, but it depends mostly on financial, organizational and political factors. For the villagers of Lingshed and the Singge La *Lok*, having a road built requires great determination and mobilization: they must build on the state's road priorities and construction schemes, and some pressure must be applied on contractors and engineers, elected representatives, and the local, state, and national governments. People must apply for different sources of funding, advance different justifications for the road, and support different road construction agents. For Sonam Dorje and his constituents, it is a constant

³⁴ In December 2010, images on Google Earth showed that the road had reached Photoksar.

³⁵ During the summer of 2008, BRO had built a helipad in Nierak to drop machinery and material and start building the road in both directions in order to increase the pace of construction. BRO also expressed its intention to construct the road from Photoksar to Nierak as it could use this road to transport men and material to build the Chadar road.

fight (Leh, 17 January 2007): “This year, we put a proposal for a pony trail to Dibling. Year after year, we will put plans, plan after plan: a link-road to Nierak, one to Zhingchan Dho, one to Dibling, and so on...”

The case of Lingshed illustrates the many obstacles to road construction: communalism and struggles of interest between Leh and Kargil, the intervention of politicians in Srinagar and Delhi who oppose the project, “environmental considerations” raised by foreign tour operators and the tourism minister, the costs of road construction, flaws in procedure, the intervention of competing road construction companies, etc. These threaten the process of road construction and to overcome them requires collective and concerted action. The biggest threat is disunion, as when the villagers of Photoksar tried to change the road’s trajectory. A Lingshedpa quoted in the introduction to this chapter said: “The public is being misled by politicians but we have to remain united for roads” (anonymous, Lingshed, 11 November 2007). Politicians might try to obtain support from different factions or villages to get elected but road construction requires unity. As with claims for regional autonomy or ST status or in the manufacture of isolation, it is crucial that people “speak with one voice” and act collectively to elicit support. As the councillor of Lingshed once told me (Sonam Dorje, Leh, 17 January 2008):

The most important thing is that people have to stay united and speak with one voice. Then, we have to use political influence. Workers, villagers, councillors should come together, in a collective effort to have roads. We need the support of ministers, both local and from the State, administrators, the DC [deputy commissioner].

Conclusion

Road projects might be decided at a macro-level through national and state policies, and according to quantitative criteria such as population and distance (Chapter 2) but, as this chapter shows, in the end, road construction depends on micropolitics and local struggles. The context of road construction is not neutral either, as roads become entangled within broader political processes and regional demands for autonomy. The state builds roads to garner legitimacy and people use the state’s and politicians’ need

for legitimacy to claim roads. Local politics also determine their pace of construction. Road construction is an erratic process: it depends largely on people who, by their collective efforts and constant involvement, keep road construction going. People decide which roads have to be built and accordingly fight for them. They determine how the landscape should be transformed and build on existing discourses and state programmes to legitimize the road in their own way. In the end, even though the rationale for road construction might change, the same road is built.

Road construction requires unity. While isolation is experienced in Lingshed (Chapter 3), this chapter presents evidence that isolation is also manufactured – both through intentional and unintentional processes, and the resulting notion of isolation differs from the way in which it is experienced. In the end, this simplified construction of Lingshed as isolated and backward produces the imperative for development interventions and road construction. It also appears that the manufacture of a common narrative of isolation serves to build consensus around the road and create unity. The question of whether isolation also acts as an “anti-politics machine” by erasing conflicts between villagers is a legitimate one. Lingshedpas say they have to remain united but when the trajectory of the road within the village must be negotiated, road construction ends up becoming a divisive process. How people negotiate around the trajectory of the road is the subject of the next chapter.

Chapter 5. Negotiating around the road

Divided by the road

“It happens like that: sometimes through the fields, sometimes through the trees. The road needs the land and we give it” (T. Murup, Skurbuchan, 18 April 2007).

This sentence sums up the dilemma of road construction from the point of view of inhabitants. Road construction has harmful effects on the livelihoods and well-being of people whose resources it destroys, permanently or temporarily. But the road is also a resource: the road and its construction generate wealth and employment, and grant access to further resources such as markets, tourism-related and other economic activities, and health and education centres. It can also grant or prevent access to natural resources such as agricultural land, water, pastures, or forests. As the road is constructed through a village, there are gains and losses for villagers but the distribution of these gains and losses depends on the road’s trajectory.

In the previous chapter, people said they had “to remain united for roads”. But, when people must negotiate the trajectory of the road, the initial unity seems to break up. How can these divisions be breached in order to arrive at a consensus? Who wins and who loses in road construction? Through the example of Lingshed and other villages in Ladakh, this chapter looks at road negotiations between people – and between people and engineers. Road construction is not a neutral intervention but a contentious matter that involves intense negotiations embedded within sociocultural practices, institutions, and power relations. As I argue in this chapter, the road’s trajectory is decided on the basis of consensus but the process of negotiation tends to create consensus in a way that reinforces the existing power structure. Engineers and contractors themselves utilize group pressure and institutions to manufacture consensus, and broader evidence further shows that vulnerable individuals and households are at risk of losing through road construction.

The first section illustrates the unequal distribution of road construction-linked gains and losses within villages. In the second section, I introduce the legal rules and procedures that govern road construction and the institutionalized practices through which negotiations take place and construction schemes are reworked. In the third section, I examine the different negotiation strategies used by villagers and engineers, and how powered institutions frame the process and outcome of negotiations. Together, these processes and practices explain the material transformation of the environment and the trajectory of the road.

1. A landscape of discord: the gains and losses of road construction

The idea so central to cultural geography that the landscape is “the social world of people as expressed in their use of nature” (Robbins 2004: 30) calls for an analysis of its phenomenology. Hence, the landscape in itself can shed light on people’s social worlds, although in some cases the landscape can be “misleading” and is often more than “the simple reflection of social practices” (Smadja 2003: 23). The landscape can “lie” (Fairhead and Leach 1996) but it can also unveil what people would prefer to conceal and highlight inconsistencies in the discourse. The landscape of Lingshed, with its incomplete portion of road, calls for an interpretation.

The unfinished dirt track in Lingshed is part of this “socialised landscape” that “has acquired particular shapes and meanings through both its physical and social use” (Leach 1996: 116). We saw in the previous chapter that the road was Lingshedpas’ first priority, for which people said they had to remain united. In a place like Lingshed, where fields are by far the main economic and symbolic resource, one might expect the construction of a road on arable land to raise some opposition, but this was denied. When I asked during our participatory session whether people would give up their land for the road, they unanimously said they would (Lingshed, 12 November 2007):

Me - Who agrees to have a road built through his fields?

[A lot of noise]

Tashi - If it comes to our house, it is no problem.

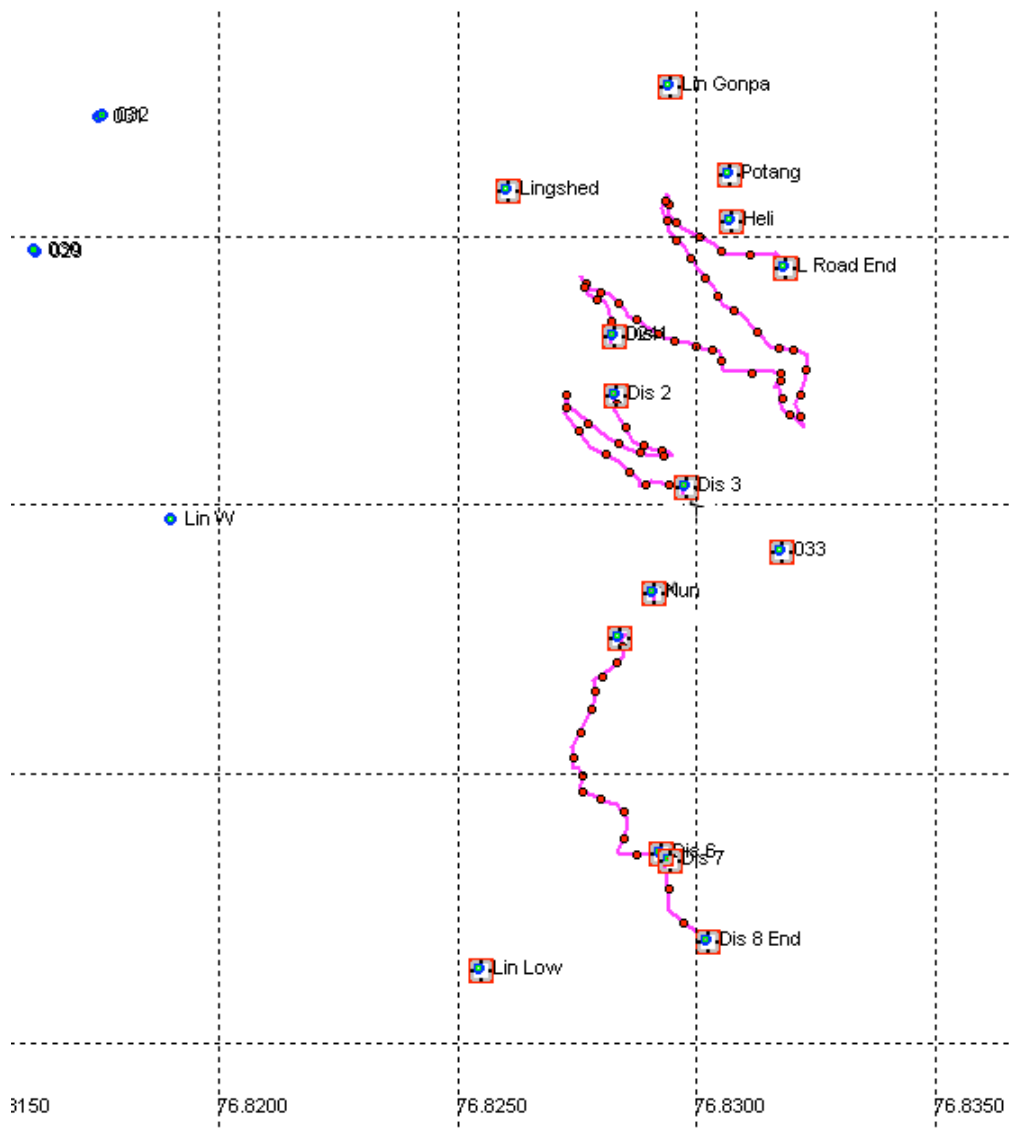
Thundup Namgyal - I’m going to sacrifice my fields and open a shop in my house.

One man - We will sacrifice our land.

Another one - Now I am ready to sacrifice.

[And such was the general opinion...]

However, the “road” in Lingshed seems to carry a very different story. It does not lead to any particular house or the centre of the village: it is relegated to a remote side of the least populated margins of the village, where the slope is steep and mainly barren (see Illustration 5.1). It is interrupted by fields, springs, forests, and even uncultivated nunnery land, showing that nobody has actually agreed to give up their land for the road. Its location and the interruptions bear the mark of disagreement: rather than unity and consensus, the road seems to symbolize discord.



5.1. The road in Lingshed

As its shape suggests, this “road” – which was built during the summer of 2007 using the councillor’s Rs500,000 (5 *lakhs*) discretionary fund by “an engineer with the help of six to seven Gorkhas” (understand Nepalese) as a response to Lingshedpas’ demands – had actually seen a lot of opposition (focus group, Lingshed, 12 November 2007). Some even believed that people’s opposition had halted its construction. Because of this opposition, many felt that building the road on the nunnery’s side would fail and Lingshedpas were divided on whether it should be built towards the school, hospital, or monastery, or whether it should come from Zanskar through Lingshed Do, which meant that it should probably be built on the other side of the village. Most agreed that the road’s trajectory should be modified but some worried that the councillor would be angry: “He has already measured it 100 times.” Yet it was “up to villagers to decide” and it was agreed that the engineer should come and measure it again (*ibid.*). In fact, the dirt track revealed the lack of consensus on the road’s trajectory: it also unveiled deeply diverging interests that were largely determined by the relative gains and losses expected from the road.

Gains in Khaltse

The following story was gathered in Khaltse, a relatively large village¹ situated along the Indus. The village, which lies on the Treaty Road, is now conveniently located on the Srinagar-Leh road. Since it is situated halfway between Kargil and Leh and at the junction of the road to Batalik, Khaltse is a necessary stopover for buses, jeeps, and trucks, so that its main street borders around 50 shops and restaurants. Khaltse is also the block headquarter and hosts two schools, a hospital, petrol station, an important army cantonment, and numerous government facilities. Agriculture is still important among people’s activities but households now derive a large proportion of their income from the village’s services-oriented economy. From mid-spring to mid-autumn, when the Srinagar road is open, Khaltse sees people of all origins working and living in, or just passing through, the village: Punjabi truck-drivers, soldiers, foreign and Indian tourists, Nepali coolies, cooks, or helpers, Ladakhi villagers, *lamas* and *rinpoche*,

¹ The village counts 208 households and 1,155 inhabitants (LAHDC-Leh 2007a).

Kargili traders, Kashmiri shopkeepers, and many others. This is the scene *Meme* Tashi likes to contemplate, dressed in his red *goncha* and white cowboy hat, pacing up and down the main street with his heavy wooden stick, or sipping tea on the terrace of one of the numerous shops and restaurants that belong to him. His story echoes the benefits that can be derived from roads and road construction, and is also evocative of village politics and road negotiations.

Tashi Thundup – or *Meme* Tashi as everybody here calls him – was born in Khaltse in 1929. His family is now probably one of the richest in the village but, at that time, they were relatively poor. Like families in Lingshed or in the rest of Ladakh, *Meme* Tashi recalls how they fell into debt every spring, which they had to pay back at harvest time. Sometimes during summer, they would have only vegetables to eat as there was no more barley. As he recalls (*Meme* Tashi, Khaltse, 3 October 2007):

Rich people used to exploit the poor. I was among the poor but I did not let them exploit me. [...] Rich villagers did not let us cultivate wasteland but they forced us to work on their fields. They forced us because we had to borrow grain from these rich families. Until 1947, we had to work for them.²

Life, he says, started improving about 40 years ago, which coincides with the decade following the construction of the road to Khaltse (among other events). He gives three reasons for this improvement. First, he started working as a mate (supervisor) on the construction of the road, and then as a cook and *chowkidar* (watchman) for the PWD. Second, as his children grew up and were able to cultivate the land and look after their goats and sheep, the family was able to buy seed, they had enough manure, and yields increased. Third, the army settled in Ladakh: “The army had a lot of food: we worked for the army as coolies and brought back food for our families. [...] Since that time, there have been no more poor [families] in Khaltse: nobody had to take loans anymore” (ibid.). And therefore nobody had to work for the rich.

Indeed, the army and road construction were major employers for *Meme* Tashi. He started working as a cook for a Gurkha regiment during the war of 1947/48 and later as

² As van Beek notes, following independence, many Ladakhi households in heavy debt saw a large improvement in their living conditions thanks to the settlement and cancellation of debts, a government initiative (2001).

a coolie and donkey man for the army in Kargil. From 1960 onwards, he worked for the PWD: first as a mate – and, as we will see, this episode was crucial to his ability to derive the main benefits of the road – and later as *chowkidar* and cook from 1966 until he retired in 2002, receiving a Rs200,000 (2 *lakhs*) pension. *Meme* Tashi also sells wood from his plantations.³ Fifteen years ago, he started selling vegetables and apricots in the bazaar in Khaltse. He is entitled to government rations but refuses them as a matter of pride. The main part of his income is derived from the road itself, as it borders his land. Since the road was built, part of the village was rebuilt closer to the road (see Illustration 5.2): *Meme* Tashi has built 24 shops along the road that are either managed by his family or rented out. The rent payments from restaurants, grocery shops, STD (telephone), DVD shops, bars, and even the village branch of the Bank of Jammu and Kashmir bring him Rs120,000 per year.



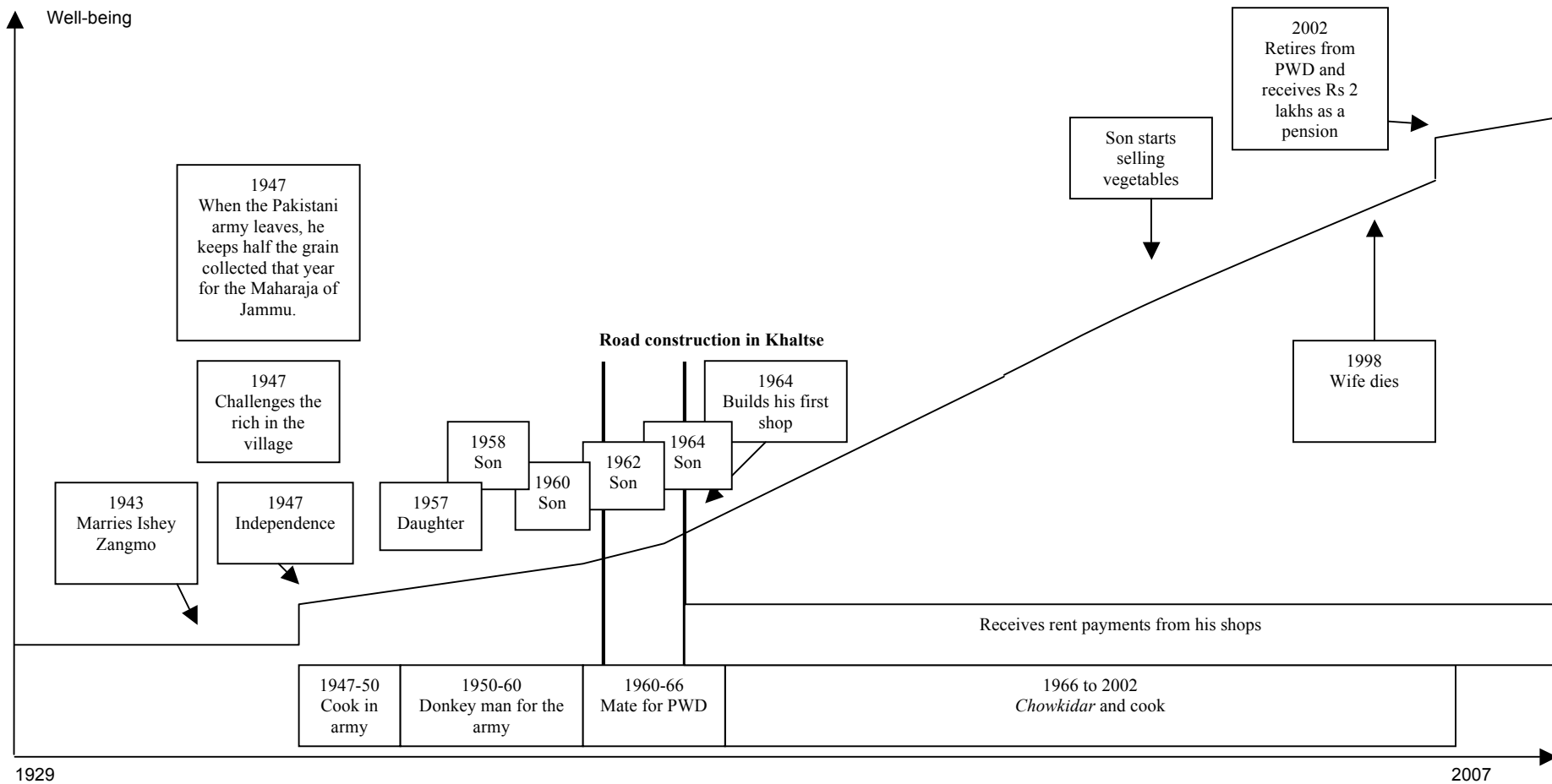
5.2. Khaltse, the last village on the Indus on the Leh-Srinagar Highway⁴

³ He remembers that, in the beginning, other villagers did not let him plant trees, arguing water scarcity. Government subsidies helped him start his plantations. Moorcroft himself noticed in his time that there were insufficient poplars to satisfy people's consumption "as the plantations are not allowed to encroach upon the contribution of corn" (Moorcroft et al. 1837/1989a: 308).

⁴ Note the original path that crosses the village and the road that was built underneath, now bordered by commercial establishments, partially hidden by trees in summer.

Meme Tashi's story is quite representative of the situation faced by villagers and engineers at the time of road construction. Initially, agricultural land was symbolically and economically the most important resource for villagers, so that losing land to road construction is lived as a tragedy (this is also evident in the case of the portion of road built in Lingshed, which is built to the side of the village, carefully avoids cultivated land, and is interrupted by fields and forests). But people want the road to be adjacent to their land and house as it can be an incredible source of wealth. *Meme* Tashi said he did not lose any land to the road but managed to have the road border his land: he gained a great deal without having to suffer any losses. With his 24 shops (literally, one entire side of the street belongs to him) plus the revenue from shops directly managed by his family and rent payments from the PWD, *Meme* Tashi has become one of the most prosperous men in Khaltse.

Thinking in terms of livelihoods and of the road as a resource, the road has improved *Meme* Tashi's well-being in two respects (see Figure 5.3). First, he benefited from road construction by being directly employed by the PWD and receiving a monetary income at a time when such opportunities were relatively rare in Ladakh's weakly monetarized economy. Moreover, he benefited from a steady monetary income for 42 subsequent years. Second, more than anybody else, he gained from the new economic opportunities that opened up because of the road as his land was conveniently located along it. More than any other factor, the road's direct and indirect benefits have played a major role in *Meme* Tashi's livelihoods and increased his well-being. The perspective and anticipation of such gains also explain people's interest in having the road designed according to their will and therefore in negotiating its trajectory. In Lingshed too, people said they were willing to give up their land on the condition that the road came up to their house. As we will see later in the chapter, *Meme* Tashi's position as a mate and *chowkidar* for the PWD was also instrumental in securing a convenient road trajectory that would best serve his interests.



5.3. Meme Tashi's life history

Losses in Skurbuchan

However, the road can also destroy people's assets, with heavy consequences for people's livelihoods and well-being. Short- and long-term losses mean that coping strategies must be used and that lost assets might never be recovered. In spring 2007, I heard the story of a road in Skurbuchan (30 km north-west of Khaltse, downstream the Indus) that had caused a lot of destruction and infuriated inhabitants.⁵ People were now complaining and demanding compensation. The road was initially built using district funds and its construction later continued under a PMGSY scheme. The first conversations I had with three men – including one who had been *goba* at the end of the construction – revealed the usual story of a fight for the road but also of the destruction it had caused and the long-term benefits expected. All three had been affected but only the *ex-goba* seemed to know what had happened, and it was mainly he who spoke (Skurbuchan, 18 April 2007):

Ex-*goba* - This road was started in 2000 or 2001. The wooden bridge was constructed in 2001, until 2004. Then it has stopped for 2 years...

Second man - It stopped because of the people.

Ex-*goba* - No, this is not the reason, it was because of funds. Funds were not released. [...] After that, I was elected *goba* and I requested again the construction of the Kachiatang road. There was a strong demand for [the] Kachiatang road at the time. We put a request to the councillor, with the *sarpanch* and the *panchas*.⁶ All together, we put [in] a strong effort, the councillor came on site and because of the good effort we got the PMG[SY] funds until Lumba [a pasture] [*sic*].

As the conversation continued, the three men started talking about the losses they had incurred because of the road, at which point the prayer mills that were turning and squeaking in their hands stood still. They were bitter about the destruction caused but the *ex-goba*, who had fought for the road, justified short-term losses in terms of long-term benefits (*ibid.*):

⁵ Incidentally, this happened to be one of the roads surveyed for a study commissioned by the World Bank, whose conclusions I will present further in this chapter (see Faith/CES 2008).

⁶ A *pancha* is a democratically elected member of a village in the Panchayat Raj system.

The road is important for young and old, although the road has damaged so many trees and fields, destroyed canals and houses. A lot of trees were cut down. We feel upset about these destructions in the short run but for the younger generation in the long run it is very important. For the moment, we cut down the trees, destroyed land from the old generation. We are sad now. But the coming generations will think the parents and grandparents were very good to give land for the road [*sic*].

Hence, the idea that “now, we are feeling the damages of the road but it is useful in the long run” justified the road’s construction. People could cope with the damage caused by road construction because it was good for “the future”. The road had destroyed many apricot trees and villagers were unable to produce oil to offer lamps to the gods, but now they could buy subsidized refined vegetable oil from Punjab. What the road had destroyed, it had brought back in another form. In a way, the road was also made necessary by further evolution in society, especially by the fact that children were enrolled in schools often far from the village and were unable to help with agricultural work anymore. Were there a road, people in Skurbuchan would be able to go to the *drok* (pasture), milk their animals, and work the fields, and then return in the evening to help their elders and young children in the village. People also had less time for threshing and winnowing and carrying the grain back home, so the road would enable them to bring agricultural machines to the *drok*, making life easier. Thus, according to the *goba*, “Everybody in Skurbuchan wanted the road. People were sad when fields and trees were destroyed, but everybody agreed the road was needed and useful.” When I asked for confirmation, the ex-*goba* assured me that “there is nobody who is unhappy about the road” (*ibid.*).

The following day, I followed the road under construction leading to Kachiatang and Skumbardo. I met people whose fields had been destroyed. It was mid-April, the road had made its way through orchards of apricot trees that bloomed abundantly with pale pink flowers, while people – exclusively women and old men since younger men were often involved in other sorts of trade in Leh or elsewhere – were busy spreading manure and watering the fields. Opinions regarding the road differed from what I had heard the previous day. The first woman I met was Tashi Kunzes as she worked on a tiny patch of land adjacent to the road (Skurbuchan, 19 April 2007):

Before, I had a house here, a new house we built two years ago. But unfortunately it was destroyed by the road last year. We cannot stay here anymore; we have to walk from Skurbuchan until here. Before, we used to stay the summer with the sheep and cattle. Last year, these fields were filled with stones because they [had] blasted the mountain and avalanches of rocks covered them. The contractor cleared them [the fields], and this year we can again cultivate. Last year, we could only cultivate late in the season, not in April, only in June. We didn't get any compensation. Nothing.

Seeing the level of destruction she would have to bear, Kunzes had initially opposed the road passing through her land. I asked her if she had tried to complain or alter road's trajectory but, as she said:

Everybody's giving fields and everything for the road to be built. They cannot refuse. Everybody wanted this road. We asked the government to build the road on the other side of the valley but about 10 families live on that side. So they built the road on this side. And from that point, we knew that our house would be destroyed. [...] Nothing is left, everything has gone. I had very little land and it has been taken.

Further down the road, I met another group of four women and an old man watering the fields. They invited me to have tea and *chang*, and we shared the *kambir* I had. Rigzin Dolma and Sonam Yangjor, both sisters, were rather vocal about the road, which they very much resented. They had lost half their fields (three out of six *kanals*)⁷ and about 100 trees because of it. When I asked them about the advantages of the road, the answer was unequivocal (Skurbuchan, 19 April 2007):

What sort of advantages? From here to there, my field has gone and there is no [longer a] proper canal for irrigation. I will have to rebuild it myself. Since last year I [have] had no irrigation. They made this trench but it is not efficient. I'm going to refill this trench. The *baboo* [engineer] came and visited the site but didn't do anything. My apricot trees are dying. He said, "I will build a cemented canal next year; this year you should manage by yourself." But it is impossible to bring the

⁷ 20 *kanals* are equivalent to one hectare.

water until here. The road has disturbed the canal.⁸ The canal is below the road, it is totally damaged, it is impossible to bring water. Last year they brought a machine but it was not successful. I could only irrigate these two small patches. It didn't work so I stopped. The field dried [up] and we had to harvest early. [...] I have become landless. I used to have fields, now this is finished. [...] We lost all the barley last year because of lack of water, and some of the apricot trees became dry as well and the apricots fell. [...] The contractor is not a nice man. [The] fields are okay but the fruit trees, which we reared like babies for so many years... We lost three quintals of barley, all apricots, walnuts, and apples: all have fallen down like sheep dung.

Damage caused by road construction is localized: it tends to affect a few families who have to bear a disproportionate price. In Skurbuchan, the road caused long-term and irreversible damage – such as the loss of fields and houses – as well as shorter-term damage – irrigation canals became temporarily obstructed and erosion caused retaining walls to collapse. Yet all this had long-term consequences for people's productive assets. Some effects, such as the loss of fields, were often permanent as there is limited land available that is suited to agriculture. Even when new fields can be cleared, terraced, and cultivated, building the productivity of the soil takes years.⁹ Retaining walls and houses had to be rebuilt. The temporary destruction of canals had impeded irrigation and seriously affected crops and trees. People had been unable to grow or bring grain to maturity and these losses were only temporary. With trees, the losses were more permanent: trees had died and it would take years, even decades, to grow new ones and bring them to maturity. During that time, people's livelihoods would remain severely affected. In Skurbuchan, the damage was exacerbated by the fact that the valley was narrow with steep versants, so that road cutting had damaged a wide portion of land above and below the road. As a result of this unfortunate combination of circumstances, Rigzin Dolma, Sonam Yangjor, and Tashi Kunzes questioned the utility of a road that had cost them so many of the resources on which their livelihoods depended.

⁸ This is often the case in Ladakh and it is very common to see people digging a deep ditch through the road as soon as it is finished, if irrigation needs had not been taken into account during construction.

⁹ In Nepal, I have heard of cases of road construction in which villagers asked the engineers to destroy their houses rather than their fields: houses were built on non-arable land and could be rebuilt; fields could not.

Because of the destruction caused, people had had to adopt different coping strategies: harvesting early, although with considerably reduced yields; cultivating other fields, sometimes in other places such as mountain pastures;¹⁰ or living on stocks, as some families often gather huge quantities of barley and wheat in their house year after year, although such a strategy is only available to households that hold large quantities of land.¹¹ Buying more rations from the government rations store or fellow villagers was also a widespread strategy. Although rations are widely consumed, some are also sold on the black market by ration stores' employees or consumers. Finally, some had chosen to bargain with the contractor in order to obtain a complementary means of cultivation, such as a pump and generator to extract water, but the success of negotiations depended on the contractor. As Rigzin Dolma recalled (Skurbuchan, 19 April 2007):

Before, there was another contractor from Khaltse. He didn't destroy as much as this one. This contractor is not good for us. The previous contractor managed to water the fields through the pipes. This contractor is from Shey and didn't agree to build new canals, manage pipes, or provide a generator. Last year, he provided us with a generator to water the fields but no kerosene oil for the generator. So we had to cut the barley before it was ripe.

As appears from this account, the contractor's role and influence might have a major impact on people's well-being. A "good" contractor might provide irrigation means through pipes or a generator, and build canals or a retaining wall to protect fields from erosion and landslides. But some contractors do not do so and consequently people have to bear more heavily the cost of destruction induced by road construction.

The examples of Khaltse and Skurbuchan illustrate the unequal distribution of gains and losses caused by road construction. For Ladakhi villagers, there is a lot to gain from the process but there is also a great deal to lose. Therefore, periods such as those of road construction unveil asymmetries of power and interests among villagers so that the process of road construction gives place to intense bargaining among villagers, and

¹⁰ In many villages, the *gonpa* has land that can be leased to the villagers in exchange for a share of crops.

¹¹ A family in Alchi had 17 years' worth of barley crops stored in what used to be their winter kitchen. Barley was used mainly to brew *chang* and was not sold. As most family members no longer lived in the village and barley as a staple food had been replaced by rations of *atta* and rice, barley was barely consumed anymore but it was still produced.

between villagers and engineers. The examples given in this chapter also illustrate the situation of individuals as “actively involved in the systems of subordination and domination – and resource competition, control and exploitation – in which they live.” (Nyerges 1997a: 9). People have different statuses that they express “through varying ways of competing for, using, and perceiving the crucial resources available to them” (Nyerges 1997b: 194). The previous stories suggest that the trajectory of the road is based as much on social and organizational factors than on geo-physical ones. Consequently, the road tends to physically embody the social hierarchy. Also, one may not exclude the possibility that the road, a specific trajectory or access to the road may be used to maintain or challenge existing power relations. The question then, is how individual practices and social hierarchies shape environmental transformations and the road’s trajectory. To answer this question it is necessary “to ground analyses in ecology in individual activity appropriately culturally contextualized” (Nyerges 1997a: 1). In the next section, I look at the institutional framework that shapes the process and outcome of negotiations in Ladakh before looking at specific examples of road negotiations in the final section.

2. Mediation through Ladakhi institutions

The technical literature for planners and engineers acknowledges the need to mitigate the potentially destructive effects of road construction and protect affected households. These issues are generally addressed by practical guidelines as well as a legal framework that finds its source in national, state, and district regulations (Faith/CES 2008). Broadly, these acts and policies provide guidance in at least three domains: (1) they attempt to guarantee a high level of participation by road-affected people, (2) they set clear and fair procedure for land acquisition, and (3) they aim to reduce or mitigate the negative impacts of road construction.

Despite this legal arsenal, evidence suggests that practice somehow deviates from theory. In 2007, an external assessment¹² commissioned by the World Bank – which

¹² The study aimed to assess the compliance of PMGSY project implementation with its guidelines and identify its shortcomings and potential negative impacts on beneficiaries. The study was carried out by two NGOs that conducted surveys, focus group discussions, and interviews in 15 different districts in five

was funding some PMGSY projects in India – critically concluded (Faith/CES 2008: Ch.6 p.1):

All administrators and implementers of this scheme should be cautious about various gaps within the process which leads to suffering of many peoples, loss and hardship. What actually has been overlooked in the process is the ‘Human’ face of development i.e. people for whom these roads are meant.

The expression “overlooking the human face of development” could be interpreted in two ways. What the report means is that roads that were built under PMGSY schemes failed to benefit those they were designed for because of the insensitive, technocratic (and sometimes autocratic) way in which road construction was managed, with little concern for local populations. What I would like to argue here is different: a second interpretation could be that road construction schemes are not implemented in a vacuum but in a ‘human’ and social context that influences the process and the final result. When they are implemented, state-designed development interventions such as road construction necessarily interact with existing social institutions, are mediated through and locally implemented by people, and the way in which they are implemented often differs from what was initially planned, leading to unintended consequences. In other words, what has been overlooked is that development is a social or ‘human’ process open to renegotiations.

Road construction schemes are reworked through “the crucible of cultural politics” (Moore 1999: 655). Along with the construction of the road, access to new and existing resources must be negotiated among different agents – villagers, engineers, contractors, and workers – within a flexible set of rules and institutions, power relations, social inequalities, and the cultural, understood not as something fixed but as a site of contestations. Central to the question of negotiations is the notion of power because relations of power often determine the outcome of negotiations and institutions tend to be shaped by power relations.¹³ However, institutions are only what people do:

states: Arunachal Pradesh, Bihar, Mizoram Uttarakhand, and J&K. In total, 78 projects were reviewed, offering a wide representation of situations and issues across India. Interestingly, three of the roads surveyed were in Ladakh-Leh district, one of them being the road from Skurbuchan to Kachiatang/Skumbardo, which example I introduced in this chapter.

¹³ Institutions have “structural properties [that] express forms of domination and power” (Giddens 1984: 18).

institutions that govern access to resources can be flexible (see Berry 1989; Nyborg 2002) and institutions and relations of dominance and power are “characteristically subject to a [...] variety of contestations” (Giddens 1984: 18). A preliminary look at institutions and power relations in Ladakhi villagers and how they are enforced and contested is necessary to understand the process of road negotiations.

Because road negotiations are divisive, potentially conflictual, and imply making collective decisions, it is essential to pay attention to Ladakhis’ attitudes to conflict and decision-making mechanisms in the first place. As Pirie writes, in Ladakh, at the heart of local practices and ideologies resides a general aversion to conflict: disputes are perceived as affecting the whole community and should therefore be avoided (2002).¹⁴ This is what she calls an ideology of “harmony” or the ethos of conflict avoidance. When a dispute arises, it should be dealt with internally, within the village and its structures of power and authority. It usually relies on a negotiated agreement between the parties and is not directed “at any idealised form of justice or fairness” (ibid.: 105). This moral attitude to conflicts is clearly present when people refer to road negotiations as they insist on the absence of dispute as well as on the fact that the issue was dealt with “internally”, in conformity with the Ladakhi ethos of conflict avoidance. As the *ex-goba* of Skurbuchan once told me (18 April 2007):

Of course, there were some people who opposed the construction of the road but we managed to convince those people through the representatives of the village, head of the village, councillor, member[s] of the *chutsoh*. We convinced those people, internally. Internally, and we did not have a big dispute about that. We made them understand.

Road negotiations are also embedded into Ladakhi decision-making mechanisms such as the *yulpa* or village assembly. The *yulpa*, writes Pirie, is the real institution at the heart of all important village decisions. She describes its functioning and the importance of consensus in negotiations but, while she insists on equality within the village, her

¹⁴ Pirie notes that, in dispute settlements, what is sanctioned is not the cause of dispute but rather the fact of committing violence. In comparison with other societies in which conflicts are seen as creative and part of normal social interaction, “Ladakhis abhor all forms of anger, fighting and violence within their communities. [...] Conflict is, for them, an unequivocally bad thing” (2009: 14). She likens the Ladakhis to the Zapotec (studied by Nader), for whom “a bad compromise is better than a good fight” (ibid.: 9).

account involuntarily suggests that not all villagers are equal (a point I develop further in reference to gender and caste inequalities) (ibid.: 154-5):

One of the central village fields is used for the meeting and men come and go throughout the proceedings, depending on their own interests, work obligations and the importance of the occasion, while women watch from a distance [...] All important and innovative decisions are taken at the village meeting, a forum attended by all the adult men, the *yulpa*. It is the *yulpa*, acting at the meeting, who are the political authority of the village, taking decisions about the village taxes and festivals, overseeing the water rotation and making new rules. They also act as ultimate arbiter in disputes [...]. If a consensus is not reached a ballot will be taken [...]. However, this is rarely necessary because in practice consensus is almost always reached. Differences of opinion may initially be expressed but people let an agreement emerge. There is no question of opposing camps forming, either before or during a meeting. Men never lobby their neighbours to secure support for a controversial proposal. In practice, certain men talk more than others at the meetings, some go to more meetings than others, some are listened to more respectfully than others but when people discuss the events of the meeting afterwards the influence of individuals is never acknowledged. Those who attend always report what 'we' agreed.

The account presents a clear picture of village deliberations and negotiations, and of how a consensus is nearly always reached and collectively endorsed after the meeting. However, Pirie tends to exaggerate equalitarian aspects while dismissing what does not conform to her representation of "a community of equal individuals and households" in which equality is essential "to suppress the possibility of internal divisions" (ibid.: 150).¹⁵ Although inequalities are downplayed, the account also illustrates how

¹⁵ The account is also slightly depoliticising, since it is hardly understandable how people can discuss decisions without trying to convince each other and "let an agreement emerge": road negotiations show that men do lobby each other, although they do exercise some restraint in order to avoid a dispute (2002: 155). Moreover, although Pirie argues that, at meetings, all individuals are equal, it is hardly conceivable how the social structure might not have an impact on decisions taken by the *yulpa*. Pirie argues: "It is impossible to identify any de facto leaders or men with real influence on village affairs" (ibid.: 155) and that the *goba*, a post that is "unequivocally seen as a burden rather than a privilege" (ibid.: 154), is only an agent of the *yulpa*. Yet, in numerous villages such as Domkhar, Skurbuchan, Alchi, and Saspol, *gobas* are elected – sometimes holding office for many years – often because they are seen as educated and influential, giving them a privileged position to argue the case of the village with external agents. Still, to fit the image of an equalitarian society, Pirie's account tends to be slightly essentializing when she writes: "In terms of individual status and prestige, there appears to be a lack of competition between individuals" (ibid.: 25). "Although [...] they are highly mediated by consensus", hierarchy and competition do exist

institutions such as the *yulpa* sanction inequalities and embody power relations: for instance, men are present “while women watch from a distance”, some talk more than others, some go to more meetings than others, and some are more respected than others. One might therefore wonder who represents women in the *yulpa* but also why those who are listened to less respectfully than others would bother to come and speak at a village assembly. My experience with *garas*¹⁶ in Lingshed and Domkhar, as I develop further, is that they tend to avoid village gatherings to avoid the stigma of being seated on the floor at the extreme end of the *gral*, behind women and children. Would such people come to express their opinions at a village meeting?

The fact is that, in general, “societies [...] are not necessarily unified collectivities” (Giddens 1984: 24). Ladakhi society is also segmented and village institutions do sanction social and economic inequalities and relations of power. The *gral* is a good illustration of this. As I explained in Chapter 3, in private as well as public gatherings, the sitting order¹⁷ reflects the social hierarchy. Individuals are ordered according to their presumed degree of purity and four set of principles govern one’s place in the *gral*: “monastic over lay, male over female, high caste over low, and age over youth” (Gutschow 2004: 4). Gender- and caste-based inequalities, which are made visible through the *gral*, are two illustrations of power relations that are enforced through village institutions and have been contested. Two examples based on gender and caste will illustrate this point and show why oppressed members of society might resort to conflict and violence to contest institutions while dominant groups attempt to enforce them.

Visitors to Ladakh have long noted how women there benefit from a high degree of equality compared to most of their counterparts in other South Asian societies (see Aggarwal 2004: 110). As I wrote earlier, gender roles are largely interchangeable and

(Gutschow 2004: 42). Beyond the apparent equality of individuals and households, accumulation of status and prestige happens through donations to the *gonpa* and possession of conspicuous objects. Contrary to what Pire sees as “resistance to acquiring any social capital in the village” (ibid.: 157), one could argue that, in Ladakh, religious rites “also emphasize social and economic differences through an elaborately choreographed spectacle of donation” and rites “draw large crowds who come to make merit as much as status” (Gutschow 2004: 51). Gutschow also shows how dispute settlement ends up re-enforcing power relations and how nuns, for instance, are “observers but second-class participants in village democracy” (ibid.: 49)

¹⁶ The caste of blacksmiths is considered inferior in Ladakh.

¹⁷ Also called *kraal*, or *gral*, or *bral-go*, depending on local pronunciations and authors’ transliterations.

often overlap. Yet, in practice, it is generally men who are involved in trade and public affairs while women dominate in the household sphere. Women do not have much say in decision making around the family budget either and their economic role is considered secondary (Aggarwal 2002). The society is largely patriarchal, as men are heads of households and assume political roles at a village or regional level. Gender inequality is also sanctioned by religion, for instance, in a nun's inability to be fully ordained or perform elaborate rituals, and for women in general to gain enlightenment (Gutschow 2004: 123).

Over the last few decades, a significant amount of work has been done by NGOs¹⁸ to “empower women”, which has in turn encouraged them to claim ‘equality’ and challenge the social order concretely and symbolically through the place of women in the *gral*. One of my translators, for instance, once cursed the head of an NGO working in his village (anonymous, Chilling, 24 September 2007): “This woman who comes and makes women think that they are equal to men, she shouldn’t do that, this is bad. Now women refuse to sit in the line behind men, they create their own line. But this is our culture. She should not attempt to change it.” This example illustrates how village institutions – or what my friend called “our culture” – sanction the dominance of men over women, how this has come to be successfully contested by women, and how changes were resisted by dominant males. Institutions that sanction inequalities are at the service of those who hold power.

Another illustration is provided by caste, a major source of inequality in Ladakh. As seen in Chapter 3, society is divided into four castes: royalty, aristocrats, commoners, and untouchables, which consist of *garas*, *mons*, and *bedas* and are deemed the most impure (Gutschow 2004: 201). The hierarchy is justified on the basis of ritual pollution but it also sanctions the political (and often economic) domination of the first group and the economic domination of the second group over the last one, as outcastes must virtually be at the service of commoners. Politically and economically, some roles are not available to *garas*, such as those of teacher or *goba*.¹⁹ Symbolically, in village gatherings, *garas* and *mons* sit at the very end of the line, they may not share their cups

¹⁸ And more recently by government agencies and even by the army, with its “women-empowering centres”.

¹⁹ In Lingshed, I was told that a *gara* could not be a *goba* as he would have to sit higher in the *gral* than other villagers, which was considered unacceptable.

or food with members of other castes and normally eat what is left over. Caste-based discrimination has recently started being contested by outcastes themselves, although changes have been strongly resisted and those who have rebelled against discriminatory practices have been the object of a social boycott (*mesde chusde*) enforced by the whole village, as the story of Tsering Angdu illustrates (Skurbuchan, 10 October 2007).

Tsering Angdu, a *gara* in Domkhar Do, has fought all his life to improve his condition. As I listened to him, he spoke spontaneously of the suffering and humiliation he had endured: first as a *gara* and then as a *magpa*.²⁰ He and his wife were emotionally and physically ill treated by his in-laws so that, at a young age, he chose to leave and seek help in Leh. He was later called back to settle the issue ‘internally’, within the village, as rules of dispute settlement command in Ladakh. Tsering Angdu exposed the multiple forms of domination imposed by higher castes over lower ones (*ibid.*):

Having to suffer bad treatment by the whole village was one thing. As I was a *gara*, I had to work for the whole village, from here to Domkhar Phu,²¹ for nothing. We were not paid until harvest time when I would go from house to house to collect donations. Most of the time, I only worked for food [...]. I was constantly looked down on, considered inferior. [...] During gatherings or at people’s places] whatever food remained would be given to us. We have to sit at the end of the line and often we don’t even have a thin mattress. [...] There was no other option. The whole system was like this. If you said you disagreed, you were *mesde chusde*,²² you were kicked out of the village, you had no option, just to die hungry.

In Ladakh, many *garas* and *bedas* have evaded this system of oppression by giving up their trades, sometimes leaving for Leh where caste-based discrimination is not so stringent. Tsering Angdu decided to directly confront the system in his village by

²⁰ In general, Ladakhi marriages are patrilocal, so that women normally join their husband’s household. However, when a family has no male heir, a husband is chosen from outside the household. He is called a *magpa* and is considered inferior to other men of the household. In Tsering Angdu’s case, this was aggravated by the fact that his in-laws later bore a son, no longer needed a *magpa*, and therefore tried to get rid of him.

²¹ Domkhar consists of three distinct clusters of houses: Do (the lowest), Barma (the middle), and Phu (the highest).

²² Literally, “deprived of fire (*me*) and water (*chu*)”. The expression dates back to the time when people did not have matches and had to ask neighbours for fire. It designates a social boycott in which a household is deprived of irrigation rights and reciprocal work arrangements, and is barred from participating in village events. As in the ecology of practice and social life of resources, the expression also illustrates the place and use of essential resources in hierarchically organised social relations (Nyerges, 1997).

challenging the existing order. Gradually, he stopped collecting donations, playing one side of the village against the other (ibid.).

First, I started with Domkhar Phu, then Barma, but I kept on collecting donations from Domkhar Do until four years ago, when the other two *garas* and I stopped collecting donations from this village also. [...] Once Drukchen Rinpoche²³ came here and we were not allowed to see him; we were not allowed to come for the teaching. But I prepared a tent here and prepared everything for the *lama*. We cannot cook for *lamas* so I brought a cook and everything from upper Domkhar. Barmapas and Gongmapas helped me. I went to the *lama* and he accepted my offering. He gave us a little teaching and other villagers finally came too.

This is one of the many ways in which he contested a system that oppressed him. Now, Tsering Angdu no longer has to wait for collections: those who need his services have to pay him and he is proud to say that he sets the right price. As he recalls, “The beginning of my life was very difficult but the end of life is becoming better. Now I am not a slave or a servant anymore.” At the age of 75, he has spent his whole life fighting against caste-based discrimination and resisting social boycotts and intimidation. He has had to fight, sometimes physically, as he was unable to advance his interests through village institutions, which only reproduced inequalities. However, he has not managed to reform all of them: at village gatherings, Tsering Angdu and the other *garas* still sit behind women and children, at the end of the *gral*.

Both examples illustrate how institutions – notably institutionalized practices of discrimination and domination based on an ideology of castes – reproduce unequal relations. But institutionalized practices are not immutable: institutions and power relations can be contested, changed, or reinforced, although changes tend to be resisted by those endowed with power. Road negotiations are embedded into Ladakhi institutions and therefore governed largely by the ethos of conflict avoidance, but questions of power and agency should not be ignored. It is fundamental to understand under which circumstances people choose to abide by rules or, on the contrary, to contest them, and who these rules serve. Institutions such as Ladakhis’ ethos of conflict avoidance can also serve the powerful, notably by suppressing the expression of dissent.

²³ Gyalwang Drukchen Rinpoche is the head of the Kargyut Drukpa lineage.

This point is developed in the next section, in which I deal with concrete examples of road negotiations and try to show how Ladakhi institutions and power relations structure negotiations and determine relative gains and losses within villages.

3. Road negotiations, power, and institutions

“Power is important”

I now turn to the phenomenology of the landscape, i.e., how negotiations and individual practices shape road trajectories. Different stories illustrate the respective roles of power relations and institutions – and power in institutions – in road negotiations. We saw in the first section that *Meme* Tashi in Khaltse owes his wealth to a large extent to his shops and land that conveniently borders the road. I once questioned him about the negotiations and combination of circumstances that led to this fortunate situation. In response, he mentioned two roads: the road to Leh, which was built in 1960, and a road that was built in the upper part of the village between 2003 and 2005, and which cost him some of his land. The two roads represent two different outcomes of road negotiations (*Meme* Tashi, Khaltse, 3 October 2007).

Me - Were there lots of discussions regarding the trajectory of the road in the village in 1960?

Meme Tashi - Not a lot. They just built it. There were no objections. Today is different. For instance, they [the PWD] recently built a link road in the village. I opposed them for two years as it passed through my stables. But the road was going to the *gonpa*, so the *rinpoche* from Lamayuru asked me to give my land and I gave it for the road. I am still waiting for compensation though, after two years.

- Was there a lot of pressure on you?

- I pressured! [Raising his fist]

- Do you think people asked the *rinpoche* to ask you?

- Nobody asked the *rinpoche*. He was thinking about his *gonpa*.

- So he asked and you gave it?

- Yes.

- You must have accumulated a lot of merit on that day, more than by building a *stupa*.²⁴
- Yes, you're right! [Laughing]. But I also build *stupas*.
- In the 1960s, did anybody oppose the construction?
- Everybody was happy. Norbu Sahib and Dawa Sahib [the engineers in charge of road construction in Ladakh from the 1960s to the 1980s] could make no mistakes. Not like now.
- Did you lose any land?
- No land! [Laughing] I was chief and mate. I was clever. I was more influential than the *goba*. Later, when I was *goba*, I carried a whip to beat those who disagreed. When I was a *chowkidar*, everybody, even officers, was afraid of me. I had a fight about the road right here, in the street...
- Who lost land at that time?
- Many villagers. Ten to twenty houses. Engineers asked me to scare away any villager who would oppose them. One day, an engineer accidentally measured my land. I beat him. What had happened was that some villagers had bribed him, this Kashmiri pandit.²⁵ That's why he was measuring my land. So I beat him.
- How did you manage not to lose any land but to have so much land on the road?
- The canal was the separation. I had the road built below it. All the land on that side of the road is mine, with all the shops: 24 shops in total. Power is important!

The story, which seems at odds with Ladakhis' ideal of harmony and conflict avoidance, represents asymmetries of power and people's ability to shape the road's trajectory to suit their interests. In 1960, *Meme* Tashi was certainly lucky in having his land ideally located but as he says himself: "Power is important." Through strength and persuasion, as exhibited by his use of coercive power, his influence over the engineers, and his position as chief and mate, he managed to impose his will and shape the trajectory of the Srinagar-Leh road. Even before he was *goba*, because he was employed in the road's construction, he managed to influence construction plans. Other villagers did not have such influence and consequently had to suffer losses.

²⁴ In the Buddhist economy of merit, s/he who builds a *stupa* or carries out virtuous deeds is rewarded with merit, generating positive *karma* (Gutschow 2004).

²⁵ The story of the corrupt Kashmiri pandit was confirmed by Bakula Rinpoche's secretary and in an article dated 1960 (see *The New York Times* 7 February 1960).

The story of the road built between 2003 and 2005 is also indicative of power relationships and how these are challenged, changed, or reinforced. This time, *Meme* Tashi was in the opposite situation – that of the powerless – and he lost his land to the road, saying that he gave it up when the *rinpoche* from Lamayuru asked him to do so. This is plausible since the interests of the *gonpa* are often well represented, heard, and respected in Ladakh.²⁶ When a road is built in a village, it often goes up first to the *gonpa*, and religious markers on the landscape (*stupas* and *mani* walls, for instance) are often taken as reasons not to build roads at those points. In Lingshed too, the dirt track stops right in front of the nunnery's land, whose patron is a *lama*, and restarts just after it. People rarely dare oppose the will of *lamas* and if a dispute erupts it is often settled in favour of the *gonpa*. But in *Meme* Tashi's case, what actually happened was very different from his version. Other villagers told me that he had never given his land to the *gonpa*: in fact, he had opposed the construction of the road for two years to preserve his stables. The *rinpoche* asked many times but *Meme* Tashi always refused. When he once left the village for a whole week, the contractor took advantage of his absence to destroy the stables and build the road. When *Meme* Tashi returned, the land had been requisitioned and he had no choice but to accept it and claim the compensation for the land taken.

"Power is important" and in both cases the road came to sanction existing power relations and the use of force.²⁷ People's ability to influence a road's trajectory generally depends on their relative degree of power, which could be based on their place within the village hierarchy, as in the case of the *rinpoche*; on their position as privileged interlocutors with the construction company and officials; but also, as the next example will show, on their position within a minority/majority situation. Whereas institutions such as the ethos of conflict avoidance and search for a negotiated agreement did not have much influence in the case of the first road built in the 1960s – when *Meme* Tashi clearly went against convention by using coercive power and violence – they did play a role in the case of the second road: by giving credence to the

²⁶ How land reforms that would have curtailed monastic estates were rejected in Ladakh under pressure from the public, monasteries, the All-Ladakh *Gonpa* Association, and the Ladakhi Young Men's Buddhist Association are a case in point (see van Beek 2001: 533-4).

²⁷ As Sikor and Lund observe: "Violence is often an integral or underlying feature in struggles over property, sometimes preparing the ground for new legitimizing practices. Violence, force and deception are powerful instruments in establishing 'settled facts' on the ground [...], and fear and risk may be as common motives for compliance as belief in power's legitimacy" (2009: 14).

rinpoche's demands, which determined the final outcome of negotiations; and by legitimizing the decision passed. Although *Meme* Tashi disagreed and fiercely opposed the *rinpoche*, he also legitimized the decision ex post by endorsing it in accordance with Ladakhi principles of decision making and conflict avoidance: "The *rinpoche* asked for my land, so I gave it."

In contrast to *Meme* Tashi during the construction of the Srinagar-Leh road, the women in Skurbuchan whose story I previously introduced were not as successful in advancing their interests. They were also in a weak position, not because of their status as women, but rather because they were in minority (Tashi Kunzes, 19 April 2007):

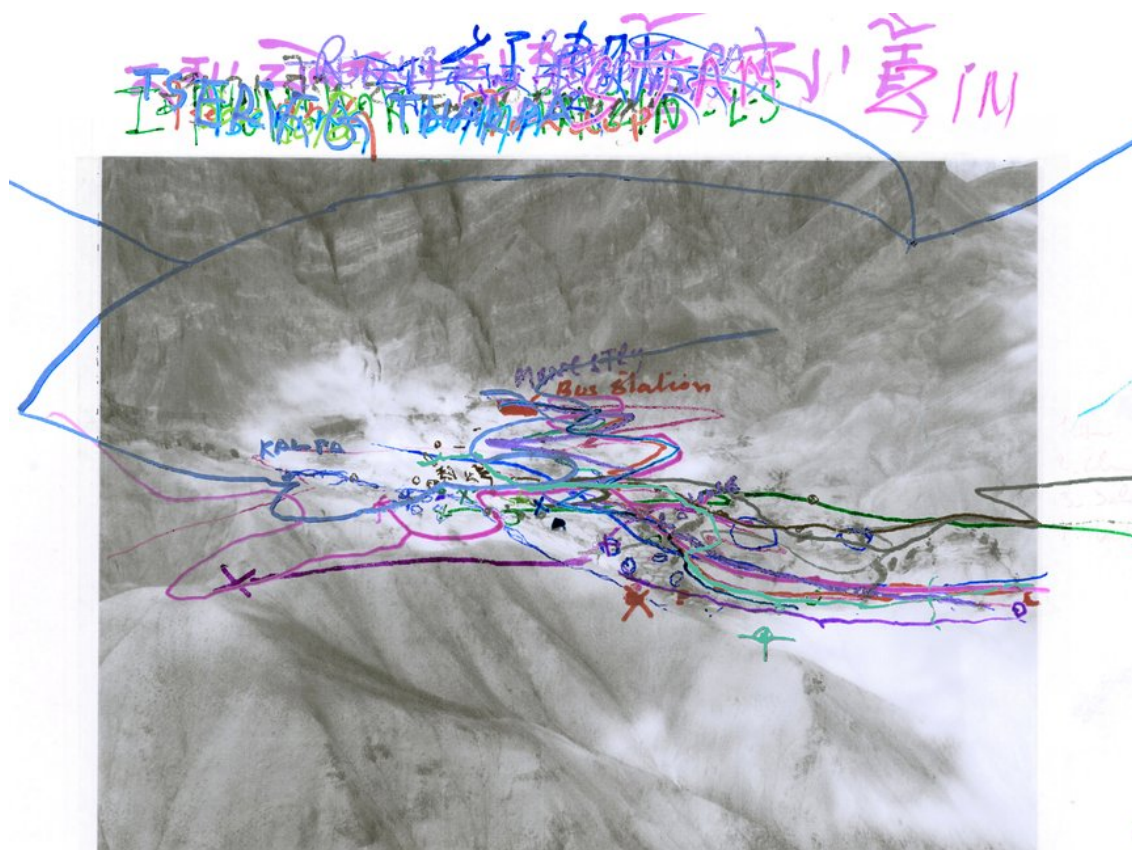
We tried to object to the government and the contractors, but we cannot object to the villagers. Because most villagers agreed with the road and gave their land, we could not stop it. A villager stopped the construction for two or three days. After that, they went on building the road as planned. If they had stopped at the beginning, it would have been possible. But now it is not possible. Some people asked to shift [the road] a little bit, but the engineer didn't care and went straight. [...] Everybody's giving fields and everything for the road to be built. We cannot refuse.

People can oppose the government or contractor and in practice often negotiate with them, but they cannot confront villagers if the majority of the village wants the road. If villagers give up their land, others also have to. The two other women, Dolma and Yangjor gave similar reasons (ibid.): "We, the two families didn't want the road to cut [through] the fields. But the other family said [that] two families stopping the road would never work. If the others had opposed..." The majority's position as a group creates enough pressure to coerce unwilling individuals to give up their land. As the *ex-goba* confirmed: "There are some differences in opinion but it depends on the majority of the people" (Skurbuchan, 18 April 2007). As one of my translators summed up after a long conversation with the *ex-goba* and his two fellow villagers: "There is no force that the government wants the road to be built here or there. Everything takes place according to 'the willingness of the village'" (Skurbuchan, 19 April 2007).

The “willingness of the village”

Discursively, the expression “willingness of the village” represents as powerfully the idea of consensus as it hides the disunion and conflicts that take place during the process of negotiation. It sums up the necessity of aggregating many diverging views into a single trajectory for a single road to be built. But what did the “willingness of the village” look like before this? I asked people in Lingshed to individually draw where they would like the road to be built (focus group, Lingshed, 12 November 2007).²⁸ As Figure 5.4 shows, “road proposals” more or less cover the entire village area because there are as many road proposals as there were group participants. Should the road go through the centre of the village, on one side, or on the other? People generally want the road to lead to their homes or be adjacent to the fields but not to be built through their fields. The road should also go to the hospital, the school, and the *gonpa*, but besides this: should it also connect other villages or lead to pastures? The village is very widespread, both geographically (circling the village takes four hours) and in terms of elevation (nearly 400 m of elevation separate the lowest house from the highest). In the figure, roads span the entire area of the village and where the road is built has huge consequences for people. Therefore, out of these many contradictory and irreconcilable voices, how can a single road be built and how did engineers discover that the piece of dirt track in Lingshed represented the “willingness of the village”?

²⁸ I distributed an A4-size picture of Lingshed taken from the Hanuma La to 16 participants present at the meeting. I asked them to map their houses, their fields, and to draw the road where they would like it to be built. We then exchanged maps between different participants for them to comment on. Figure 5.4 shows the 16 different maps aggregated into a single image.



5.4. Drawing the road in Lingshed

Construction guidelines state that villagers²⁹ should be consulted and that a transect walk should be undertaken (Ministry of Rural Development 2004). But in practice, when I asked Lingshedpas how the road's trajectory had been decided, the answer was very contradictory (focus group, Lingshed, 12 November 2007):³⁰

First villager - It was decided by the councillor last year.

Second villager - No, the councillor and engineers discussed with the villagers last year.

Me - Was there a meeting organized within the village to discuss it?

²⁹ "Key informants" and "representatives from the entire community" (Pattanaik and Pearse 2006: 12).

³⁰ This kind of observation was noted on a wider basis in the World Bank study as project-affected persons (PAPs) reported a lack of information in the alignment and construction process. In Arunachal, for instance, 90.7% reported that they had not been informed. In J&K, only half the PAP said they had been informed; slightly over a quarter of the people (27.3%) knew that a village council meeting had been organized, out of which only 79.3% participated. This represents an average of 4.3 people per project. In J&K, only 26.3% of the PAPs participated in the transect walk, representing an average of 5.3 people per project (12.5% only in Uttarakhand). In most cases, only the *panchayat* members along with officials did the transect walk. "Participants said that they were not consulted about road finalisation, but officials consulted among themselves. The villagers said they had to agree, as they were helpless" (Faith/CES 2008: Ch. 6, p. 24). About 84.8% of respondents said that no suggestions were made during the transect walk and 87.6% said that the results of the transect walk had not even been discussed (100% in Mizoram). Contrary to what engineers' manuals prescribe, villagers are frequently not consulted

Third villager - No, no!

Fourth villager - Yes! Yes! There was a thorough discussion last year. During the measurements, all of us, the monastery and villagers were together there but for the construction, people were not there. They brought their own labour and contractor. Then the head of the *chomo gonpa* [nunnery] opposed the road. He agreed to the road but on the condition that it remained at some distance from their fencing. After that, the construction stopped.

Thus, there was a great deal of disagreement regarding the decision-making process. ‘Who had been consulted?’ ‘Was a meeting organised and who was invited?’ ‘Who made the final decision?’ All were highly debated questions. Some claimed they had not been consulted. It appeared that a meeting had been organized but it was not clear who had been invited; it seemed that some people had not been aware (or claimed so) of it. For some, it was the engineer and councillor who had decided; for others, it was the villagers. The village has to decide but if it is a heterogeneous community of people with diverging interests, then who has the power to decide for “the village”? How can consensus ever be reached on the building of a single road?

Engineers, contractors, and villagers

Being able to witness a road survey in a village and see how engineers deal with contradictory demands would have been extremely informative; unfortunately, this never happened³¹ so I had to rely on engineers’ and villagers’ testimonies. During a participatory field enquiry session in the village of Domkhar Gongma – where a road that had been under construction for the past 20 years had just reached the village – we tried to re-enact a road survey and transect walk. Participants who played the different characters – villagers, engineers, and contractors – attempted to reconstruct the scene. The play soon turned into a big farce in which engineers tried to convince villagers that the road would bring them development and prosperity, while two villagers who refused to see their only field taken up by the road tried to bribe the engineers and contractors

³¹ Although I often asked engineers in Leh and Khaltse to include me in such an exercise, it never occurred.

with *chang*.³² After much *chang*, force, and persuasion, they finally managed to have the engineers change the road's alignment. The scene was hilarious and people's laughs encouraged the actors to add more persuasion to their game. But the re-enactment was more of a speculation as it appeared that most people had not been present during the transect walk and the road's trajectory had been decided without their consent. After the play, the few who had been present stood up and spoke (focus group, Domkhar Gongma, 1 October 2007):

Namgyal - I'll tell you in detail what happened during the survey. The *baboo* was from Khaltse. He started to measure and the helpers were from Kurambik.³³ The *baboo* himself said that the government would have to give a lot of compensation if the road happened to go [through] the middle of the village, crossing the fields. So HE changed [the trajectory] to go to this mountain, less fertile area, less expensive. Now these people are blaming us for opposing it. But it was the *baboo's* choice. [...] It was not ours. [...] We are just being blamed but it is the government that chose to take it up into the hillside.

Others [trying to downplay the importance of the play]: This is just a play. It is just an example. We were just playing...

Spalzung [who had also been there when it happened, intervened] - I'll tell you what happened that day: It was the fifteenth of the first month and nobody was around to help the *baboo*. I went to catch the measurement rope.

What was interesting in this case was not the play itself but the reactions it triggered and the new information that was disclosed. In spite of the importance of the road and its consequences for villagers, most people had no idea what had happened or how the trajectory had been decided. In any case, the road's trajectory had been decided by the engineer himself or by a very small committee. Most villagers had not been consulted and obviously held those who had been present during the survey process responsible for the alignment, even insinuating that the latter had bribed the engineer to their advantage.

³² The idea that some villagers must have bribed engineers was often given to me as an explanation for a road trajectory that seemed irrational or extremely beneficial to some of the villagers.

³³ Kurambik is a village on the other side of the river, meaning that its inhabitants were impartial and had no interest in whether or not the road passed through a specific place

What is even more disconcerting is the date chosen by the engineer to conduct the survey. In general, the fifteenth day of the month is Amitabha Buddha's Day, which marks the first sermon of Lord Buddha. As such, it is a day of celebration. The fifteenth day of the first month of the Tibetan calendar – *Tangpe Chonga* – is even one of the most important days of the year for Ladakhi Buddhists because it marks Buddha's entry into his mother's womb. On this occasion, prayers are held both at home and at the monastery (Kaul and Kaul 2004: 130), and laypeople and *lamas* circumambulate the monastery, carrying out prostrations. *Tangpe Chonga* is also the "Day of Miracles", the last of the 15 days during which Lord Buddha accomplished one miracle per day (*gochak*). For the *Gelugspa* order, it is *Molam Chenmo*, the "great prayer" festival. Thus, the fifteenth day of the first month is not a random date. The engineer could not have ignored it and it is hardly conceivable that he did not consciously choose this day to visit. He probably knew that most people would be busy or away and that, by finalizing the alignment that day, he would avoid most opposition. Finding the "willingness of the village" this way would be much easier. The same technique seems to be used by contractors. As Kunzes in Skurbuchan told me, "When the contractor came, he asked our neighbour not to tell [anyone] he was here, he said he was [too] shy to meet us." Avoiding situations in which discontent might be expressed seems to be one of the first strategies that engineers and contractors use to manufacture compromise over road alignment.

Another strategy used by engineers consists of laying the blame on the contractor, whose role and power are important but only loosely defined. In Skurbuchan, we saw that people bargain with the contractor and that his role and influence can have a major impact on people's well-being, for instance, by providing complementary means of cultivation or irrigation, or a canal or retaining walls to protect fields from erosion. Moreover, in Khaltse, it was the contractor who, after two years of opposition, decided to destroy *Meme* Tashi's stables and build the road through his land. Far from being a single executant, the contractor appears to enjoy real power, which he exercises at several stages in the process. Yet the discretionary role of the contractor is mentioned nowhere in the official literature or in PMGSY road directives.³⁴ The power of the

³⁴ The issue is not exclusive to Ladakh. The World Bank-commissioned review found that, in Arunachal Pradesh, for instance, land acquisition was "mainly handled by the road contractors" (Faith/CES 2008: Ch. 6, p. 25). In Arunachal and Mizoram, the process is supposed to happen through "voluntary donation"

contractor might be even more important given the absence of legal codification: the limits of his power and responsibilities have never been defined. In Skurbuchan, the lack of responsibility resulting from this situation enabled the engineer and contractor to mutually blame each other (Rigzin Dolma and Sonam Yangjor, 19 April 2007): “Now the contractor is going straight; he ignores us. I requested the contractor, but [...] he never listens. He says it is the fault of the *baboo* while the *baboo* says it is the fault of the contractor. What shall I do?”

However, the most frequently used technique consists of ignoring village plurality and representing the village as speaking with one voice or, on the contrary, in instrumentalizing village power relations and peer pressure to suppress dissent and create “consensus”. Sometimes, the complexity of villagers’ demands, conflicting interests, and asymmetries of power are simply ignored and the situation is simplified: for engineers, villagers are supposed to speak through the voice of their leader. As a PWD engineer in Leh told me (22 July 2007): “The *goba* represents the village majority.³⁵ We discuss [matters] with him: he represents the will of the people.” When I asked another engineer whether or not villagers could change the road’s trajectory, he replied (Khaltse, 27 July 2007): “Not one villager. The village’s *numberdar*,³⁶ MLA, councillors, yes. Then we look at possibilities and costs.”

Taking the voice of the leader as representing the “willingness of the village” is one of the methods that engineers use to suppress dissent. But discussions with them showed that they were perfectly aware of village politics. They knew that several contradictory voices and irreconcilable diverging interests existed within villages and that, due to internal dynamics and power relations, powerful voices would prevail over weaker ones. Engineers were simply using village politics to their advantage: “If somebody doesn’t want the road, we try to talk with other villagers and try to make them convince this person. They can’t resist the whole village” (anonymous, Leh, 22 July 2007). Kunzes also mentioned this practice when relating a story about someone who had opposed the road for days: “Some officials came from Khaltse and some elders from the

(ibid.: Ch. 6, p. 15). The study also notes that “the majority of people unwillingly consented to donate their land voluntarily” (!) and in blatant violation of PMGSY rules, since “no MOU was signed between landowner and project officers for land transfer” (ibid.: Ch. 6, p. 25).

³⁵ Saying that the *goba* represents the village “majority” is often inexact: *gobas* are not always elected but often designated in turn.

³⁶ The registered representative of a village community for the payment of government dues.

village talked with them, and then they agreed to build the road from here” (Skurbuchan, 19 April 2007).

Similarly, based on his recent experience, an engineer described to me what he called the “wait-and-see technique” (Leh, 22 July 2007):

A few days ago, I was in a village called Shara, near Karu. I was drawing the map and taking measurements. The valley there is narrow and just between the river and the cliff lie three *stupas* and a field. So the plan was to build the road on the field. The owner of the field came to me and requested [me] to build the road on the river. He refused to give up his land. I told him I couldn’t do that: the river was low but the level could rise any time and destroy the road. And whose responsibility would it be if that happened? Another solution would have been to destroy the *stupas* but if I did that I told him it would affect the sensitivity of other villagers. I cannot do that either. I went to see the other villagers, the *goba*, the elders [...]. I told them I couldn’t work like that and I left. Now, we’re waiting. We’ll see what they decide. We generally adopt a ‘wait-and-see technique’. We have other works to do in other villages. We’ll come back later.

In this case, the instrumentalization of village politics was obvious. The engineer knew that the voice of this contesting villager was in a minority: by reporting it to other villagers and the *goba*, he was simply giving internal power dynamics time to act. As the construction of the road was delayed, pressure would probably increase on this individual until he yielded to other villagers’ wills and agreed to “voluntarily” give up his land for the road. As a retired engineer explicitly told me (Leh, 25 April 2007):

When we build the road, some conflicts may arise between villagers. We ask the *goba* to come, other villages, we organize a meeting [...]. With village pressure, people feel stupid in the end. But in some cases, work can stop for two years. The PWD switches to another village and then comes back when villagers have reached an agreement.

One advantage of this simple mechanism is that it spares engineers the trouble of resorting to burdensome administrative procedures: “There are different methods of convincing people. Most of the time, villagers convince each other. We never force

people to give up their land.” Powerful legal instruments such as the Land Requisition Act or Ribbon Development Act – which allows competent authorities to clear land up to 70 feet to the left and right of the road centre – exist but engineers in Leh said they had never used them (17 January 2008). In practice, as another engineer in Leh put it, other means are preferred (25 April 2007): “Sometimes we convey a meeting and try to convince villagers. We sit with them and explain: ‘Why should you suffer for one person?’”

In most situations, engineers and contractors do not have to use force because they use different techniques to evade negotiations, silence opposition, convince people, or foster compromise. In fact, decision making and persuasion is delegated to the villagers and left to internal village dynamics and power relations, which work to manufacture “the willingness of the village”.

“There was no pressure”

These examples demonstrate the role and influence of power relations in road negotiations and strongly suggest that villagers come under significant pressure to accept the decision. However, when looking at how villagers understand processes of negotiation, the picture becomes more ambivalent. As Pirie shows, the general attitude in Ladakh is that disputes should be dealt with internally, within the village and its structures of power and authority, and that disputes should be avoided (2002). By delegating road negotiations to the village level, engineers also abide by Ladakhi conflict resolution and decision-making mechanisms. Engineers might benefit from Ladakhis’ strong moral principle that places community interests above individual ones but they also abide by customary principles according to which conflicts should be dealt with internally and power devolved to lower instances.

This general attitude to conflict often emerged when discussing road negotiations with participants, notably in the words of Skurbuchan’s *ex-goba* who insisted on the absence of dispute and the fact that negotiations were dealt with “internally”. It arose in attempts to minimize the level of disagreement that took place regarding road construction; one

time, it resulted in one of my interpreters being uncomfortable at uncovering people's disputes and voluntarily mistranslating interviews in order to maintain the image of a harmonious community.³⁷

In negotiation processes, this general attitude to conflict also restrains villagers from fully expressing their dissent and arguing in favour of their interests. Tashi Kunzes mentioned how she could not object to other villagers. While Rigzin Dolma and Sonam Yangjor voiced their discontent (which my translator tried to hide), the two women mentioned a young man who had passed by and was walking towards the village: "This boy is the representative of the area, he is also not listening to us. We are from the same village, so we hesitate to tell him" (Skurbuchan, 19 April, 2007) The two women refrained from complaining to their representative in order to avoid conflict and preserve harmony within the village.

Another story gathered in Skurbuchan reveals the strength and influence of such attitudes to road construction negotiations. In January 2008, I finally managed to meet the man who had notoriously opposed the road to Skumbardo and who I had been trying to meet for the past ten months. *Ajhang* (uncle) Dorje had had to bear heavy losses because of the construction of the road to Skumbardo and was seriously dissatisfied. Although the decision process and its consequences had been quite unfair, he finally chose to accept the new trajectory and not to oppose the village. I knew that my participant had initially opposed the road and I asked him if he was satisfied with how it had been constructed (Skurbuchan, 8 January 2008):

Dorje - No, not really. Initially, they [the engineers] had planned to build the road on the other side of the river. But then the survey was changed. [...] The road was passing [through] my land. I had built a canal to bring water there and after three years of hard work it was finally completed. Now this land is lost. [...] I had about 100 trees above the land where the road was built [...] and they died. They were poplars, about 15 years old. [...].

Me - Why was the road initially planned on one side and then built on the other?

³⁷ Whereas a villager told me that she resented the road – which she said was useless and had only caused destruction – and that other villagers were indifferent to her lot, my interpreter translated this as "she is very happy with the road and finds it very useful", which matched the version previously given by the *ex-goba*.

Dorje - First, the other side is a cliff so although there is only a little land there it involved a lot of blasting. It was costly [...]. Also, there was a *chorten* on the other side so the *lamas* and villagers did not want to destroy it. But I think an important reason was that the *gonpa* owned houses on that side of the river [where the road was built]. The *lamas* were happy to have the houses destroyed for the road in order to receive compensation. [...] Everybody in the village knows it. [...]

Some *lamas* and villagers must have spoken to the engineer. The survey had been made four times before and building on the other side was physically possible. But then it was changed, mainly because of the *chorten*. I tried to convince the engineer that it was better on the other side but the villagers and *lamas* came to see me. The blasting could have damaged the *chorten*. So I accepted. [...] I still think it was better on the other side. It is painful when I think about the trees I have lost. I lost most of the 50 *kanals* [2.5 ha]. Most of it is gone or useless now.

To sum this up, *Ajhang* Dorje had wanted the road to be built on the other side of the valley as initially planned. However, after a fourth survey, the plan was finally changed due to individual demands, mostly because *lamas* at the *gonpa* wanted to receive compensation for the destruction of monastery-owned houses. He disapproved of the new road alignment, which would cause him important losses, including a newly built canal, 50 *kanals* of land, and 100 mature poplars. At a time when *Ajhang* Dorje was struggling financially to send his daughter to college in Jammu, this had serious consequences for him and his family. He also knew that the reason advanced – protecting a *chorten* – was just a pretext.³⁸ He tried to change the engineer's mind but when the other villagers and *lamas* came to talk to him about it, he accepted their decision, using the same *chorten* as a pretext. One might therefore assume that it was pressure from other villagers – as engineers themselves had described as a mechanism –

³⁸ Technically, nothing prevents one from moving a religious monument, whether a *chorten* or *mani* wall, when the need arises. As a highly respected *lama* in Leh explained to me (*Lama* Konchok Pandhey, Leh, 18 October 2007), a *stupa* or *chorten* is consecrated through a ritual but it can also be deconsecrated and moved: "A consecration ritual means if this is a Manjushri *stupa*, we invite the real Manjushri from the celestial sphere to come and enter the object [...] So people believe, people respect it, people request it, people pray. When people want to destroy the *stupa*, there is a kind of ritual: we take Manjushri out of this *stupa* and put him in some mirror or somewhere and keep it here. The *stupa* becomes like a dead body, without Manjushri. No spirit is there, only clay. So we can destroy the *stupa*. Then another *stupa* is built elsewhere and the spirit is put in this other *stupa*." In practice, numerous *chortens* or *mani* walls – consisting of votive stones that can simply be moved – are cut, destroyed, displaced, or rebuilt with the consent of the monasteries and villagers concerned (the roads to Hemis *gonpa* or Takmachik are good illustrations of this).

that had made him reluctantly accept the decision but when I asked him, he categorically denied it (ibid.):

Dorje - There was no pressure. There was a *chorten*, so there was a need to preserve it at any cost.

Me - But all these negotiations: did they create any tensions in the village?

Dorje - No, there were no tensions; there was no problem.

Ajhang Dorje had to accept the decision against his will but he denied the presence of peer pressure. He and others in the family knew where their interests lay and were unanimously opposed to the construction of the road on that side of the valley. The circumstances in which an unfair decision was imposed on him could have been conducive to a heated situation but according to my participant there were no tensions, no pressure, and no problem. In the end, *Ajhang* Dorje had fully endorsed the decision of the village.

This statement is hardly understandable without taking into account Ladakhis' "moral attitude to conflict according to which all forms of quarrelling, fighting and expressions of anger are negative and dangerous" (Pirie 2002: 7). As long as the affair did not degenerate into a dispute, there were no tensions. Just as dispute settlement is not directed at any idealized form of justice or fairness and is simply "something that 'has' to be achieved," (ibid.: 105), in road negotiations an agreement is above all something that has to be reached, whether or not it is fair. Collectivity exercises authority over the individual but as the principle is entrenched in people's behaviour, they might not even feel the pressure as such, as it appears in *Ajhang* Dorje's denial of any form of pressure and his endorsement of the final decision. He lost land and trees to the road: this was tragic but at the same time accessory as long as harmony in the village had been preserved.

People's agency and the "Buddhist method"

Institutions shape negotiations but they do not determine their outcome, and abiding by rules of conflict avoidance is also a choice and negotiation tool. As in the different cases

already discussed, people can also choose to contest institutions by resorting to private negotiations or violence and conflict. The following extract from an interview conducted in Domkhar Gongma illustrates how different strategies might be used in a sequence (Samstan Tundup, Domkhar Gongma, 30 September 2007):

- At the beginning, there was a meeting with PWD and we signed a paper stating that we would give up our land wherever the *baboo* had decided. But after that, some people changed the rules, they refused and had the survey changed. They surveyed twice [...]
- Was there some pressure applied to people to accept?
- No, a little bit.
- What was the argument used?
- That it will benefit all of us if the road is built in the middle of the village [...] We also used the “Buddhist method”: not being selfish. That way, we convinced Lama Wangchukpa, who had stopped the road for two years. People from the upper part [of the village] also came to me and I gave up my land.

In this example, rules that were agreed on at the initial meeting were later changed by individuals outside village institutions. In Ladakhi villages, community interests might take precedence over individual ones but community members sometimes have to be actively reminded of the principle. People use what my participant called the “Buddhist method”³⁹ to convince others, i.e., by reminding them that harmony and common interests should prevail over selfishness. The “Buddhist method” is only one of the negotiation tools available as, depending on circumstances, individuals might choose to bring negotiations within village institutions, using the threat of conflict and disruption of harmony, or outside institutions and contrary to norms of conflict avoidance.

In the different accounts given in this chapter, many villagers affected by the road tried to influence the process outside of village assemblies. In Lingshed, the head of the *chomo gonpa* did not oppose the road at the village meeting but did so during the construction phase, as probably did the owners of the fields and forests that accounted for interruptions to the road. Also, in all the episodes cited above, people came to see the engineers and contractors directly to complain and attempt to change the road’s

³⁹ Buddhism condemns selfishness, notably as the cause of suffering.

trajectory. The most eloquently expressed case was that of *Meme Tashi*, who did not hesitate to use his influence with engineers, his position with the PWD as mate and *chowkidar*, or a whip to beat those who opposed him.⁴⁰ The fact that he “had a fight about the road right here, in the street” (*Meme Tashi*, *Khaltse*, 3 October 2007) metaphorically materializes the act of taking negotiations beyond village assemblies. His use of coercive power – with villagers and the engineer – also clearly manifests the choice to carry negotiations beyond Ladakhis’ ethic of non-violence and harmony.

When do people choose not to abide by institutions? As in Benda-Beckmann’s concept of ‘forum shopping’(1981), villagers tend to choose between different methods depending on the chances of success and on their power relative to others. This behaviour is not confined to road negotiations: *Tsering Angdu*, for instance – because he was a *magpa* and *gara* and therefore in a weak position – challenged institutions from the outside, physically fought, created disputes, confronted village discriminatory rules and social boycotts, and did not hesitate to leave for Leh to defend his case.⁴¹ In that specific case, the ethos of harmony and conflict avoidance tended to play against him and in favour of the status quo because institutions embody power relations. In the case of road construction, villagers who are in a weaker position within village institutions tend to choose different means of negotiation, often because they are in a minority situation and the outcome is uncertain. In the examples I have presented, most individuals who were in such a position failed, with the exception of *Meme Tashi* in *Khaltse*, who wielded significant power due to his privileged position at the PWD.

When put together with engineers’ strategies, the dynamic is interesting. While individuals in a minority situation try to negotiate directly with the engineers, the latter attempt to bring negotiations back into village assemblies, where they know the ethos of harmony and conflict avoidance will silence opposition. As a result, the role of village assemblies is ambiguous: they could work in favour of a wider representativeness of decisions⁴² but most of the time they serve the powerful and tend to suppress dissent.

⁴⁰ Another time, *Meme Tashi* also told me that he did not hesitate to bring a case to the court in Srinagar when his right to the land was challenged by a rich landowner in the village.

⁴¹ Such behaviour could also be compared to Scott’s seminal work, which shows that “relatively powerless groups” tend to rely on a “subtle mixture of outward compliance and tentative resistance” (1985: 289) such as “foot dragging, dissimulation, false compliance, pilfering, feigned ignorance, slander, arson, sabotage”.

⁴² And they would have in *Meme Tashi*’s case.

In fact, one wonders whether villagers might not voluntarily evade collective negotiations conducted through village assemblies. If village assemblies and institutions suppress dissent, those in a weaker position have no interest in attending them. In Lingshed, a meeting was held but some claimed they had not been informed; in Domkhar Gongma, the large majority of villagers were absent from negotiations. The report commissioned by the World Bank also found that only half the people had been informed of the road construction project, less than a quarter knew that a village meeting had been organized, and among them most did not participate in the meeting or transect walk to finalize the alignment. People said they were frustrated since “they had to agree, as they were helpless [*sic*]” (Faith/CES 2008: Ch.6 p.24). That people affected by road projects did not bother to argue their case seems aberrant, given the consequences that the road and road construction have for them. Such weak participation strongly suggests that people were either not informed or voluntarily chose not to participate because they were helpless in such a power configuration.⁴³

Consequences of powered negotiations

From the previous discussion, it appears that the outcome of road negotiations is less the result of consensus than the expression of existing power relations. As a consequence, whether it is through village assemblies or private negotiations, some vulnerable individuals and households might see their interests underrepresented: they risk being harmed considerably more than others and could miss the immediate benefits arising from road construction.

The literature shows that road planners are aware of the potential detrimental effects induced by road construction and that measures exist to minimize or mitigate such consequences, but it seems that these measures are rarely applied.⁴⁴ In practice, road

⁴³ Interesting elements could be drawn from the literature on displacement but this is beyond the scope of this thesis.

⁴⁴ Companies like BRO obviously seem to have a more pragmatic approach by denying the problem: “When a BRO bulldozer reaches a village for road formation cutting, the villagers get together and dance with joy as they know that now their village, which had no road earlier, would be linked with a road that would bring far-reaching benefits to them” (Ministry of Defence 2003).

negotiation and land acquisition processes potentially give place to all sorts of flaws and abuses.⁴⁵ At the time of fieldwork, people in Domkhar and Skurbuchan were still waiting for compensation; I was often told by engineers themselves that the process can take up to ten years and that the state compensates at a fraction of market prices. Moreover, in addition to various flaws already observed, the World Bank-commissioned report notes that “no provision of assistance for loss/damage of common property resources; non title-holders/encroachers, loss of livelihood” were made (Faith/CES 2008: Ch.6 p.15). Because nothing is done to protect the interests of vulnerable households or compensate them for the losses they have incurred, road construction has great potential to harm indiscriminately poorer and weaker people, people who are the most likely to be silenced.

Whether poorer households are relatively more affected than wealthier ones by the destruction caused by roads is unknown.⁴⁶ However, when the average resource profile of people in Lingshed and Skurbuchan – generally small landowners with limited resources, mainly dependent on revenue from their land, vulnerable to shocks because of limited income and absence of savings – and the extent of destruction caused by the road are put into perspective, then the extent to which people’s well-being and livelihoods are affected becomes obvious.⁴⁷ If one adds that, in many cases, no

⁴⁵ For instance the World Bank report notes that, in Arunachal and J&K, only 8.7% and 11.6% of PAP were asked any household information. In general, no household survey had been conducted (Faith/CES 2008: Ch. 6, p. 15), and as a result “no provision has been made to mitigate the loss of vulnerable groups such as small and marginal farmers, women headed households scheduled community, households below poverty line and physically challenged persons” (ibid.: Ch. 1, p. 2). As the previous report notes: “Most of the project official[s] told in this regard MoU was not signed because [villagers] donated their land verbally” (ibid.: Ch. 6, p. 15). Also, no provision for compensation was made and therefore “there is no budget head to mitigate losses suffered by the community members” (ibid.: Ch. 6, p. 9). Some states, such as J&K (perhaps due to the dispositions of the National Tribal Policy) compensate for loss of assets but people were not aware that they were entitled to compensation and there was no documentary evidence that compensation had been promised.

⁴⁶ In absolute terms, households with more land are more likely to be affected since the probability of losing land to the road increases with the amount of land owned. However, that would be ignoring the influence of powered relations. In relative terms, if two households lose the same surface area of land, the household that owns less land will be more affected than the household that owns more land since the relative loss resulting from losing the same surface area is higher for the first than for the second. Hence, in theory, if poorer households are less likely to be harmed by road construction, those who are harmed are likely to be relatively more affected than richer households. Yet powered relations and positive discrimination can influence the result in one way or the other. Moreover, the loss of agricultural land also affects those who depend on it through wage labour or sharecropping agreements, so that even if they do not own the land, poorer households are still likely to be affected.

⁴⁷ The World Bank study gives quantitative data that allow us identify the average profile of affected households: small landowner (nearly often below 3 acres and on average 1.3 acres in J&K), below the poverty line (100% in Mizoram and Uttarakhand, 47.5% in J&K), earning less than Rs1,000 per month (67.8% in J&K), whose livelihood depends mainly on agriculture (97.4% in Mizoram, 61.8% in J&K).

compensation was given, that compensation might be given at a fraction of the price after a lengthy process, that no rehabilitation programme had been planned, and that no survey was done to identify vulnerable people prior to finalizing the alignment, one might expect road construction to have considerable short- and long-term consequences on the livelihoods and well-being of vulnerable people.

This is even more regrettable since roads are sold as development projects and poverty alleviation tools and, as the case study of *Meme Tashi* tends to prove, roads and road construction can have considerable positive short- and long-term benefits in terms of livelihoods. If vulnerable households had been previously identified, not only would it have been possible to spare them and avoid destroying their assets but the road could also have been used to discriminate positively in favour of them. It could have offered them short- and long-term employment possibilities; and, through a carefully chosen trajectory, it would have been possible to grant them privileged access to the road, which could have created additional livelihood means for them. Instead, the devolution of decision making to village assemblies tends to suppress dissent and favour those with access to power resources, while rules that would protect the most vulnerable households are not applied. The way in which road negotiations happen strongly suggests that road construction schemes fail to positively discriminate in favour of vulnerable households, which remain at risk of being harmed.

Conclusion

The micropolitics of roads can be reduced to two distinct phases governed by different dynamics and strategies. As seen in the previous chapter, during the first phase people fight collectively for the road to be built to their village and must remain united. This unity breaks up during the second phase. Because road construction in villages results in unequally distributed gains and losses, which depend in turn on different road trajectories, people tend to be divided. As people argue in favour of different trajectories, collective strategies give way to individual ones. People negotiate with each

On the other hand, losses due to road construction consisting mainly of agricultural land amount on average to more than Rs5,000, and account for a significant part of PAP property (in J&K, in two-thirds of cases, more than 10% of their property; for 34.6%, more than 25% of their property; and for 10.3%, more than half their property).

other, with the engineer, and with the contractor, through powered relations and within institutions. Whereas the first phase is responsible for bringing the road to the village, the second accounts for micro-adjustments to the road through the village. At the same time, the two phases are not totally independent of each other since strategies used to muster consensus around the construction of the road during the first phase can also be used to muster consensus over a particular road trajectory during the second phase. Disagreement can always be a threat to the road's construction, and the threat of not having a road works as a tool to manufacture compromise for a particular road, a strategy often pursued by engineers in Ladakh.

Out of this process, the road's trajectory is never totally set. An initial survey might be done but it can then be changed several times under the influence of either a group of villagers, one particular villager, the engineer, or even the contractor (and under the influence of workers, as we will see in the next chapter). The trajectory is always open to negotiations but the ability to change it differs among individuals. In the end, a road is built but it should not be seen as the expression of a consensus. Instead, what the road materializes is the expression of conflicting interests expressed through power relations and resolved by different means, including persuasion, individual negotiations, trickery, and force. Even if an agreement is reached peacefully and "the willingness of the village" found, the road continues to embody a relation of force and the physical imprint of a conflict on the landscape. However, the consequences of roads cannot be completely understood without paying attention to their long-term effects, which I deal with in Chapter 7. In the next chapter, I look at the politics and consequences of road construction from the perspective of migrant road workers, and at their role in the transformation of the landscape.

Chapter 6. Working on the road

“We are puppets in the hands of nature”

This chapter is about migrant road workers. It deals with the way the road affects their livelihoods and how they live with danger on a daily basis. It also looks at how their perception of the environment is shaped by their work on the road, and how workers influence its trajectory in exchange. “We are puppets in the hands of nature”¹ – as Manmohan, a road worker in Chilling, once told me (14 June 2007) – could sum up part of this relationship. Manmohan was expressing how tiny and powerless they felt compared to the surrounding gigantic mountains and the incessant landslides that would destroy whatever they were trying to create, sometimes even claiming the lives of workers. Nature played with them as it might with simple, fragile puppets. At the same time as they carved out a road and transformed the environment, the environment also acted on them and shaped the way they interacted with it. What I was to discover later was that the expression “puppets in the hands of nature” carried a deeper meaning about the lives of workers in general and its many aspects over which they seemed to have little or no control. In their stories were some recurring factors, some sort of structural forces that constrained their agency. Similar to the image of puppets was the expression “Everything depends on the mercy of god(s)”, which also conveyed how they felt compelled by overwhelming forces that shaped their existence.

As seen previously, one purpose of road construction is to provide employment and generate livelihoods; road construction is used as a poverty alleviation tool but how does it benefit road workers in reality? What are its effects on their livelihoods and well-being? As I argue in this chapter, their agency is severely constrained by structural factors that in many cases prevent them from benefiting from the redistributive effects of road construction. As a result, migrant workers see little or no improvement in their well-being as a consequence of road construction. Paradoxically, migrants have agency

¹ Manmohan used the Sanskrit word “*prakriti*”.

on the road: they participate fully in the transformation and construction of the Ladakhi environment and actually shape the road's trajectory.

This chapter is divided into three sections. The first consists of an ethnography of migrant road workers in Chilling and their families, and their daily experiences on the road. The second section focuses on their immediate experience with danger and attempts to understand the factors that structure their experience as migrants and road workers. The final section looks at the role of migrants in transforming the landscape and the agency that workers have on the road.

1. Ethnography of migrant road workers

From September 2006 to July 2009, I engaged with many migrant workers along the Zaskar Highway and collected many different stories. "Studies which treat migration as a homogeneous process, which means the same things to different groups, and at different stages in the migration process, thus only tell one part of what is really a far more complex story" (Gardner 1995: 4). This is true but out of this complexity and myriad experiences, there were also some elements shared by many workers. There seemed to be certain recurrent patterns in their choice to migrate and work on the road, and in their experience with work, death, and danger. In order to understand why migrants come to work and risk their lives on roads in Ladakh, why they accept this situation of social injustice and violence, and why they see no improvement in their well-being as a consequence of roads and road construction, one has to look at the larger framework and integrate the role of structural factors. Workers are agents: they make choices and exercise some kind of power but at the same time wider sociopolitical forces structure these choices and curb people's agency. This idea is well embodied by the concept of structural violence (Farmer 1997, 2004; Galtung 1969), which explains why some people remain more at risk of suffering and death than others.

By placing workers' experiences of suffering and violence into this larger framework, I am not trying to distort people's own perception of their condition. Das writes that, for victims of suffering, "Life appears not to be guided by laws of history and society but

by a series of contingent events” (Das 1995: 19-20). The world is felt by the victim to be “accidental and contingent in nature” (ibid.), and therefore Das chooses to represent “undeserved suffering” as a “testimony to the chaotic nature of the world”. This may be true in some cases but such an approach tends to discard any deeper understanding that people might have of their own situation. Drillers are not born drillers: they choose the occupation and certain factors help them make this choice. In Chilling, road workers were aware of the danger and risks they incurred as drillers. They expressed it when they left or said they wanted to leave for a safer job, when they refused or attempted to refuse to work as drillers, or when they said that they did not want their children to risk their lives as they were doing. They were conscious of the reasons that had pushed them to migrate, be it civil war or other factors. Jharkhandi workers were aware of the fact that the company recruited workers in the state because it was poor, badly governed, and corrupt; they wished the central government would spend as much in Jharkhand as it did in J&K. They were also conscious of being cheated and exploited. As with the image of “puppets”, they were aware of being manipulated by larger forces and they relied on the mercy of the gods that had to be tamed in a not-so-“chaotic” world. Thus, looking at the bigger picture is also being faithful to people’s experience. But most of all, “a search for meaning” does not “only give [...] legitimacy to the system” (ibid.): looking at the broader picture is necessary if one wants to understand which factors structure suffering and violence. There are too many similarities, too many exogenous elements in stories and deaths that happen on the road to ignore the weight of structural factors. By turning a blind eye to these factors, one would legitimize people’s suffering. Describing the world as chaotic offers no solution to alleviating the suffering of those who work on the road. By using the concept of structural violence, I try to understand what drives workers on the road, what structures their choice, and why they do not benefit from the road.

I propose to explore these themes through the life of Thinle Sherpa, a choice partly driven by methodological considerations and partly by emotional ones. Thinle Sherpa was one of the first workers I met when I returned to Chilling in April 2007. It was he who introduced me to the world of road workers as I followed him from morning rituals to his drilling work during the day and back to his tent in the evening. It was also with his family that I stayed in winter, sharing food and shelter. Many of the things I learnt on the road were through Thinle, and it seems natural to let his story guide this chapter.

Heuristically, his life and experience on the road contain most of the elements necessary to understand the lives of road workers in Ladakh. Also, “the mode by which knowledge is produced in anthropology is the mode of intimacy” (ibid.: 3), and in the intimacy of Thinle’s family emotional links were formed. His untimely death on the road in September 2008, a few months after I finished my fieldwork, affected me deeply and is one more reason why it is his story I want to tell.



6.1. Thinle, Zangmo and their children (Mingmar, Tashi, and Passang Dolma) in January 2008

As many as 1,200 migrants work on the four construction sites of the Zaskar Highway every summer. Among them, around 300 are stationed in Chilling, the northern end of the Chadar road, every summer. They stay in three camps situated on the side of the road at a distance of 500 m to 5 km before and after the village. All of them are migrants. I focused on two groups of workers. The first was a crew of Nepali workers (mainly Sherpas) living and working there on a long-term basis (up to six years). They were known as CPL, employed for a long period but whose contracts were renewed every six months. Most of them lived there with their families (wives and children) and were the vanguard of drillers and blasters. The second group was a crew of 48 seasonal

workers – or ICPL in BRO jargon – all men, recruited in Nagrota, near Jammu, to work in Chilling during the four summer months (June to September). Like most road builders in Ladakh, they came from the district of Dumka in Jharkhand, to which they generally returned after their four-month period.² Thinle was part of the first group: the CPL.

The life of Thinle Sherpa

Thinle was born around 1967 in a village called Kiangsing in the district of Sindhupalchok in Nepal. He was a Sherpa and grew up close to the border with Tibet (see Figure 6.2). At the age of 15, he started working far from home to supplement the household's income, when he left to sell garments on the streets of Bombay and later in Karnataka. He returned after four long years and married Zangmo with whom he had four daughters. Thinle sometimes also worked in the lumber business with Tibet, reinvesting his income to buy cows. His business became unprofitable when he started experiencing losses and in 1998 he decided to leave again, alone, to sell garments in Bombay. When he returned after a few months, he bought 50 goats, most of which died of disease. The political and security situation in Nepal was grim as the country was going through the People's War (1996-2006), and the national and local economy was deteriorating further. Thinle and his family lived with the fear of forced enrolment by the Maoists and had to face exactions from both Maoist and government forces, as both would ask the villagers for support while suspecting them of helping the enemy.

In 2003, like many others, Thinle and Zangmo decided to leave Nepal with their two eldest daughters and their fifth new-born daughter Passang Dolma. The third and fourth daughters stayed with relatives back home. Thinle and his family started their long journey in Himachal Pradesh. Thinle also returned to Bombay for three months but this time could not earn enough to support his family, so he decided to try his luck in Manali. He and Zangmo worked there for a private road contractor. Yet, as is often the case with migrants, they were cheated and never paid. When they heard that working

² The previous year, another group of ICPL workers had consisted of men from Jharkhand, Bihar, and West Bengal. Observations carried out in September 2006 among this group also provide part of the information used in this chapter.

conditions in Ladakh were better, they decided to cross the Himalayas. They worked in Stok, building walls and canals, but once again were not paid the full amount that was due to them. From there, they went to Skalzangling where Thinle worked as a mason. Here, Zangmo gave birth to their sixth child and only son, Tashi. Whereas their economic situation had been deteriorating for years, and further since having left Nepal, it started to improve for the first time, although only temporarily.

From Skalzangling they moved to Shey where they found work in stone breaking: “very hard work”, as he later told me (Thinle, Chilling, 28 June 2007). They moved to Kargil in 2005 to work in road construction for a private contractor and there married their eldest daughter to a relative. When they heard about work opportunities with the army in Batalik, they moved there, and Thinle started carrying food rations from the main army camp to advanced posts. The work was well paid but conditions were terribly difficult: he had to work at night, carrying heavy loads in the snow, and most of all he was the only breadwinner. Once again, they left in search of a better livelihood.

In November 2006, Thinle and his family reached Chilling. Some of their relatives were already working there and he had heard about work opportunities with BRO on the Chadar road. This is how he recalled his arrival in Chilling when I first met him (Thinle, Chilling, 21 April 2007):

The officer recruited us for that purpose [drilling]. We didn’t want to, we were scared, but the officer said, “There are no vacancies in road maintenance and embankments, there are only vacancies in drilling.” We had heard about the deaths.³ The officer didn’t tell me about the deaths. Because of the deaths in August, the drilling had stopped until December. Because of that, they told me they would give me employment as a driller. This is my first job as a driller.

I came here and I heard from people who had been working here longer that people had died right at that place. And for the first three days, I was really scared. Nobody was working there at the time. From December to April, we’ve received

³ Four workers had died in an accident in Chilling in August 2006. Two of the bodies had fallen into the river and were never found. Following the accident, the drillers went on strike until new drillers were recruited in December 2006. The accident is discussed in the third part of this chapter.

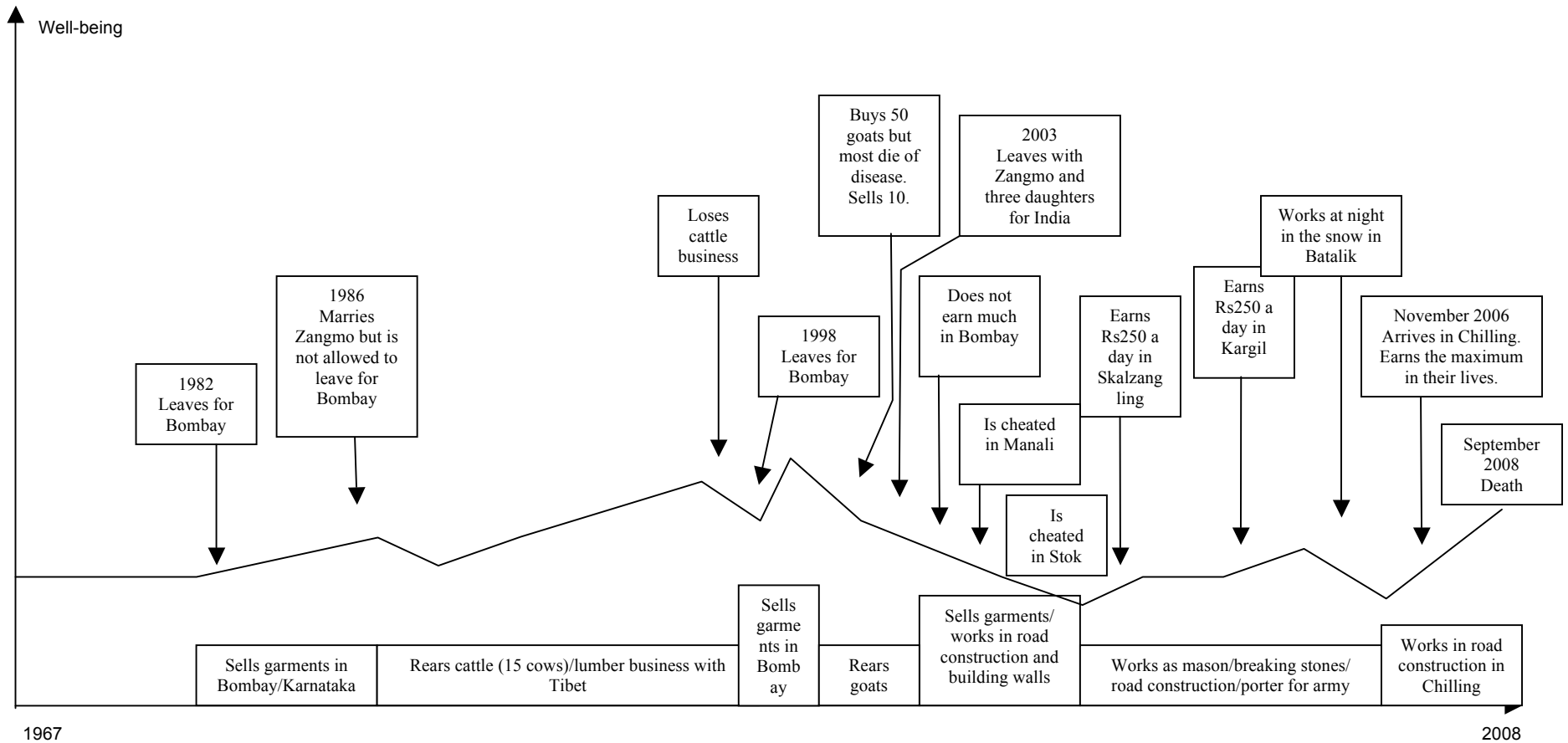
more money than what people normally get for drilling: Rs3,900 per month instead of Rs3,200. This is more than what you get elsewhere.

[...] For the first few days, I was really scared. We had heard that Guru Rinpoche⁴ resided in the mountain, he had gotten angry, and this was why people were dying. So I went to see people living here and asked them which god resided here, what did they believe? They said it was Guru Rinpoche. I am a Buddhist too so I don't believe Guru Rinpoche would want to kill people. If this is Guru Rinpoche I don't believe he could harm anybody. Before we came, people here got *lamas* to hold prayers and the *lamas* said, "Now this is a safe place, you can work here, the gods won't harm you."

That is how Thinle and his family started living and working on the road near Chilling. Until June 2007, Thinle, Zangmo, and three of their children – Mingmar, Passang Dolma, and little Tashi – shared a concrete shelter with another Nepali family next to the trolley over the river, on the upper side of the road. Their eldest daughter and her husband lived and worked in a restaurant in Nimmu. In 2007, Thinle's family, along with about 12 other families, was relocated to a campsite opposite the place where the Markha River flows into the Zanskar, where the new trolley now stands.⁵ The new camp was closer to the construction site but unlike in most villages there was no stream nearby: water had to be brought every morning in large barrels in the rear of a truck.

⁴ The mountain where the drilling was taking place is named Lama Guru after Guru Padmasambhava – referred to as Guru Rinpoche in the Tibetan world – who introduced Vajrayana Buddhism to Tibet in the eighth century. Guru Padmasambhava, also referred to as the second Buddha, is believed to have travelled through the valley and performed some miracles, as is exposed later.

⁵ In August 2007, the old trolley was sabotaged by inhabitants of Skiu-Markha, who resented the Chillingpas for reaping all the benefits of tourists crossing by trolley (by charging Rs100 per crossing).



6.2. Well-being graph of Thinle Sherpa (LChi12)



6.3. Zangmo, Tashi, and Passang Dolma in their first shelter in June 2007

Behind is the family altar, with pictures of His Holiness the Dalai Lama and Karmapa, and their few possessions.

Unlike Chilling or other villages in Ladakh situated in areas that receive a lot of sun in summer and winter, both areas where the road builders lived lay in the shade of high peaks and ridges most of the day, barely receiving two hours of sun in the middle of winter (see Illustration 6.4). If the temperature inside the tents was suffocating in summer, it dived far below zero during winter as the icy Zanskar wind blew along the river, penetrating the numerous tears and holes in the tents, engulfing one under blankets and freezing one to the bone. When I asked a camp inhabitant in spring where the hens I had seen the previous autumn had gone, she told me they had frozen overnight (Neema Dolma, Chilling, 22 April 2007). And indeed, once the small *bokhari*

stove had stopped producing its heat and smoke, the temperature would become arctic; I remember staying awake and shivering the whole night in Thinle's tent. In the early morning, the drillers would leave for work severely under-equipped; they would build small bonfires in order to get warm in the shade of the cold vertical walls that dominate the river, a thin dark-blue ribbon partly covered by ice and snow at that time of year. It was so cold that even diesel oil would freeze and fuel tanks and engines had to be heated over the flame of a stove placed underneath the tipper, before the engines could be started.



6.4. The camp in winter

Unsurprisingly, the climate was a fundamental variable in workers' life and well-being in Chilling. The climate determined living and working conditions, what food was available and how much it would cost, how much they would have to spend on heating, what work could be done, and how much they would be paid. The winter months were thus cold and difficult: people often fell sick (especially children), food was limited and expensive, and heating costly. On the other hand, workers were paid more (Rs3,900 monthly instead of Rs3,200 for a driller), working days were shorter, and the frost held

rocks together so that rock falls were less frequent. In summer (see Illustration 6.5), the heat could be unbearable (especially in the tents for women who stayed at the camp), so that food spoiled easily, there was more workload, and the melting frost and rain could trigger numerous landslides. Working conditions were much more dangerous. Yet in summer migrant workers could also work for the local villagers and sell *chang* to seasonal workers and earn extra income. The most pleasant seasons were spring and autumn, as food was more easily available and relatively affordable, temperatures clement, the workload less, and income high in relation to expenditures.



6.5. The workers' camp in summer 2009

Some of the tents have been replaced by semi-permanent stone structures.

Thinle and his family worked on the construction site for nearly two years: Thinle as a driller, and his wife Zangmo as a *chowkidar*, guarding the camp during the day and monitoring movement on the dirt track during the night to prevent people from stealing road-building materials. Mingmar – their second daughter – also worked on the road, mixing cement and building walls. Zangmo also distilled rice *chang* and *raksi*⁶ over the fire during the day, selling it to workers who stopped at the camp during or after work. Nepalis, Jharkhandis, Biharis, Bengalis, Punjabis: all of India was represented there,

⁶ Beer and distilled alcohol made of fermented rice.

“united in diversity”. Sometimes, she also cooked for them. Workers – CPL and ICPL, but also regular BRO employees – usually paid her at the end of the month when salaries were distributed. Workers sometimes left Chilling in considerable debt and sometimes people’s money (stored in a transparent candy box) was stolen, which is how her neighbour Neema Dolma lost Rs7,000 one day (18 June 2007). In spite of this, the three wages paid by BRO allowed Thinle and his family to make a living and save money.

Men usually left for work at 8 a.m., so that mostly women and children were present at the camp during the day. That time was devoted to domestic chores: cooking, washing clothes in the river when the water was not too muddy (otherwise they had to walk to the stream), mending clothes, cleaning their tent or concrete shelter, and brewing *chang* and *raksi*. Packed lunches were collected and brought by tipper to the construction site at noon. But in summer, women had to share the camp with ICPL workers, so that some men – the mate and his helpers, cooks, “sick” workers, and sometimes a few intoxicated men – were also present. A washing area consisting of four poles and a flattened barrel sheet had been installed to create some privacy, while the flat area below the cliff next to the camp was used for defecation. Those who ran little shops in their tents served passing customers and cooked tea and noodles, often with a cradle hanging from their backs supported by a strap passed around the forehead, the Nepali way. The men returned from work at 4 p.m. or earlier in winter. They would use that time to wash in the stream or river, play games, and drink. During the harvest, men could go to the village to help with farming and earn extra income or buy fresh vegetables and *chang*.



6.6. Arjun, one of the five cooks, has finished preparing lunch for the ICPL workers

Sunday was their day off and most workers and their families usually went to the market in Nimmu, 30 km downstream. A company tipper left at 10 a.m. from the officer's camp, 5 km before Chilling – although the departure time could fluctuate a lot – and ferried everybody to Nimmu. The same truck brought everyone back in the early afternoon in an epic ride, carrying workers and their families, their provisions, and a bunch of drunken men who would argue and exchange insults, sometimes fight, and spend most of the journey singing, dancing, and clapping.⁷ If they missed the truck, workers would have to charter a taxi for Rs600. In Nimmu, they could buy food from the market and the rations shop (although, as migrants, they were not entitled to subsidized rates) – mainly rice, *atta*, potatoes and pulses, sometimes chickens, eggs, and vegetables (see Figure 6.7). Workers also formed long queues in front of the STD (telephone) shop as they waited for their turn to call relatives back home. Some

⁷ Songs often belonged to the Bollywood register and lyrics were sometimes changed into drinking songs, e.g., “There is nobody as beautiful and gorgeous as the bottle (instead of ‘lover’) of mine, which is full of wine...” Many songs were in Bhojpuri; one favourite song advertised a brand of chewing tobacco (Khale Tiranga). These songs differed from those sung by male workers at the camp in the evening where everyone would clap and plates, stones, and tanks were used as drums. These were mostly devotional songs: to Ram and Sita, to Durga, to Lord Shiva, or about the pilgrimage to Deoghar in Jharkhand (Chilling, 19 June 2007).

disappeared into small restaurants where they would drink or buy alcohol that was twice as cheap as in Chilling.

Rice	600	kg
Daal	50	kg
Atta	450	kg
Potatoes	330	kg
Onions	30	kg
Nutrela (soya chunks)	15	kg
Vegetable oil	60	litres
Ghee (clarified butter)	15	kg
Eggs	200	
Meat	15	kg
Sugar	50	kg
Tea	2	kg
Kerosene oil	300	litres

6.7. Monthly food consumption for a crew of 48 ICPL workers in Chilling

The cost of living is high for migrants working on the road: they do not have access to government rations, most BRO rations are sold on the black market and, as a result, a large proportion of their income is spent on food and fuel for heating (wood and kerosene). Because living costs are high, many workers do not manage to save much beyond what is required for their subsistence and that of their family. Yet Thinle and his family were among the few who were doing well. This was the first time in his life that Thinle had managed to save so much – Rs10,000 to Rs12,000 a month on average, mostly thanks to the sale of *raksi* and *chang* (up to Rs8,000).⁸ They even had plans for their future back home in Kiangsing as the situation in Nepal had improved since the end of the civil war and the signing of a peace agreement in 2006. Thinle's family had a small portion of land there and they would send money back home to build a house. They were planning to buy sheep and goats and restart Thinle's cattle business. Zangmo even talked one day of buying a car – more or less seriously since there is no road to Kiangsing. Their daughter Mingmar was happy with these plans (Chilling, 26 June

⁸ This was very unusual for Chilling where, in general, the level of savings was much lower. Sona Jangbu and his wife, for instance, saved only about Rs2,000 a month and many households and workers did not manage to save anything.

2007): “I don’t like working on roads. My dream is to become a goat-keeper in Nepal. My father told me we’re leaving next year in October [2008]. I’m looking forward to that.”

2. Living with danger

Death and danger

Building the road in Chilling was terribly risky. The danger was obvious to anybody visiting the area but many workers were willing to take the risk, as here at least they were not cheated too heavily and payments came in regularly. When Thinle shared his first experiences as a driller with me, it reminded me of my initial impression when visiting the area a few months earlier, just after the big accident that had claimed the lives of four workers in August 2006:

Extract from my research journal (15 September 2006): The first thing they told us in the morning was that they had stopped working at the end of the road because of the accident that had happened there in August. Some road builders were working closer to the village but even there the danger was palpable. The site was impressive, with these massive 400- to 800-metre-high slopes, cliffs, and hanging rocks dominating the light-brown Zanskar River. And somewhere 50 m above the river, there was this thin road carved into the slope, following its contours, with tiny humans toppling rocks off the cliff, picking up stones, digging with picks and shovels, loading a truck, preparing cement, and building walls, and the drone of one or two bulldozers in the background.

Above and below the road, rocks would fall, lifting up storms of dust behind them, and in some places workers wearing symbolic helmets watched intermittently for rocks falling from these high, unstable, and steep slopes. This is probably what struck me the most: these people looking up when working, as if to emphasize that, here, the danger comes from above. Even when not working and when there was no danger in sight, workers still looked up, just as a reflex incorporated into their pool of gestures necessary to live and move in this world and on which survival ultimately depended, as if to signify that for the time they would spend here the

threat of death would constantly be floating above them.

When I arrived, I immediately felt a sense of danger, trying not to stop at those places that seemed the most unsafe and also watching above. The air was dry; the strong sunlight burned the eyes, and sand particles crunched between the teeth. My heart was beating fast and, from time to time, as I listened to them, I was relieved to be able to hide my feelings behind my dark sunglasses. This feeling was even more extreme in places where nobody was working, as this silence and loneliness on an unfinished dirt road gave you the impression that the place had been deserted. The workers had been forced to flee by overwhelming circumstances, giving an impression of the last frontier and defining the geographical limits of life. Workers were trying to extend this frontier further, and this hostile, almighty, and deadly environment was firing back at them, forcing them to retreat.

Based on the intensity and dangerousness of the tasks, there were essentially two types of work in Chilling: drilling/blasting and other diverse tasks such as digging, building walls and drainage, breaking stones, loading trucks, soling, and tarring. Drillers and blasters were mostly CPL⁹ overseen by a JE, diesel engine operator, and blaster, while other tasks were performed mostly by ICPL, loosely supervised by their mate and sometimes by a BRO overseer. Doing physical work at this elevation and in these conditions is necessarily strenuous but the pace of work for the latter was rather lax – except when the officer in command (OC) was due to visit, generally on Wednesday mornings. Hence, on any site, unless supervised, for every ten people present, two to four would be working while the others remained idle. Those who had been assigned a specific task might finish much earlier and absenteeism could be quite high. Tarring – although impressive to an outsider because of the flames, the dark clouds of burning kerosene, the smell of melting tar, the sooty faces and blackened clothes, and the hellish picture that emerged – was not perceived as a difficult task by the workers themselves, although they largely ignored its health consequences.

⁹ All of them were CPL in 2007 but not in 2006.



6.8. Blacktopping the road in Zangla, Zaskar (August 2007)

In comparison, drillers and blasters worked at the forefront, digging the road blast after blast at a pace of 2 m a day. Two to three blasts were carried out each day and between 5 and 20 holes had to be drilled for each blast. Four to seven workers drilled holes wherever the JE told them to, based on his experience. The drilling machine was powered by a compressor stationed outside the danger zone to which it was linked by 100 m of rubber pipe. As the drilling progressed, three drill-bits of different length had to be used. Up to six workers could be required to hold the machine and exert enough pressure for the bit to penetrate the rock, while another worker held the bit in his bare hand to direct it into the hole. A lever that had to be operated intermittently stopped the drilling and released a powerful stream of air into the hole to clear it of rock dust. Sometimes, the bit would get stuck so that work would have to be interrupted for a time to release the bit with the help of a hammer and wrench. Drilling one hole generally took between 10 and 20 minutes depending on its depth, the hardness of the rock, the position of the drillers, and whether or not workers had to look out for falling rocks or be careful not to slip down the cliff. For anyone standing less than 3 m away, the noise was deafening and unbearable; the vibrations in the soil could be felt up to 20 m away,

shaking the whole rock face; and the operation lifted up clouds of dust. Despite this, workers were equipped with minimal protection: a helmet, a scarf over the mouth to prevent dust from entering the lungs, and a cheap pair of sunglasses to protect the eyes from dust.



6.9. Drilling (September 2007)

Before the drillers had finished, the blasters would start filling the holes with explosives – five sticks (600 g) for a small one, and up to 16 sticks (2 kg) for a 10-foot-deep hole – pushing them in with a wooden stick until each hole was full. All the holes were then connected by a green gunpowder wire that had to be kept under tension for the explosion to take place simultaneously in each hole. The last hole was connected to a fuse and lighting wire: 50 cm allowed a 1-minute-lapse between the ignition and explosion. When everything was ready, everyone vacated this theatre of operations, except for two blasters who stayed behind. Observing the scene from a distance of 300 to 400 m, everything seemed very silent. Far away, we could see the two blasters running in our direction to find shelter behind the compressor. For another 20 seconds, nothing happened. Still silently, a sudden, violent burst of rocks and dust erupted

horizontally from the cliff, drawing a vertical asymptote as stones were gradually drawn by gravity towards the river below. Only then, 1.5 seconds later, a thundering explosion would shake the whole gorge, resonating deep inside our bodies as small stones and sand started falling from above us. At the same time, as more and more stones detached from the face of the explosion site and fell into the river, a large cloud of dust would climb up towards the sky, obscuring the valley and spreading the smell of gunpowder. Sometimes, a second landslide, even bigger than the first, might follow, as the rock face weakened by the explosion collapsed, taking down with it everything in its way. This is why the biggest blast usually took place at the end of the day so that stones would fall at night when nobody was onsite.



6.10. Filling holes with explosives on Lamaguru Mountain (June 2007)



6.11. Blasting on Lamaguru Mountain (June 2007)

After the explosion, the place had to be prepared for the next blast. Drillers and around seven to ten helpers had to clean the site, throw rocks down the cliff with the help of picks, bars, and shovels, sometimes pushing stones forward with their feet or hands while a colleague loosely secured them by holding onto their shirt collars. If the platform was wide enough, then the bulldozer could be brought to clear it all in one go, although the vibrations of the tracked vehicle often provoked further rock falls from above (see Illustration 6.12). The cliff face above also had to be cleared of loose rocks, for which long rods were used; or Thinle and other Sherpas would climb up and try to detach the biggest and most unstable elements (see Illustration 6.13). Yet this kind of terrain could never be totally cleared: nothing was stable and one could never be sure that the face would not crumble at some time or another.



6.12. The bulldozer retreats under a rock fall

What was fascinating was how workers – especially drillers – managed to deal with danger on a daily basis. They could not avoid it and so they seemed to try and tame it, often with the help of their gods. I once asked Thinle (Chilling, 21 April 2007):

- Are you less afraid now?
- Everybody prays to their gods in the morning, there is a small temple up there. We pray to our own gods.
- How is the work compared to what you expected?
- It's okay. The only fear is that we might die. Otherwise the work is not difficult. It's better than the other jobs I have done in Ladakh.

In May 2007, Thinle and the others went back to drilling following a blast when a whole section of the mountain collapsed. One of the drillers – Shanta Bahadur – was killed on the spot while another was injured. Thinle, who had been standing just next to Shanta, was miraculously safe. When we talked about it, Thinle was trying to understand. That morning, Shanta had told Thinle that he wanted to quit his job here

and go back to Delhi to a safer job, even if it paid less: “Why him and not me? He also respected the gods. Perhaps he didn’t believe sincerely...” (Chilling, 12 June 2007).



6.13. Thinle and Karma Sherpa clear the cliff above the road

Prayers and faith were often the only protection that workers had: as they often put it, “Everything depends on the mercy of God(s).” In Chilling, the day always started with a *puja* at home for Hindus and Buddhists alike at the small Shiva *mandir* (temple) under the cliff where representations of Shiva, Hanuman, Durga, and Guru Nanak were displayed,¹⁰ and more especially at the old Lamaguru sanctuary where Thinle would pray. A *puja* to Vishwakarma was also carried out on bulldozers and compressors,

¹⁰ The temple was built where the four workers had died in August 2006. It was completely washed away by a landslide a few months later.

which were all marked with an “*Om*”. On the helmets of the drillers and helpers were painted the words “*Om nama Shiva*” or “*Jai mata di*”, tridents as symbols of Lord Shiva, or the words “God doesn’t forgive the sinner” or “If you want to take me, ask my boss first”. Engineers also took part in the *pujas*, paying their respects to the gods before starting work, washing their feet, prostrating, lighting incense, and ringing the bell at the *mandir*. Builders sometimes built small statues of Durga with the remaining cement in the walls and inscribed “*Jai Ma Kali*” in fresh concrete.



6.14. Thinle performs a *puja* at the Lamaguru sanctuary before work

Yet people carrying out the most dangerous tasks, such as drilling, seemed to defy danger. It was very common to see them standing on the most unstable rocks at the cliff’s edge, quietly rearranging their scarves and helmets. During breaks, a common game was to throw stones at each other’s helmets or at the cliff just above somebody who was sitting down or napping, initiating small rock falls: the person lying underneath had to stand up quickly and jump aside to avoid being scattered with rocks. It was also common to see two or three workers “clearing” unstable cliffs by throwing stones at huge rocks above with diabolical precision – causing rocks and soil to fall –

while they could have done it more efficiently and quickly with the long iron poles they sometimes used in other cases. At the end of the day, everyone jumped into the back of the tipper; as it drove dangerously fast along the edge of the cliff, one had to bend down to avoid getting hurt by overhanging rocks while the youngest drillers would push each other and simulate falls. When Thinle and his companion Karma were clearing the slope, the whole scene looked like a ballet as they gracefully danced along the cliff, ignoring the 70 or 80 m of void below them. There was no sign of fear as Thinle proudly cried out “Sherpa!” to designate his friend: Thinle was a Sherpa too and they did not fear the void. There seemed to be an excitement about danger.¹¹ As Thinle put it, the job was not difficult: the only risk was death. Although they were perfectly aware of the danger, they did not flee from it. Perhaps because risks were unavoidable and largely unpredictable, workers often seemed to play with them, taming danger and relying on the mercy of the gods rather than attempting in vain to avoid danger.

If the drillers were most at risk, the danger did not spare other workers and family members either. It affected them in a different and more insidious way, putting them at risk of losing someone they loved, and often the main breadwinner of the family. After the accident of May 2007 “safety measures” were adopted. Somebody would look after the drillers and blow a whistle if rocks started to fall. The measure seemed illusory because the noise of the drill would cover the sound of the whistle. Mingmar became the “whistle blower” while her father was drilling: “The work is easy. I just have to carry the water and blow the whistle” but “Drilling is dangerous, I fear for my father. Stones can fall at any time” (Chilling, 26 June 2007). Zangmo too feared for Thinle. At 4 p.m., in what had become like a daily ceremony, Zangmo and her neighbour Kamla would wait outside the shelter, scanning the end of the road, anxiously waiting for the truck that would bring their husbands, son, and daughter back to the camp.

¹¹ Once again, it is not difficult to draw a parallel with the excitement of danger felt by miners in Bolivian tin mines, “which adds a certain élan to the workers’ self-image” (Nash 1993: 12). As a miner says in Nash’s account: “I like the excitement of putting myself in danger to prove my manhood and my capacity” (ibid.). Similarly, miners rely on beliefs, gods, and demons to explain, cope with, and ward off death and accidents. As a miner puts it: “The miner must believe in the Pachamama and the Tio because of accidents that occur” while “the Tio is an explanation for the inexplicable, a rationale for the irrational destiny which is forced on the miner” (ibid.: 163-4).



6.15. Zangmo, Passang, and Kamla wait for the truck to appear

The last time I saw Thinle and his family was in January 2008, before leaving Chilling for Leh in the back of a tipper with two Bihari road workers who were freezing to death in their cotton trousers, acrylic socks in plastic flip-flops, and torn woollen gloves. I hoped I would meet Thinle some day when they were back to Nepal but it was not to be. In October 2008, I received a message from a friend in Leh. She had just returned from Chilling, bearing bad news. At the end of September, just after an explosion, Thinle and three other workers returned to the site to inspect the work of the blast, when a freshly destabilized section of the mountain collapsed. The other three workers just had time to flee but Thinle, who was behind them, was hurt when a stone struck him on the head. He was brought unconscious to the hospital in Leh in a BRO tipper and pronounced dead three days later on 1 October 2008.

The wider framework

Leaving aside the ethnography of road workers for a while, let us attempt to understand the larger social matrix in which this history is embedded. The story of Thinle and his family is unique but some of its features correspond to patterns that are common to many road workers' stories in Ladakh. There are probably many Thinles and Zangmos whose story remains undocumented. The stories of Nima Dorje, Shanta, or Doma, or the four Jharkhandi workers who died in the summer of 2006 would also have unveiled "some of the mechanisms through which large-scale social forces crystallize into the sharp, hard surfaces of individual suffering" (Farmer 1997: 263). As in the story of Thinle, several factors can help us understand the conditions that drive migrants to work in road construction, and make them accept work as drillers and bear intolerable risks. None of these factors is explanatory on its own: rather, it is the cumulative effect of the political, social, and economic forces that structure risk that might help us explain the situation of road workers, their willingness to bear risks, and the incidence of 'structural violence'.

The first factor mentioned in Thinle's story was the situation in Nepal, which has a long history of labour out-migration: estimates of the number of Nepalese working in India vary between 250,000 and 1 million (Seddon et al. 2002; see also Seddon 2011).¹² The situation was further exacerbated by the civil conflict (1996-2006), which drove many people who faced exactions and could not make a living in Nepal out of the country. This was a common feature in stories of other Nepali migrants in Chilling.¹³ As Sona Jangbu, another Sherpa worker in Chilling, described (16 June 2007):

¹² According to estimates, nearly 2 million Nepalese work abroad. Approximately 700,000 work in the Middle East, East Asia, and South-East Asia; another 700,000 in the private sector in India; and 250,000 in India's public sector (Seddon 2011).

¹³ Among workers from Dumka, the main reason cited was rather economic and had to do with the absence of livelihood opportunities in Jharkhand. Dumka district is situated in eastern Jharkhand, a state carved out of Bihar in 2000. With one hospital, two colleges, no train station and, until recently, not even a single tarred road for more than 1.1 million inhabitants, Dumka is among the most rural and underdeveloped districts in India. About 45% of the population is classified as ST while literacy rates are 50% for men and 25.7% for women (Dumka District Census 2001). The main economic activities consist of farming, brick making, and illegal coalmining. There is barely any industry in Dumka and many workers find employment in neighbouring districts and states (such as the Bocaro and Tata steel factories in Jharkhand or in West Bengal).

The Maoists force you to enrol. You receive one, two, three phone calls, and then they come and beat you and take your possessions. I was robbed once... Then you have national army check points every 100 m, it is frightening.... We have had to shelter the army, then the Maoists, every time exposing ourselves to retaliations. Our place is a beautiful area, full of forests; so many tourists used to come. Now, they don't come anymore so there is a lack of employment and we are in a big crisis.

A second factor that had aggravated Thinle's situation was the precariousness of work. From the moment they left Nepal in 2003, he and his family went to work in eight different locations in less than five years. Often, work was temporary, and once the work was finished they had to look for another source of income.¹⁴ If labour demand in Ladakh is high in summer (due to tourism and agricultural work), it is low during other seasons and nearly null in winter, when it is too cold for construction work: in winter, the whole economy comes to a standstill. In two locations, their employers cheated them out of the full amount due to them: the lot of many migrants I interviewed and the lot of many migrants in general. This set of circumstances led many migrants to work for BRO, where at least they received their full wage on a monthly basis and all year long.

A third factor was the limited amount of bargaining power and narrow margin of manoeuvre that Thinle had, due to economic as well as institutional factors. When he came to Chilling with his family, he needed to work. He did not want to be a driller but it was the only job available. He was scared, he had no experience of drilling, he had heard of accidents occurring, but he had little choice. Most drillers were in a similar position: they were travelling with their families, had limited resources, and had to work to provide for their needs. This made them accept short-term contracts and dangerous jobs such as blasting and drilling. Thinle's family shared their shelter with another Nepali family: Preeti Bohra, Kamla Devi, and their two sons Buddhiram and Harida. Both the father and eldest son (16 years old at the time of the interview) worked as drillers, while the mother worked at night as a guard. When I asked Kamla why they had come to Chilling, her answer was: "Anyway, I have to work because I have to feed

¹⁴ In a way, working for BRO was also precarious: in 2005, due to scarce funds, construction in Chilling stopped and workers were laid off.

my family” (Chilling, 16 June 2007). When they arrived in Chilling, they had nothing and had to borrow Rs3,500 from Thinle’s family in order to survive during the first month.

Workers’ bargaining power is largely unequal. It depends partly on their family situation since people with dependents are less mobile and cannot easily refuse a job or stay unemployed long, but it is also determined largely by their status. ICPL workers are relatively free to refuse dangerous tasks. When I asked an ICPL worker, a male without dependants, whether he would agree to drill, he answered: “I’d tell them to go to hell and I’d run away” (Zakir Hussein, Chilling, 26 June). As a BRO medical officer once told me: “BRO is more careful with ICPL, we are responsible for them” (Chilling, 21 April 2007). ICPL are seasonal migrants recruited in their region of origin; they arrive as a crew and have a collective contract for a fixed period (four months in Ladakh) during which they cannot be laid off, and at the end of which their transport back home is paid for by BRO. There was one occurrence in which ICPL workers went on strike successfully because BRO did not provide them with enough water in the morning. They also went on strike after the accident of August 2006.¹⁵ CPL, I was told, could never do that as they might easily be discharged.

Thinle, Preeti Bohra, Buddhiram, Karma, Lakpa, Sampa Lal and all the drillers and blasters in 2007 were CPL workers. Although CPL tends to comprise ‘permanent’ labourers – some had been working in Chilling for more than six years – their working

¹⁵ In fact, the situation of ICPL workers is also mediated by the power of the mate, who acts as a buffer between the workers and the company. A weak and inexperienced mate, such as the one posted in Chilling in 2006, responsible for a crew of workers of different origin (Bihar, West Bengal, and Jharkhand) could agree to send his workers for drilling and blasting. A strong, experienced mate who has worked for BRO for many years, as in 2007, could refuse to send them, rightly arguing that “They were not trained for that.” The mate’s position is largely ambiguous: on one hand, he must please the hierarchy and provide labour, possibly receiving a premium; on the other hand, he is responsible for the lives of his workers, who generally come from the same area as him. A mate whose workers die on the road loses the confidence of other workers and will be unable to recruit anymore. One of the workers in 2007 was in this situation: he had lost two men on the road 10 years ago and since then could no longer work as a mate because workers did not trust him anymore. The mate can also be sued by victims’ families, as happened to Jiauddin, the mate in charge of those who had died in August 2006: he was in jail at the time of my fieldwork. The mate can also be in a difficult position regarding workers: he acts as a buffer between the company and workers and can be a magnet for discontent as he has to maintain discipline among the crew and might need protection in case of disputes or mutiny. For this, the mate often relies on relatives (cousins, brothers-in-law, etc.) or a core of workers to whom he might offer favourable working conditions in exchange (such as not reporting absenteeism). The mate is also expected to keep his workers informed of the main religious festivals. Thus, the mate’s relationship with his workers is highly paternalistic.

conditions are extremely precarious and their six-month contract can be terminated at any time without advance notice, or not be renewed. For instance, in February 2005, 306 CPL workers were laid off in Akhnoor and formed a workers' association. As the chief engineer of the project mentioned:

Para 503 of Border Roads Regulations clearly says: "The personnel may be employed on daily or monthly rates of pay. If on monthly rates, the period of their engagement shall be for a maximum period of six months at a time and the personnel shall not be eligible for any of the privileges of continued employment under Government. The services of the personnel are liable to be terminated at any time without notice and no terminal benefits shall be payable" (*Daily Excelsior* 4 February 2005).

The workers' agitation was also labelled "illegal and unjustified" since working conditions are constrained by army rules and by the Army Act, although CPL is not entitled to army benefits such as salaries, pension, compensation, or other advantages. Therefore, basic rights such as those contained in the Minimum Wages Act, Industrial Dispute Act, the right to unionism, or simply the formation of an association do not apply to BRO workers (*ibid.*). And it is a fact that BRO workers are denied minimum wages and benefits (OC 21 May 2008).

In wartime, BRO acts as a military organization by repairing roads, bridges, and airstrips of strategic importance. For this, it heavily relies on CPL. During the Kargil war (1999), 1,300 labourers were brought in from Dumka to maintain and repair roads and bridges that were being shelled by the Pakistani army (Noatay 2 October 1999). Although BRO workers are entitled to compensation in case of death or disability,¹⁶ the rules also state that workers employed for less than 179 days are not eligible for compensation (BRO 2009). Even though CPL workers or their families generally do receive compensation, the payment is often delayed (*Daily Excelsior* 12 February 2003) and only takes place after a lengthy (18 months) and complicated process during which most of the money is diverted towards bribes and other expenditures, as happened to a family in Chilling. If a deceased worker's body is not found, as in August 2006 when

¹⁶ In case of death, BRO workers' families are entitled to Rs200,000 (2 *lakhs*) in compensation; workers are entitled to Rs150,000 (1.5 *lakhs*) in case of total disability; and Rs100,000 (1 *lakh*) multiplied by the percentage of loss of earning capacity in case of partial disablement (BRO 2009).

two bodies were swept away in the Zaskar, compensation can only be paid after seven year. Many other accidents and diseases linked to working conditions, such as pulmonary oedema, are not covered and do not give workers the right to compensation (Noatay 2 October 1999).¹⁷



6.16. CPL (ex-ICPL) from Dumka in their tent

Despite the absence of political rights, CPL workers episodically take action, demonstrate, and go on strike to demand better working and living conditions. In 2001, a group of workers complained to the All India Trade Union Congress regarding lack of compensation, delayed payment of salaries, absence of retirement benefits, and generally “anti-labour policies” (*Daily Excelsior* 12 June 2001). In 2003, workers complained to the state of J&K for “non-payment of bonus, supply of inferior quality uniform and shoes, non-clearance of wage arrears and delayed settlement of compensation cases”, and asked for the payment of retirement pensions, issuance of insurance, and reinstatement of workers who had been laid off (*Daily Excelsior* 12

¹⁷ “During Operation Vijay (Kargil war), six CPLs of the BRO lost their lives on getting afflicted by pulmonary oedema. But this disease is not covered under the provisions of the Workmen’s Compensation Act, 1923 [*sic*]” (Noatay, 2 October 1999).

February 2003). In 2004, the J&K Minister for Labour and Employment Rigzin Jora raised the issue¹⁸ and asked BRO “to take appropriate measures for improving the working conditions of its vast human resource”. Workers were asking for transport, temporary shelter, medical aid, and supply of essential commodities at fair prices, as well as the “implementation of Labour laws, security cover and other welfare schemes for all Casual Paid Labourers and early disposal of cases under Workmen’s compensation Act and payment of compensation as per provisions of the Act” (*Daily Excelsior* 9 February 2004).

In the past, BRO has applied extremely repressive policies to its employees. In 1980, the Centre of Indian Trade Unions (CITU) in a note to the ILO complained that BRO workers “ha[d] been refused the right to form an association, ha[d] been arrested, tortured, detained without trial and dismissed for their trade union activity and had their ‘illegal’ trade union premises broken into, their documents confiscated and their funds seized” (ILO 1981). These events happened in December 1979 after 2,000 workers employed in Tezpur, Assam, formed an association to demand better working conditions. A protest was held, the army was sent in, and workers were fined and beaten and 335 of them “arrested and held in prisoner of war cells for weeks and months without sanitation, food, water or lighting arrangements and their families were terrorised by the military” (ibid.). Some were held for 18 months before being discharged without trial, while some were still in jail awaiting their trials at the time of the report (ILO 1983).¹⁹

There are numerous reasons for discontent. Although this incident was never mentioned by the workers themselves (and probably unheard of), such facts explain why CPL in Chilling was not politically organized, adding to the vulnerability of workers. They were not unionized, and workers complained about working conditions, their pay being raised and decreased, the fact that maternity leave was no longer granted, and the

¹⁸ In this case, most workers were local citizens of J&K. It is unlikely that a state minister would have raised the case had they been migrants.

¹⁹ Despite ILO requests, the report observed that the Indian government did “not reply to the specific and detailed allegations” but simply stated that “GREF [was] practically a wing of the army as its work is connected with defence, and thus its employees [were] lawfully restricted from forming an association” (ibid.). The government reaffirmed this position in the ILO’s subsequent report when it refused to respond on the substance of the case (ILO 1982). The case was finally dropped in 1983 after the ILO acknowledged the conclusions of an internal Supreme Court judgement that ruled that army rules – and therefore the absence of freedom of association – applied to BRO employees (ILO 1983).

promised rations and equipment that were never delivered (working equipment, clothes, shoes, and mattresses, for instance), but they rarely complained formally to the hierarchy. As the then director of BRO Major General Soin put it in 1980: “BRO is run along military lines” which “produces relative efficiency” (1980: 165). BRO relies heavily on CPL as its structure comprises 37,300 GREF personnel (permanent regular staff) as well as 70,000 CPL workers (Department of Road Transport and Highways 2004: 67). Although they are not trained and are “casual” labour, they are permanently employed to accomplish the most dangerous tasks in place of BRO’s regular employees. Institutionally, everything seems to be made to sustain this relatively cheap and docile source of labour.

Such institutional arrangements largely curbed workers’ bargaining power but did not curtail it completely. Despite the interdiction to form associations, there was room for manoeuvre but negotiations often took a confrontational tone. When I asked a worker how they expressed their grievances and solved disagreements with the hierarchy, he said (Zakir Hussein, Chilling, 17 June 2007):

We can use violence. For instance, Baboo Arun Kumar threatened the officer with a knife. He didn’t come out of his car. “Why did you report me as absent?” The officer told him: “If you keep on threatening me, I’ll discharge you from work”, to which Baboo Arun replied: “If you discharge me from work, I’ll discharge you from this world.” His friends took him back to the camp: he was drunk. He has since been reported present. It was a mistake: he was only sick for half the day.

However, the working conditions of BRO workers are by no means peculiar in the world of road construction. Although labourers who work for civilian companies and contractors are not prohibited from forming associations, their situation is far from compliant with the legal standards set by the main national regulations.²⁰ Despite claims to the contrary, a study commissioned by the ILO in 1996 found that “hardly any worksite” complied with the requirements set by the administration and ministries of labour and health with regard to minimum wages, gender equality, child labour, drinking water, toilets, shelter, and first aid. (ILO 1996: 17). The situation was hardly

²⁰ Such as the Contract Labour (Regulation and Abolition) Act 1970 and the Payment of Wages Act 1936 (ILO 1996: 9).

better when workers were employed by local government agencies. The study also mentions the conclusions of the Working Group of the Planning Commission (1995), which point to serious violations of labour standards at the same time as they reveal a lack of interest in seeing labour standards applied (*ibid.*: 25):

As of date, nearly a score of labour laws are applicable to construction sites all over the country. [...] The fact, however, is that none of these laws is implemented or followed even in its essentials. The primary reason seems to be that the laws themselves have little relevance to the realities of construction business and logistics of construction sites.

Similar reasons were cited when I visited the Labour Department in Ladakh in 2009, which is in charge of overseeing the implementation of labour laws and monitoring the working conditions of labourers in every field except the public sector.²¹ However, as the person in charge explained to me, “The Labour Department is not very active” (anonymous, Leh, 22 July 2009). People are posted to this department for a year or two and therefore do not bother to learn the job or relevant laws for such a short time. There is only one labour inspector for the whole district and labour inspectors can easily be bribed when labour standards are violated. Most of all, as he told me: “Our labour laws are very strict but if every law was implemented, contractors could not work in this country. Even BRO wouldn’t be able to work” (*ibid.*). Hence, while rules exist, they are not implemented so that, in the end, workers have no protection.

As this part shows, the limited amount of bargaining power that workers – especially CPL – have is due to two sorts of factors: personal ones, such as family situation, resilience, and financial capacity, but also institutional factors. Such factors, whether legal (such as the absence of rights to form an association) or linked to inefficient protection mechanisms contribute heavily to maintaining workers’ vulnerability. They also fail to diminish the risks incurred by road workers or prevent workers from asking for safer and better working conditions. This might be aimed at “producing relative efficiency”, as the director of BRO put it – although this is far from proven – but as a result it fails to provide real benefits to workers and their families.

²¹ However, BRO’s CPL falls under its competence and it sometimes has to address CPL workers’ grievances and provide legal advice.

A fourth factor that matters in understanding Thinle's situation and his enduring acceptance of risk was the high cost of living that workers faced while living on the road and more generally in Ladakh. In 2007, monthly wages were Rs3,000 and Rs3,700 for simple labour (for summer and winter, respectively), and Rs3,200 and Rs3,900 for a driller, which is high for India but slightly lower than what workers could expect for doing a similar job in the civilian sector in Ladakh. Yet, with BRO, wages were paid all year long, even in winter when employment opportunities are scarce. As migrants had no access to rations at subsidized rates, they had to bear the heavy cost of food and fuel for heating (wood and kerosene oil). As an example of a budget, Kamla Devi, who shared a shelter with Thinle's family, said she spent up to Rs3,500 a month on food for her family: this amounts to one full month's salary (16 June 2007). On average, during winter months, she would spend Rs700 a month on kerosene.

With three salaries and the extra income from the sale of *chang*, *raksi*, and meals, Thinle's family benefited from a relatively high income in comparison to their living costs; they even managed to save. But for many road workers, the cost of living was simply too high. This was also the case for ICPL workers, who, in addition to being exploited by the company, had to cope with exploitation on the mate's part, who would charge them a high price for the food they consumed and for any single item they could buy through him (mostly soap, toothbrushes, alcohol, and *bidis* for smoking). Mates would charge their workers Rs1,000 for food whereas those (generally CPL) who had chosen to organize themselves individually paid around Rs625 per month (in summer) and ate much better. Altogether, the mate charged every worker around Rs1,300 per month for food and transport.²² When adding other expenditures to this, CPL workers

²² At the same time, the mate has to pay back the considerable amount invested in transporting his crew of workers to the recruitment centre, paying fees and bribing recruitment officers. The mate has to pay Rs20,000 to deposit workers' papers at the recruitment centre, another Rs3,000 to the recruiting officer for his workers to be accepted (more if some workers are declared "unfit" or underage), and then about Rs2,400 to the officer on site every month (probably the sum that is informally requested by officers as so-called "insurance"). In terms of transport, the mate has to hire a bus to transport his crew from the village to the train station (Rs3,000), and then has to advance their train fares until Jammu and Nagrota (Rs300 per worker). In total, this represents an initial investment of Rs38,000, a considerable amount for which he often has to mortgage his land and house, and which he deducts out of workers' wages. The task of recruiting, which is unpaid, is also time consuming and tedious. The mate has to travel extensively to meet potential workers within a large area (some might live as far as 30 km and even 100 km from his home), persuade workers and their families, while in the end only 20 to 30% of potential workers join his crew. As one said: "It is difficult to recruit good men who want to work and don't drink too much." In terms of salary, the mate is paid Rs3,600 per month (instead of Rs3,300 for workers). If the hierarchy is

could hope to save a maximum of Rs4,000 to 6,000 after a four-month period; this was just enough to provide for family expenses until the following spring, when they would migrate to work for BRO.²³

Moreover, their meagre savings were often used up in health-related expenses, sometimes in gambling and drinking or in supporting relatives back home. Those who managed to save often did so because they did not depend solely on a single road worker's wage but earned cumulative wages and sold *chang*, *raksi*, or shop items, as in Thinle's case. Thus, for instance, alcohol was easily available everywhere but because Chilling is far from the main road and markets,²⁴ those selling alcohol could charge twice the normal price. Home-brewed *raksi* was sold at Rs100 a bottle (70 cl), and *chang* at Rs40 per jug (1.5 l) for "super quality" and Rs25 for "duplicate" quality, as it was called among workers.²⁵ Kashmiri rum and whiskey – mostly from the armed forces – were also available at shops (and from the mate) at twice the maximum retail price (MRP): Rs160 for half a bottle, Rs320 for a full one. Workers often bought a bottle together and shared the price between three or four of them, which often led to fights over the sharing of the content. For many workers, although by far for not all of them, drinking was an important part of life on the road. Some even pretended that they had come to Ladakh for the sole purpose of drinking:

satisfied with his work, he may receive a premium of Rs10,000 at the end of the working period and he charges workers for what he sells them. Hence, the mate can expect to save between Rs25,000 and 30,000 over four months.

²³ Some workers, like Dinesh, had initially planned to invest their savings in productive activities such as building a shop or buying a cow. As he said: "At home, I cannot save money. Everything is spent on the family, drinking with friends, social expenditures, etc." (Chilling, 15 June 2007). Yet, after four months in Ladakh, his savings were too low and he could not afford to buy more than a few bags of potatoes to seed for the next harvest. Having said that, labour migration to Ladakh should not be understood in economic terms alone: for the workers, migration was also seen as "space away from the social constraints back home" (see Shah 2006: 98) and motivations were very diverse: to flee the police and (drug) problems back home, live out a prohibited relationship, save money to pay for school, an eye operation, marriage expenses and often a dowry, etc. Some also migrated because they wanted to preserve their status rather than doing any physical work at home in Jharkhand. As Arjun told me (Dumka, 9 February 2008): "I am a mate. So, to save my prestige, my status, I don't work here. Why should I do small work like soil cutting or work for others here if I'm a big person? So I don't do any job here. For this, I go out of Jharkhand." Or, as Upendar said: "People recognize me here as a mate. I would feel ashamed to do low-grade work. Outside, nobody sees me." In any case, whether or not migrants follow economic pursuits, such cases help us understand migration as no more than a strategy of rupture: to escape one's social milieu and its obligations and constraints. In that, many migrations were successful.

²⁴ And, one could add, because the price elasticity of the demand for alcohol is low in general.

²⁵ "Super quality" designates the first *chang* after fermentation; the second one is milder and has a lower alcohol content.

At home in Dumka, I don't drink. My family doesn't accept it if I come back home drunk. So I smoke *charras*. [...] Here, I can drink. Lots of people come here only for drinking. There's no family control [...]. We came here with our pockets empty and we'll leave with our pockets empty... (anonymous, Chilling, 22 June 2007).

As another worker named Bilko, who spent his whole day drinking, once told me (Chilling, 27 June 2007): "Who has come to save money? It is all for passing time!" And effectively Bilko did not save any money: after his four-month period, he – who had a wife and a son in Dumka – did not go back home but stayed in J&K to work as CPL. There did not seem to be any particular reason for drinking: some ICPL workers said they drank out of boredom while one driller always drank before leaving for his dangerous job. Alcohol consumption was not encouraged but it was not banned either: it was even used by the mate to pay workers for small services. In a way, alcohol has a nearly systemic role in the same way that coca in Bolivian tin mines makes working conditions more bearable (Nash 1993: 200)²⁶ as do drugs and alcohol in the South Louisiana oil industry's labour camps (Higgins 2005).

Some workers also managed to save because they were involved in corruption networks with BRO officials, selling diesel, rations, equipment, and construction material, or were very skilled at playing cards, as in the two examples I will present below. Corruption is quite widespread on the road, according to the workers I interviewed. Workers cited several cases in which they had directly observed it or in which quantities of working material, rations, and fuel were not monitored and disappeared.²⁷ In

²⁶ In Potosi tin mines, writes Nash, the "management is well aware of the importance of coca in that it makes inhuman conditions of the mine tolerable". It therefore keeps the company shop well supplied with it (1993: 200). As Higgins argues about South Louisiana labour camps, drugs and alcohol are an integral part of the system as "supplying a workforce for the [...] industry's least desirable jobs require manipulation of non-market forces that shape access to labor."

²⁷ A few cases of what is often presented as a general practice were sometimes reported in the press. For instance, in 2007 in Drass, 40 BRO workers assaulted policemen who were investigating theft and the illicit sale of construction materials; four of them were charged (*The Telegraph* 21 July 2007; see also *Daily Excelsior* 12 February 2003). Conover also mentions the corruption cases he experienced: a Bihari worker in Reru offered to sell some cement at "a really good deal" that had been "stolen from the road project" (2010: 87). One member of his party even bought some to build a monastery. Another time, in Padum, a contractor delivered 25 barrels of 200-litre capacity containing only 135 litres of diesel each: the officer signed the delivery forms, covering the scam by pretending that bad roads to Zaskar had caused the barrels to leak. In other cases, it was bitumen that was sold (Das, 28 December 2010): as the article states, corruption would explain the 150% inflation in construction costs per kilometre of road compared to PWD rates. In 2010, a BRO engineer posted on the Leh-Manali road was caught and arrested by the Central Bureau of Investigation for selling diesel illegally (Chauhan, 24 August 2010; 14 October 2010). In a report in 2011, a parliamentary panel cited corruption as one of the main reasons for delays in

Zanskar, for example, the BRO camp is the only available source of diesel in the whole valley and is notorious for providing diesel.²⁸ Corruption was also clearly palpable in the quality of construction of buildings and retaining walls: because the ratio of cement to sand is too low, pieces of wall break off if rubbed against by hand and walls have to be rebuilt after two years. To a large extent, corruption benefits officers but it also necessitates the help of workers in making the material available and carrying it to external buyers. Workers who had won the confidence of officers and were involved in such operations could earn a hefty amount from corruption, often twice their salary.

Another example is gambling – a favourite activity for many workers. Three games were played: a card game called “29”, another called “*teen pathi*” – by far the most lucrative – and, in winter, a Nepali dice game that uses coins and shells called “*sho*” in Tibetan, played by Sherpas around *Losar*. In the evening, small groups of players formed outside tents: usually four to six players sitting in a circle and as many as 20 spectators gazing passionately at the game or waiting their turn to play. Women did not play but benefited indirectly from these games as they might receive Rs10 or Rs20 banknotes from successful players because they said it brought them luck. It seems difficult not to draw a parallel between the behaviour of workers on the construction site – in a way, gambling with their lives – and their card gambling games, in which bank notes as high as Rs100 (the equivalent of a daily wage) could change hands every five seconds. Some might lose everything in gambling while others might win as much as Rs2,200 – perhaps more – in half an hour. For people in the second category, gambling was a very effective way of increasing their income. Arjun was one of them, recognized in the camp as “one of the two experts”. It took him two years to master the card games, a phase during which he lost much of his pay; after this, he gradually reduced his losses and slowly started becoming good enough to make profits. After his four months in Chilling, Arjun refused to tell me how much he had won. Yet I saw him playing nearly every evening, sometimes earning more than Rs2,000 at one party. He proudly told me that he had never lost his initial capital at any party. More than a simple pastime, gambling could rightfully be considered a livelihood activity.

road construction in the country (Das, 7 March 2011). In April 2011, the defence minister ordered an investigation of projects Deepak (Leh-Manali road) and Arunank (Arunachal Pradesh) following allegations of lack of quality control, favouritism, lack of transparency and near-absence of competition in awarding contracts (IBN Live 2011)

²⁸ The closest petrol station is near Kargil, more than 200 km from Padum.



6.17. Playing cards and gambling

Thus, on one hand, the high level of expenditures in comparison to low wages keeps workers vulnerable and dependent on the company. On the other hand, other possibilities of gain by cumulating wages, selling alcohol or construction material, and gambling explain why many workers who wanted to quit their jobs eventually stayed longer as they were earning more than they might in most other jobs. But there were few people in this category. A parallel can be drawn with the camp system that supplies the workforce for South Louisiana's offshore oil and gas industry, whose existence is "driven primarily by the marginality of the workers" and depends on the reproduction of "the continuities between work and poverty for [a] marginalized underclass" (Higgins 2005: 12). Migrants working for BRO are small peasants at home, partly self-sufficient and partly integrated into market relations. Working on the road provides them with a means to cope with the basic needs of their families but not more as potential savings are sucked into diverse expenditures, living costs, payments to the mate and officials, alcohol consumption, gambling, etc. As gains remain marginal, in the end, many workers are left with little choice but to migrate to different construction sites and

continue working for the company, so that BRO benefits from a limitless pool of construction workers.

A final, decisive factor is the dangerousness of the task itself and the widespread view that casualties are unavoidable in road construction in difficult terrain.²⁹ As BRO proudly states on its official website (BRO 2008):

Let us not forget that roads in this difficult terrain have been built not only with mere cement and concrete, but also with the blood of men of the Border Roads Organisation of India. Many lost their lives for the cause of duty on the project. To these men, who always play with danger and laugh at death, duty comes first.

I was often reminded of this view by BRO officers. As a BRO supervisor once put it (anonymous, Chilling, 15 September 2006): “Because it [the road] is built for defence, it has to be completed. For every worker who dies, BRO will recruit 50 others.” Casualties were truly seen as inevitable: they did not even seem to enter people’s calculations in the decision to build bridges or whether or not to avoid a dangerous area; if they did, it was only in terms of compensation. As an engineer said: “Accidents can happen. But roads are more important for the army and to develop the country. Road construction accidents happen anywhere” (anonymous, Chilling, 16 September 2006). Casualties were seen as a price to pay and it seemed that some people had to be sacrificed for that road. In the business of road construction, death becomes normalized.

This factor was further aggravated by the choice of construction methods and the necessity of building the road in the allocated time. After an explosion, the surrounding cliffs are seriously weakened, so that the worst rock falls generally happen not during the explosion but minutes or hours later and at a time nobody can predict. The pace of construction lagged behind the targets set and the road had to be built quickly. As a result, workers had to start drilling right after the explosion while rocks were still unstable, walls had not been cleared properly, and illusory protective measures (such as blowing a whistle to warn drillers of rock falls) were adopted. Most accidents happened in such conditions; inevitably, more will happen until the road is completed.

²⁹ See Tan-Pei-Ying (1945) on the Burma road or Ispahani (1989) on the Karakoram Highway.

Chilling in particular is known among workers as a dangerous place. Many workers have died there, although exact figures were impossible to obtain. Many rumours circulated among workers, histories were transmitted from one worker to the next, and the figures given by the company itself were inexact. When I arrived, I was told by a BRO staff member that 13 workers had died in one year in the 1990s, forcing the PWD to stop construction. Yet these figures were never confirmed by inhabitants. On the other hand, accidents that affect migrants are quickly forgotten and erased from collective memories.³⁰ During my fieldwork in Chilling from August 2006 to October 2008, seven people died in four separate accidents. Two of these casualties were not recorded by BRO and there is evidence from the body count published in its monthly newsletter that many CPL casualties are not even disclosed. In 2002, an article estimated that ‘at least’ 124 lethal accidents had affected BRO workers in Ladakh over the last 15 years, a figure that is probably far below reality (Sharma 26 October 2002). In 2010, the Indian parliament expressed its concern regarding the high fatality rate among BRO workers: nine fatalities every ten days or 330 fatalities every year, “which is higher than the fatality rate of any army battalion in J&K” (Press Information Bureau 2010). BRO’s regular employees also die on roads but the majority of fatalities are casual workers, most of them migrants.

Additional structuring factors: women and children

There were also additional factors that made some individuals more likely to suffer than others, these being women and children. The experience of living and working on the road is highly gendered. Chilling is a predominantly male world: groups of seasonal workers consist exclusively of men, and even among permanent migrants the population was largely male. In Chilling, women were wives or daughters who had followed their husbands or fathers over the long migration process. They always made it clear that the decision had been made by their husbands or fathers, that the process had been painful,³¹ and that they would only return when their fathers or husbands decided to.

³⁰ One example is that of the Nepali workers who were trapped in Padum when the snow came early in autumn 1987. About 40 to 50 of them died, trying to flee through the Jumlam and Shingo La. Interestingly, most people in Padum did not remember the incident or said that it had never happened.

³¹ This was mostly true of women or at least initially. Some women, such as Neema Dolma, had lived their migration as a painful experience but were ultimately satisfied with their situation in Chilling: “I will

Women often pushed to go back home but they had to follow. This was the case of Mingmar – Thinlee’s daughter – for instance. The kind of work and the way in which danger was experienced were also gendered, as men and women were given different tasks. Only men were in charge of drilling and blasting but women were not spared the danger of rock falls either: in 2006, Sherpini Doma died when a stone struck her on the head. Although young women were given tasks such as carrying stones and mixing cement, older ones were mostly cooks or *chokidars*. Because they were on night watches or had to stay in their tents during the day, they experienced other kinds of hardship, such as the unbearably high temperature in tents during the summer, or sometimes the threat of intoxicated men. They were also confronted indirectly by danger and distress, such as Mingmar who feared for her father when blowing the warning whistle, or Zangmo and her neighbour Kamla Devi anxiously waiting for the truck to appear at the end of the road.

As women, additional factors could increase their suffering: having an alcoholic husband would cause the whole family distress. For instance, despite a happy childhood in Nepal, Kamla’s life had turned into a nightmare from the moment she got married. Kamla’s situation was mostly due to her husband’s addiction as he would spend most of the household money (three wages, including that of his wife and son) on alcohol. She told me that they had not been paid by three contractors over the last 10 years, totalling about six years of work. Although cases of migrants being cheated are not unheard of, being cheated with such frequency is rather uncommon and it seemed unlikely that her husband would have agreed to remain unpaid for such long periods. The fact is that her husband controlled the household money. Despite earning more than Rs12,000 every month, they still owed Thinle Rs3,500 after a year. Thinle finally refused to lend Kamla’s husband any more money. Kamla’s husband was injured in May 2007 in the same accident that claimed the life of Shanta Bahadur. He was so drunk at the time that other workers thought he was putting on an act. He was taken to hospital and given money for medicines. When, after a month without any news of him, his son Buddhiram went to look for him in Leh, he found him not at the hospital but at the bus stand, completely drunk. He returned to Chilling where he would drink all day long,

never leave. After the road is completed, I’ll be working here. One of the best things is that my family and I work here and we get paid on time. Otherwise we would be working under a contractor for a season, a year, and the contractor would not pay... This is the best situation we can hope for” (Neema Dolma, Chilling, 17 September 2007).

threatening to leave if his wife did not provide him with alcohol and asking the officers or mate for money for medicines while pretending that he had given both medical reports and receipts to the company. Kamla wanted to leave Chilling. When her husband had an accident, Thinle also advised them to take the money they had received as compensation for the accident and leave. Yet when I visited them again in January 2008 and July 2009, they still had no plans to leave Chilling: “We have no money: where should we go?” (Kamla Devi, Chilling, 14 January 2008).

Other obvious victims of the road were children, and structural violence could strike them at an early age. Women who work for BRO no longer get paid maternity leave.³² As a result, pregnant women work until a short time before their term and return to work shortly after delivery. There were several babies in Chilling. It was not uncommon to see a baby in a basket on the side of the road, sometimes protected by an umbrella, crying in the sun while its mother was working 500 or 600 m away. Children had access to free medicine at the local dispensary in the village but living conditions were especially harsh for them in winter, as they had to live in a tent. They had access to the village school (although sometimes parents who had not been to school did not see the point of their children attending school either) but their camps were often situated kilometres away from the village. Although there was a high level of mutual aid between families and children could find in the family tent a haven of peace that contrasted with the harshness of life outside, they were also soon put in contact with a more inimical environment. The example of Tsering Dolma, “daughter of the road”, embodies this best.

Tsering Dolma was born in Chilling in September or October 2006. Her father worked in Leh. Her mother, who had been working on the road at the time, had left with another man, leaving her daughter behind when she was only a few months old. Tsering Dolma was brought up by her grandparents in the camp, and when they were busy or away, other workers would take care of her. Some were caring and obviously had a lot of affection for her; yet, for many, Tsering had to bear early the consequences of what they attributed to her bad karma: her mother was considered a slut as she had left with another man and consequently so was Tsering Dolma: “a prostitute like her mother”

³² Some workers said they used to be given 40 days.

(anonymous, Chilling, 22 June 2007). Many workers showed very little compassion towards her and would make hostile gestures at her. Most of all, they laughed about her *chang* addiction. When she cried, she was fed a full bottle of rice *chang*: she would become red, fall on her back, and start snoring like an old man. Her grandparents had no milk and *chang* was seen as a good substitute. Nobody really seemed concerned about the consequences of alcohol for her. Fortunately, those with less empathy did not stay long in Chilling and Tsering seemed to find a friendlier environment among the Sherpa families in the camp. I was happy to find a healthy and joyful little girl when I visited her grandparents in July 2009.

These are some of the factors that affect most migrant workers living on the road. They help us understand the presence of migrant workers on the road, the risks they are subjected to, their acceptance of these risks, and ultimately the violence they confront. Working and living conditions also explain why road construction, despite being presented as a development tool aimed at providing employment and redistributing income, actually fails to benefit workers. In Chilling, workers were kept in a situation of precariousness, their bargaining power limited by personal and institutional factors, the gains insufficient in relation to high living costs, and the tasks assigned too dangerous. Most workers did not manage to save anything, so that their well-being improved only temporarily, marginally, or stagnated. Thinle's family was one of the few for whom I had hope because they managed to save and had plans to leave Chilling, but this hope vanished with his death.

Thinle, his family, and other workers were certainly not devoid of agency – as their story demonstrates – but this agency was curbed at many turns by accumulating social, economic, and political forces over which they had little control. Similar to the image of the “puppets”, they were confronted by overwhelming forces that contributed to shaping their existence. This is one of the ways in which the road had agency over the workers: by shaping their livelihoods and existence; another way was by shaping workers' perceptions of the environment. At the same time, workers also had agency over the road as they were able to shape its trajectory. I now turn to this aspect in the last part of this chapter.

3. Transforming the landscape

The same experience of working on the road and living with danger shaped the perception workers had of their environment. Drillers like Thinle experienced it every day through their work and in dealing with seasons, weather, altitude, risks, and danger. “We are puppets in the hands of nature” sums up part of the relationship between road workers and their environment (Manmohan, Chilling, 14 June 2007). For workers like Manmohan, “nature” was powerful, it shaped mountains, it could destroy what they had created, and it played with workers: sometimes, it could even kill them. What is singular is how this view contrasted with engineers’ and official views, according to which carving a road out of the cliffs and transforming the place was just a matter of willingness and technical means. “Everything is possible”, as an engineer once told me, speaking in front of a blank map on the wall (anonymous, Khaltse, 27 July 2007). But on his map, there were no mountains, no contours, no obstacles. There were just a few rivers drawn in blue ink and roads drawn in red ink and so much surrounding white space that it was clear that many more red roads could be drawn on the map and therefore constructed on the landscape. Manmohan’s view also contrasted with how BRO describes itself: the “Mountain Tamers”, which can be read on milestones or on the way to BRO’s headquarter in Choglamsar. In BRO’s view, road builders are here to ‘tame’ the mountains in a kind of heroic fight to domesticate the wildness of nature. But in Manmohan’s view it was clearly the mountains that dominated people and road workers were in the hands of nature, not the other way around.

From the modest perspective of workers, building roads “is an unending process: you make the road, then nature comes, there are landslides, and you have to rebuild... the process goes on and on” (Sitaram, Chilling, 12 June 2007). As Ingold writes, “Ways of acting in the environment are also ways of perceiving it” (2000: 9). How people interact with the environment – whether as engineers sitting at a desk, army officers commanding considerable human and technical means, or workers carving out the road with their own hands and confronting the vagaries of the climate – shapes their very conception of the environment: the way it is perceived and the way it is transformed. In the case of workers, as Thinle’s story suggests, it is moulded by their experience of

danger, of seasons, and by the way they inhabit the landscape with their gods, among others.

In Chilling, local villagers have a pragmatic knowledge of their environment, which, like in other places in Ladakh, is constituted and derived from dwelling activities: moving through the landscape and perceiving it through the senses, using its resources, and cultivating it. The landscape takes sense through people's daily activities and the toponymy of places reflects people's mental constructions and use of the territory (Dollfus and Labbal 2003a, 2003b). The landscape is also given symbolic meaning: in Chilling, the portion of the Zaskar gorge from the Indus up to the Lamaguru mountain is marked by the legend of an epic fight between Guru Padmasambhava and a local demon. Traces of the fight can still be seen like scars on the landscape, from the thrust of Guru Padmasambhava's sword that cut into the cliff a few kilometres upstream the Zaskar River, to Lamaguru where he vanquished his opponent and stayed to meditate, to the heart of the demon: a red rock balanced on top of a mountain. A small sanctuary was built in the gorge, consisting of a big *stupa* and 108 smaller ones, an altar, and a small statue of Guru Padmasambhava. Most Chillingpas have never been there as the way to the sanctuary is dangerous, but when the river freezes over in winter it becomes easily accessible and they send a *lama* to hold prayers during the first and fourth months of the Tibetan calendar.

When the groups of migrants I followed came to Chilling, they knew nothing about Ladakh in general, besides the few images they had seen on TV during the 1999 Kargil war. They arrived in the Zaskar gorge and discovered a new environment: rugged, treeless, and nearly barren. The environment was unknown: they had no words to describe it but ceaselessly compared it to the green plains, fields, and gardens of Dumka in Jharkhand, or to the green valleys and lofty, foggy hills of Kiangsing, places that were familiar to them. Compared to Ladakhi people, their interaction with the environment was quite limited. There was a paradox here in the sense that these workers had travelled thousands of kilometres, crossed the country from east to west, and crossed the Himalayas to find themselves confined there to a world that was not more than 30 km long – the distance from Nimmu to Chilling – and 4 m wide – the width of the road. Moreover, their world in Ladakh was limited to three or four places: the camp; the construction site; the village, if they carried out any work in the fields in their spare

time; and Nimmu's bazaar on Sunday. Besides these four places, this world of high barren mountains was unknown to them and it was mainly through their work in road construction that they were going to make sense of the place.

Most workers (officers, engineers, and supervisors included) felt alienated in Chilling. As they often said, they felt "trapped". BRO engineers themselves often knew little about the place. They did not know the name of the next village the road would cross, even on Reru side (south of Padum) where the village is only 2 km away and easily reachable by a path along the Tsarap River: in two years they had never been there. In Chilling, they had built a milestone indicating "Nierak 16 km", whereas the village is obviously more than 30 km in a straight line on the map and two days' walk through the gorges in winter. This lack of knowledge of the place might also explain why, in February 2001, an army engineer was confident that the Chadar Road would be made operational in eight months and completed by October 2001 (see Mankelow 2001). In 2001, the target for completion of the road was set as 2011. Ten years later, the road is still far from being completed and rumours in Leh say that that BRO has asked for a 10-year extension. BRO engineers are only posted to Ladakh for a limited period, after which they shift elsewhere. By comparison, some workers had been living and working on the road for up to seven years; they were the road's memory, a memory constituted of their experiences and those of others. It was a kind of multi-layered memory borrowed from previous batches of workers and transmitted to new ones, season after season, year after year.

As Harvey writes, "Work [...] – broadly understood as simultaneously life-giving and culturally creative activity – is the fundamental process through which our relation to and understanding of the world of nature gets constituted" (1996: 26). Gradually, road builders would make sense of the landscape through their work and by dwelling in that particular place. A few weeks after they had arrived, workers emphasized how Chilling was special, unlike any other place they had been in the past, and how this one was dangerous as stones would fall all the time. For those who stayed longer, danger was seasonally lived, corresponding to climatic cycles: the most dangerous seasons were spring and summer as the melting permafrost destabilized the cliffs and rain and wind caused rocks to fall. Workers felt the lower density of air and the lack of oxygen and adapted their pace of work accordingly. Winter in the gorge was extremely cold

whereas summer was extremely hot. They also filled the landscape with their own gods, building altars in their tents, Durga statues, and Shiva *mandirs* along the road.

About 5 km after Chilling on the same bank of the Zanskar, they learnt about Lamaguru, named after Guru Padmasambhava, “the Lotus-Born”. Some would even visit the sanctuary regularly to offer a *puja*. They learnt about Guru Rinpoche who killed a demon in the gorges of the river and stayed in a cave in the mountain on his way to Tibet. When the road was started in the 1970s, the initial plan was to connect Zanskar and the villages of the Markha Valley to the Indus. Therefore, the plan involved building the road on the right bank of the river, along with three bridges to avoid the sanctuary, and link the villages of the Markha, but none of the three bridges was ever completed. When BRO took over the Zanskar axis project in 2001, succeeding the PWD, its aim was simply to link the Indus Valley in the north to Padum and Darsha in the south, not to link the Markha. A new survey was carried out and a new alignment decided on the left bank of the river 50 m above it. The sanctuary, which lay in a small saddle above the river, was on the proposed trajectory and the engineers decided that it would simply be destroyed.

Two different constructions of the landscape confronted each other. For the inhabitants, the mountain and site were sacred and had to be preserved. Therefore, the road had to be built on the other bank of the river. In the “disenchanted” and very technical view of the engineers, the mountain was just rocks of different quality and different gradients, and the most cost-effective solution was to carve the road through the sanctuary in accordance with the alignment of 50 m above the river. It is not clear what the initial position of the workers was but subsequent events definitely helped them shape their own landscape. When four drillers died under an avalanche of rocks while working at the end of the road on Lamaguru in August 2006, the people of Chilling linked the accidents to the plan to destroy the sanctuary, and so did the workers.

For many of the BRO engineers I met, the story of the sanctuary had been invented by the villagers. But for workers who were carving the road through the mountain, the situation was quite different. For them, the story of Lamaguru was real and the landscape was perceived in a very different way. It was they who experienced the might of Lamaguru on a daily basis and had to ask for his protection and be careful not to

provoke him. A month after the accident, Sanjay,³³ a bulldozer driver, told me that Chilling was very different from all the places he had worked in before. In Chilling, rocks would fall all the time without any reason. “In Chilling, every rock is sacred, holy... Rocks are like statues” (Chilling, 14 September 2006). He could see faces on the rocks, mainly Buddhist statues and faces, and he showed them to me: on a rock above the road, on the cliff on the other side of the river, and on a stone he picked up on the road. Sanjay also told me about the problem of the 1,000-year-old sanctuary 300 m after the end of the road, the 108 *stupas*, and the naturally formed *Om* on the rock a worker had seen on the mountainside: this was what made rocks fall and had caused the accident. One night, some Nepali workers even saw ghosts breaking stones near the mountain and some workers started behaving strangely, subject to fears and hallucinations. The story of the ghosts was later related by the people of Chilling and became part of the local repertoire, adding to the construction of the Lamaguru landscape (Tsering Dawa, Chilling, 24 September 2007).

Following the accident in August 2006, workers refused to work at Lamaguru and went on strike. BRO officers said they would find new recruits. Drillers were brought in from a nearby construction site as strike breakers, but when they heard the story of the accident and the sanctuary, they refused to drill at Lamaguru and also went on strike. From August to November 2006, nobody would agree to work there. Only in December 2006 did the company manage to recruit drillers “willing” to work at Lamaguru: among them was Thinle. However, the new drillers did not agree to work on any condition: they imposed a change in the trajectory of the road. If they were asked to destroy the sanctuary, they said they would all stop working (Chilling, 21 April 2007). The engineers were made to agree and the alignment was changed accordingly to preserve the sanctuary. Although it was more difficult since it required more work and more blasting, the road was carved with a downward slope in order to pass below the sanctuary. When large explosions took place, engineers and workers feared they might have damaged the monument and, every morning, workers would visit it to perform *pujas* to Guru Padmasambhava and light incense and oil lamps. Three months later, at the end of June 2007, the road finally passed Lamaguru, 20 m underneath the sanctuary.

³³ Fictitious name. BRO workers requested that their testimony remain anonymous.

The sanctuary remained safe and the road could easily be carved out on the softer terrain on the other side of Lamaguru.



6.18. The Lamaguru sanctuary before the road

The small trail on the other side of the Zaskar River corresponds to the PWD's original road alignment, later abandoned by BRO.

This episode of the construction of the Chadar road through Lamaguru shows once again (as in Chapter 4) how different, incompatible social worlds and individual practices determine different uses and material transformations of the environment (Nyerges 1997a). Once again, negotiations around the road became negotiations around a particular perception and social construction of the landscape, a struggle over meaning. In this case, workers' construction of Lamaguru as a holy sanctuary and a particular place – partially borrowed from the Ladakhis but in which workers participated – was powerful enough to shape the actual transformation of the place and determine the road's trajectory. But more importantly, it is because the workers were involved in the business of drilling and blasting that they came to construct the landscape in such a way.

Conclusion

The overall picture of the role of road workers and the effects the road has on them is rather contrasted. As the first and second parts of this chapter illustrate, workers do have agency but their power is constrained by several structural factors. An accumulation of social, economic, and political forces – that are all at some point the result of human agency – help us understand the choices and living conditions of road workers but also why they see no improvement in well-being as a consequence of roads and road construction. Politico-economic conditions at home, the precariousness of work for migrants in Ladakh and on the road in particular, a limited margin of manoeuvre constrained by personal and institutional factors, the high cost of living in relation to a limited income, and the dangerousness of the task, together with the widespread view that casualties in road construction are inevitable all contribute to frame migrant workers' existence, their willingness to bear risks, the violence they are confronted with, and the consequences the road has for them. Additional factors – being a woman or a child, for instance – also constrain migrants' choices and existence.

As seen in Chapter 2, one of the main purposes and arguments in favour of road construction is based on employment generation and income redistribution: road construction can be used as a poverty alleviation tool. Chapter 5 showed (and Chapter 7 will show) that locals do benefit from this. For migrant workers, road construction provides an immediate means of subsistence but not much beyond that. The same structural factors that constrain workers' agency also prevent them from benefiting from road construction, so that migrant workers see relatively no improvement in their well-being. The situation of road workers is in great contrast to that of locals involved in road construction, who benefit from its direct and indirect effects: locals benefit from long-time income generating activities, have no living costs to pay for, have bargaining power, and can reinvest their incomes in other activities. By comparison, the overall situation of migrant workers is entirely different (Edmonds and Howe 1980; Edmonds 1980: 133; Molesworth 2001).³⁴ Salaries and working conditions also explain why

³⁴ The same phenomenon was observed in other road construction studies. In Nepal, Molesworth (2001) found that road construction had positive effects because villagers locally employed in road construction did not spend money on lodging, could have food at subsidized rates, and did not spend on alcohol, gambling, or women. In contrast, families of workers who had migrated to town did not benefit as much as most of their income was spent on living costs. In Mexico, Edmonds (1980: 133) found that “90 per

hardly any local is employed in road construction in Ladakh. It seems that, if migrant workers are to benefit from road construction, safety measures have to be taken and the company has to provide workers with more rights, better working conditions, and higher earnings, and improve their ability to save and invest their incomes in productive activities. Yet this might not be in BRO's interest.

Thus, the road has agency over the workers: by shaping their livelihoods and existence and also their perception of the landscape, since it is through their work on the road that the environment is perceived. However, as the last part of this chapter shows, workers have a large amount of agency on the road by shaping its trajectory. In the end, the outcome of road negotiations is largely symbolic. It might appear paradoxical that workers, who often seem to lack agency over their own lives, happen to have agency on the road's trajectory. It also seems ironic that people can mobilize to change a trajectory when they fail to mobilize for better working and living conditions. But at the core of the issue of the road's trajectory was a question of survival: had the sanctuary been destroyed, the wrath of Lamaguru would have been directed at them and they would have been at risk of being killed. So they mobilized and imposed a change of trajectory. It is because workers' survival depended on the gods more than on anything else that preserving the sanctuary was of such importance. Also, questions of livelihood, risk, and danger, perceptions of the environment, and road trajectories are all linked: it is because workers' livelihoods involve living with danger that the environment is perceived as mighty, powerful, and partly unpredictable, and that workers are concerned with the road's trajectory.

In the next chapter, I deal with the consequences of roads on local populations. Based on the experiences of villagers living on the road, I seek to assess the influence of roads on changes in consumption, production, mobility, livelihoods, and well-being.

cent of the wages earned by workers on the [road construction] programme was spent on consumption items": there was an increase in family income but the income was also spent in town and not in the communities. As Edmonds and Howe sum up, road construction does not create development but "only the means by which it can take place" (1980: 198). Road construction must be integrated into a rural development framework, along with other activities and services. Road workers are generally the poorest among the population. Therefore, the rise in income is often just sufficient to lift them above the subsistence level but is not enough to be translated into savings and any productive investment.

Chapter 7. Living on the road

The end of isolation?

This chapter deals with the consequences that roads have in Ladakhi villages. Based on people's experiences in different on-road locations – mainly Alchi, Domkhar Gongma, Domkhar Do, and Chilling – I criticize the idea that roads increase mobility and improve livelihoods merely by connecting remote places to markets. I argue that (1) the consequences of roads are complex, often contradictory, and affect people in many different ways; (2) road transformations happen within a continuum of change; and (3) roads often act in combination with other factors. Hence, the road is better understood as a facilitator than an initiator of change and a factor that affects the magnitude and rapidity of transformations. It works through complex inter-reactions, interplays, and adjustments.

In the first section, I look at patterns of mobility in the village of Alchi, the way they differ along gender and generational lines, and how they have been transformed by the road. In the second section, I examine the life histories of four people living in on-road locations in order to understand the consequences of roads on consumption, production, livelihoods, and well-being. I also look at the limited (or contradictory) effects of roads on demography, seasonality, and isolation.

1. Experiencing mobility

Roads and mechanized transport reduce the time needed to cover distances. Crowden, for instance, notes how Kargil, formerly known as “the town of seven days”, is now only a day's bus journey away from Leh, Srinagar, and Skardu (1996: 53). Roads also facilitate the transport of goods as trucks carry to Padum in one day the 6,000-kilogram-load that a whole caravan of 75 horses would have taken six to eight days to carry, reducing by the same token transportation charges (Crowden 1995: 272). But not only

do roads decrease travelling times and facilitate transportation, they also thoroughly transform mobility patterns (Blaikie et al. 1980; Seddon 2000).

Rural development interventions often focus on roads and transport in order to increase mobility and access. This reasoning is based on two misconceptions: first, that increased mobility necessarily improves access, a point criticised by Edmonds (1998: 38); and second, that roads inevitably increase mobility, a theory refuted by the experience of Ladakh. In Ladakh, roads do not increase mobility: they modify the way people travel but their effects on mobility are complex and mobility remains determined by gender and generation.¹ The following section attempts to trace the contours of these complex multiple changes, which are ultimately linked to deep transformations in livelihoods, consumption, production, and people-environment interactions.

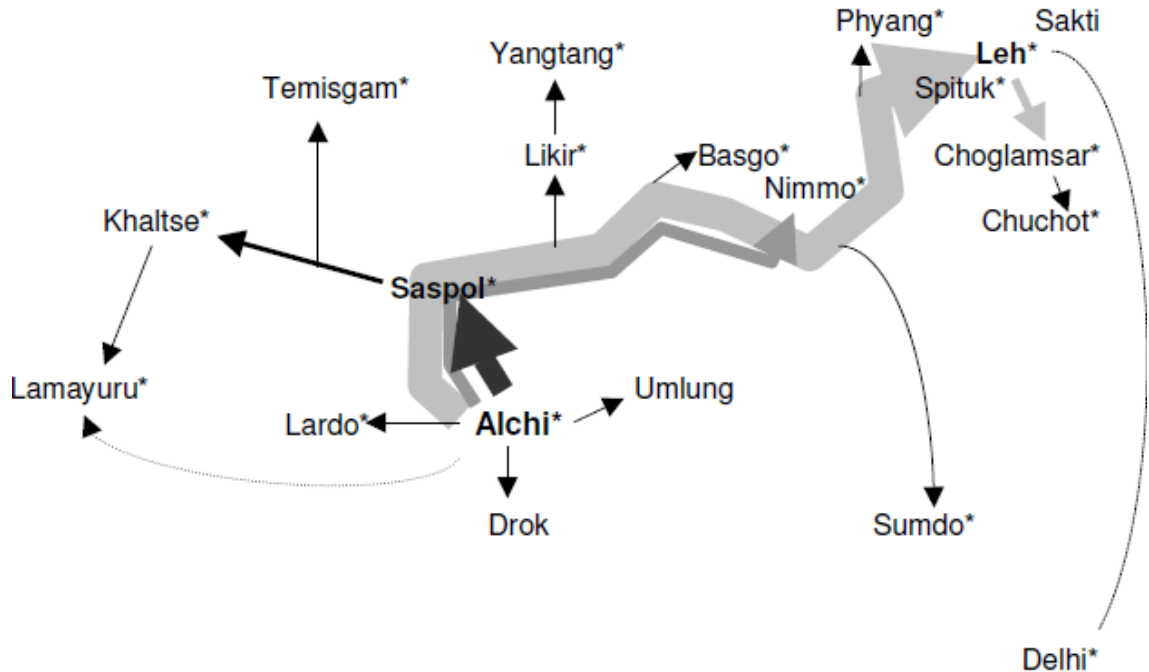
Chapter 3 showed that the absence of roads does not preclude mobility as people in Lingshed are extremely mobile. A mobility survey conducted in Alchi² confirms that people are not more mobile in Alchi than in Lingshed, and displays interesting findings in terms of the frequency of journeys, patterns of mobility, and gender differences. The two maps below (Figures 7.1 and 7.2) represent the average number of journeys per person per year (journeys/capita/year) for the population of Alchi. For the male population (Figure 7.1), Leh is the most travelled destination (6.4 journeys/capita/year), followed by Saspol (4.2), Nimmu (2.4), and Choglamsar (1.5). In terms of patterns, most destinations are linked by road (indicated by an asterisk on the map) and most journeys take place on the Leh-Alchi road or branch off from the Khaltse-Leh road (Srinagar-Leh Highway).

¹ Whether roads increase mobility is a legitimate question. Blaikie et al. (1980) conclude that the number of journeys increases following road construction, based on the assumption that the number of off-road journeys in a post-road situation – which can be measured ex-post – is representative of the totality of journeys in pre-road conditions. In other words, the reasoning starts from the assumption that mobility is necessarily higher after the road. Airey and Cundill find that the volume of travel increases substantially after the completion of a road, mainly due to reduced transport prices and mainly among higher-income groups (1998: 7). However, they have measured only the number of vehicle journeys undertaken (which rose from five per household per month in 1983 to 11.2 after completion of the road in 1986 and down to 8.4 in 1989). They also fail to account for the fact that transport is costly for the poor (accounting for 15 to 25% of poorer households' incomes in the urban context; see Fouracre 2001: 5), who might therefore see no change in their mobility. Other studies clearly reveal that "people in the rural areas are more mobile than has previously been assumed" (Barwell et al. 1985: 129). Dawson and Barwell also cite a study that found that, due to a lack of vehicles, the road network had "facilitated travel" but it had not "induce[d] greater mobility" (1993: 5). In Peru, Gade notes that the construction of a road decreased the number of pack animals and therefore reduced mobility for villagers (in Wilson 2004: 534).

² Results were obtained through a survey conducted with the help of Dr Padma Dolma in April 2008 in Alchi; 14 men (aged 33-76) and 17 women (aged 17-73) took part in the survey.

Schematic map of movements in Alchi
(not to scale)

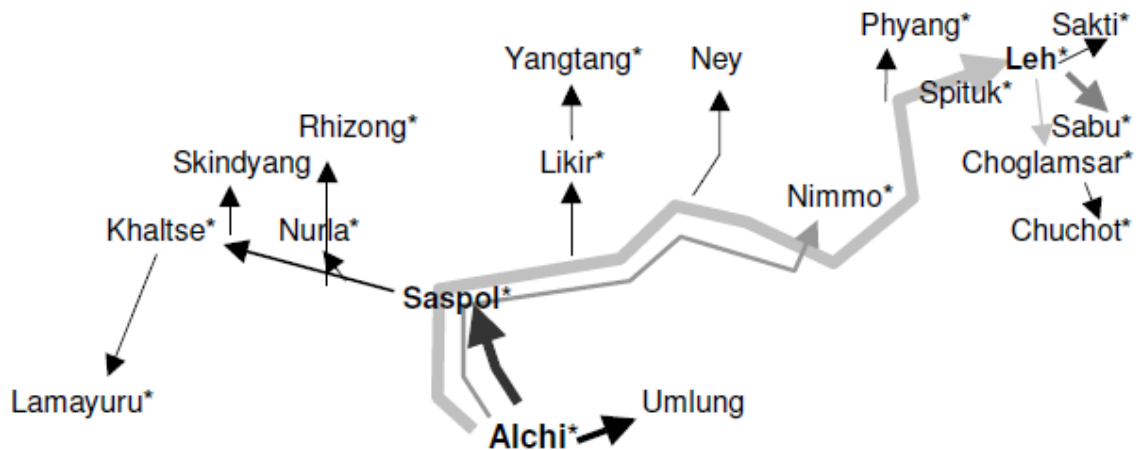
Men:



7.1. Schematic map of movements for the male population of Alchi

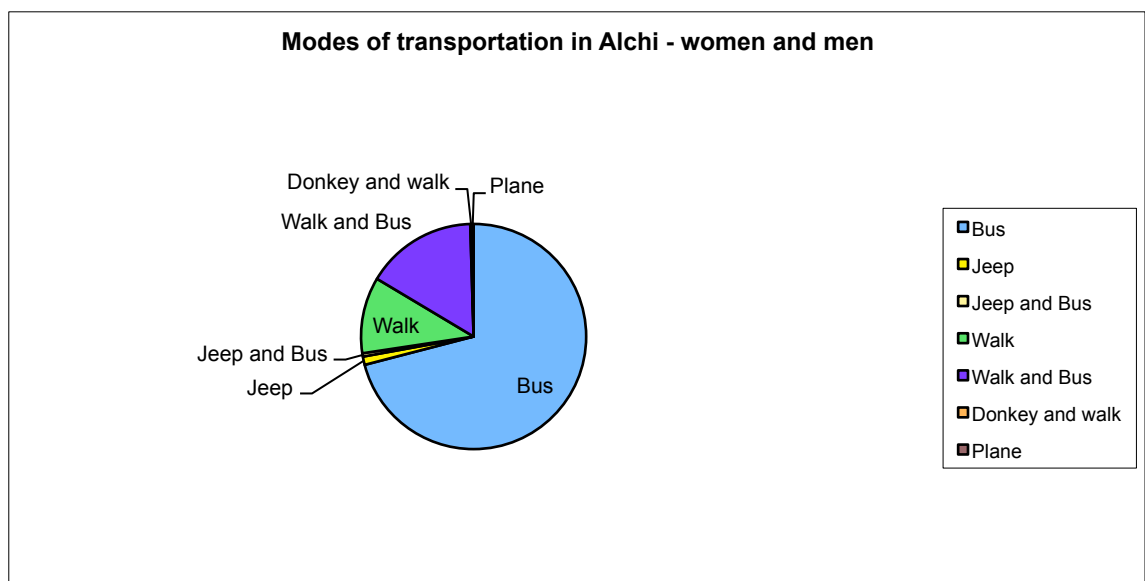
Except for the first destination (6.4 journeys/capita/year to Phanjila in the case of Lingshed and 6.4 journeys/capita/year to Leh in the case of Alchi), the number of journeys in Alchi is significantly lower for all other travelled destinations compared to Lingshed. Also, the total number of journeys is 52.7 per capita per year in Lingshed whereas it is only 17.9 in Alchi: this means that, on average, men in Alchi travel three times less than those in Lingshed. Distances and the time spent in travelling are also significantly lower: Leh is only three hours away by bus and the return journey can be done in a single day; Saspol is only an hour's walk or a 10-minute drive from Alchi. The mobility map of Lingshed implied an extremely mobile male population, with seasonal patterns that radiated in every direction. That of Alchi shows fewer and relatively simpler mobility patterns.

Women:



The width of the arrow is proportional to the frequency of journeys (per year and per capita)
 * Localities on the road

7.2. Schematic map of movements for the female population of Alchi



7.3. Modes of transportation in Alchi

From personal stories collected in Alchi, it appears that many places such as Lardo, Mangyu, Sumda, or Chilling are barely, if at all, visited anymore: these are destinations that are not connected by road or that have become relatively remote when one travels by road. For other destinations, roads have changed the way people travel: they used to

walk but now go by bus or car (see Figure 7.3).³ The road seems to have transformed Alchi into a deadlock as many trails east, south, and west of Alchi are no longer travelled and many destinations have disappeared from the map. According to recollected stories, pre-road mobility patterns were similar to the present ones in Lingshed in terms of direction, time, and scale of travel. The road has radically changed the mobility of Alchipas but it has not increased it. Mobility now takes place on roads, which are less numerous than trails, and roads seem to simplify and canalize movement.⁴

As suggested in the case of Lingshed, mobility in Alchi differs significantly according to gender in terms of frequency (see Figure 7.2). At 2.2 journeys/capita/year for Leh, 1.8 for Saspol, and 0.7 for Nimmu – the three most travelled destinations – the number of journeys per year per woman (10 journeys/capita) is far lower than that of men (17.9). Otherwise, gender does not seem to affect the general shape of mobility patterns, which are similar to those observed for the male population.

The fact that women travel less than men illustrates the fundamental role of institutional factors in shaping mobility. This can be explained by the socioeconomic division of tasks along gender lines as “needs for travels are shaped by socially constructed obligations on productive and reproductive duties” (deGrassi 2005: 55). As observed in Chapter 3, men in Ladakh are generally the “itinerant element” in the household (Dollfus 1989: 147) whereas women are responsible for domestic chores and looking after the household, fields, and animals.⁵ For instance, in Chilling, the 65-year-old

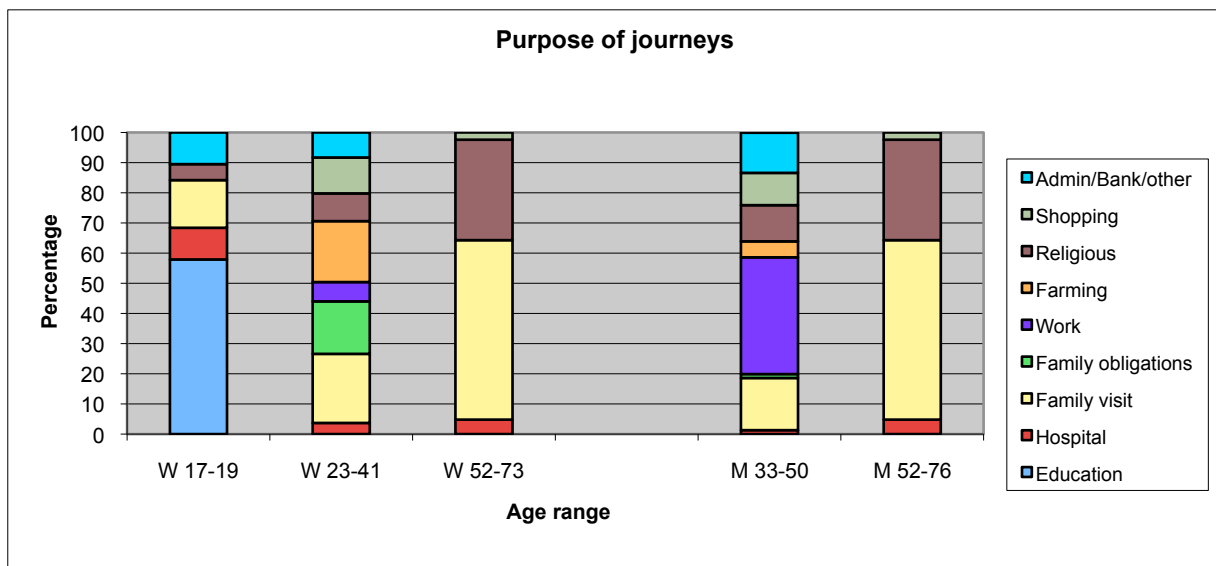
³ Effectively, buses are the main means of transportation used, as in Alchi more than 86% of journeys are made wholly or partly by bus. It is equally interesting to see that walking only intervenes in 27% of journeys, either for the whole journey (11%) or for part of the journey (16%, often one way by bus, the other on foot). “Now people even want to go to the *gonpa* by bus...” as a participant humorously put it (Namgyal Nangso, Domkhar Gongma, 1 October 2007). This is an important transformation brought about by the road, which also shows the importance of a good, reliable, and affordable public transport system if people are to take advantage of the road.

⁴ This phenomenon was observed by Blaikie et al. in Nepal: “The introduction of roads has radically changed personal mobility patterns, shifting many journeys from the trails to the motorable roads” (1980: 166). Traffic flows changed as east-west routes came to be used rather than the previous north-south ones. Skeldon also notes that, as a consequence of roads in mountain regions, “complex cyclical movements within the mountains changed to those based around a central village site, which increasingly becomes oriented to centres outside the mountains themselves” (1985: 247).

⁵ The transport literature has long been concerned with the gender-specific needs of transport and differentiated the impacts of transport on men and women. For instance, Edmonds writes that “there is a major distinction between the transport burden falling on women and men” (1998: 21). Women are mostly involved domestic chores, such as carrying water or collecting fuel wood and grain, while men are more involved in transport related to agricultural production, economic activities, or building materials.

Thundup Tsomo finds the road very helpful although, as she says, she has never been to Leh in her life, a mere three hours away by bus. Her husband and sons go but her job is to look after the sheep and goats.

Evidence further demonstrates that the purpose of journeys differ according to gender and generation (see Figure 7.4). Whereas men travel mainly for work or administrative purposes, women's journeys are essentially linked to family obligations (such as births, funerals, and wedding) and farming.⁶ Young people – young girls but this is also true for young men – travel mostly for educational purposes while older people's journeys – both men and women – tend to be linked to family visits and religious purposes. The same phenomenon was observed in Domkhar Gongma: for men, the most travelled destinations were markets and administrative centres; for women, neighbouring villages or pilgrimage sites; and for children, education centres. Of the places that people spent the most time, the village came first for women and children but was ranked fifth by men, showing that they are mostly away from the village.



7.4. Purpose of journeys by sex (W, M) and by age group

An additional explanation for women's reduced mobility resides precisely in the absence of men and children. As this chapter will show, men are increasingly involved

The kinds of transport (distance, frequency, load, etc.) vary and therefore mobility patterns differ, as does the impact of transport on men and women. Women's needs in terms of transport have long been overlooked (see also Fernando and Porter 2002).

⁶ At the same time, as Booth et al. argue, such journeys may also be linked to livelihoods as they allow people build up their social capital (Booth et al. 2000).

in the money and service economy, children are enrolled in schools, and therefore women are often left alone (sometimes with the older generation) in charge of farming and subsistence activities. As their presence is required at home, they can hardly leave the village. The mobility situation of women does not differ much from that in Lingshed although the availability of faster transportation implies that women are able to leave and return the same day when travelling to closer destinations. But, on average, the road does not really seem to affect gendered disparities in terms of mobility.

Thus, roads do not increase mobility; rather, they restructure movement along fewer axes.⁷ The mechanisms need to be explained. Some of the reasons have to do with how roads physically structure mobility. Roads decrease the time and energy people spend on mobility. Even when distances are longer, people opt to travel by bus as it is faster and less tiresome than walking on trails. An illustration was given by a villager from Domkhar Gongma (anonymous, 1 October 2007):

The village of Stanbila became dislocated from the originally accessible location as the road now goes up the other side of the valley. We used to walk by the river and visit Stanbila, bring messages, stop for tea and *chang*. The road changed it. We don't go there anymore.

The village is only 30 minutes away from the river or from the road but it is simply not on the way anymore. In Chilling, *Meme* Skarma told me nostalgically how they used to walk to Leh either along the Chadar or, in summer, across the Stakspi La and through Alchi, sleeping in caves and carrying quantities of *chang* and meat (24 September 2007). Now that everyone goes by bus through Nimmu, they need not pass through Alchi anymore. In Padum, I met a young *lama* about to undertake a five-day bus ride all the way to Kargil, Leh, and Manali, instead of walking directly across the Shingo La: the latter journey would be a quarter of the distance and take just as many days but it would require walking. In Domkhar Gongma, people used to walk north across the passes to Largyap in the Nubra Valley to collect fermentation seeds (*phaps*) but do not anymore; they now buy them in Leh. As roads restructure mobility patterns, they also

⁷ Blaikie et al. for instance, note how road construction in Nepal led to changes in the direction of traffic flows, "shifting many journeys from the trails to the motorable roads" (1980: 166). They also note the development of new urban centres, the exponential increase in the number of (roadside) commercial establishments, and the displacement of markets.

restructure social interactions and exchanges between people and places. Paradoxically, some places become further away and more isolated than before.

The same happens within villages as the road restructures their geography. Houses are rebuilt along the road, which acts as “a vacuum cleaner”, to use the expression of Blaikie (in Campbell and Campbell 2009). Gradually, the road becomes the new epicentre of the village, where people meet, goods arrive, and news is shared. In Domkhar Gongma, “earlier, *Stago*⁸ used to be the main place to gather, or to welcome dignitaries, at the centre of the village. Now it has shifted to the bus stand and community hall, on the road” (anonymous, 1 October 2007). In 2007, Gongmapas were building a brand new temple next to the road while the two existing ones in the centre of the village and higher up on the cliff were falling into ruins. As Dorje Angchuk said about his village (Domkhar Gongma, 1 October 2007):

In Domkhar Do, everybody used to go to the *gonpa* for prayers, *mane*, and *Tsichu* [tenth day of the month, the day of Guru Padmasambhava]. The road made it different. The elders say that now nobody regularly visits the *gonpa*. Everything happens at the community hall, at school [...]. Also, when we didn't have roads, the *kagan* [*chorten* gate] was very important: we used to welcome *rinpoches* and important persons there. It was the main gate. Now it has been shifted to the bus stand.

In most villages, public gathering places, buildings, and private houses are relocated along the road or near the bus stand, further transforming village life.⁹ Open fields give way to smaller concrete habitations reflecting the changing demographic and economic patterns as well as the availability of new construction materials, or they are enclosed to adapt to new needs and production methods (see sections on production and consumption). As the road – more than the presence of fields and water – determines their location, houses, habitations, administrative buildings and commercial establishments spread into hitherto undesirable or unviable territory, and individuals' practices further transform the material landscape.

⁸ *Stago* was the main gate by the house of the *lonpo* (king's minister).

⁹ Actually, one could often estimate the road's age by looking at the geography of the village.

Roads and motorised transport also modify the experience of space, time and distances, as well as the perception of the landscape. With roads and motorised transport, “time-space compression” occurs, as “social constructions of space and time are [...] shaped out of the various forms of space and time which human beings encounter in their struggle for material survival” (Harvey 1996: 210). I have mentioned in Chapter 3 how, in Ladakh, notions of distance and surface were related to time, and were constitutive of each other: a field is described in terms of the time or number of days taken to plough it (Osmaston and Rabgyas 1994), while distances are often measured in day’s journey by foot.¹⁰ Work shapes peoples’ perceptions of time and distances, as time is “tied to the particular circumstances of place and people” (Ingold 2000: 195). When one travels by car or bus, “neither the body nor the topography any longer defines a natural measure of speed” and distances (Sachs 1999: 201). Milestones become the markers of distances, and if for the older generation of Domkhar Gongma Leh is still “five days away” or “one day away by bus,” for the younger generation it is “124 km away” (focus group, Domkhar Gongma, 1 October 2007).

When cruising on a bus through the rocky plains and valleys, the monotonous landscape and rhythm of milestones and potholes is only echoed by the repetitive beat of loud Ladakhi pop music and Bollywood hits, half-covering the roaring sound of the engine and the intermittent horn, while passengers either sleep or gossip with their neighbour, helped by the close proximity offered by an often overloaded bus. However, whether the experience corresponds to a standardization of space and time and alienation of the landscape can be debated. As Penny Harvey reminds us, time-space compression “is discontinuous and uneven” as “the continual awareness of the road itself is inevitable when they are in such a poor state of repair and demand the attentive engagements of drivers and passengers” (Harvey 2005: 125). Also, roads are far from being “placeless” or “nonplaces” (Adey 2006: 77), as through their use and construction they become incredibly loaded with history and meaning. Roads often follow the paths of previous walking routes, and just like walking, travelling by bus also has its codes and meanings.

¹⁰ For road workers as well, time and distances are perceived through the different tasks they perform. Hence the distance from Chilling to Zangla may have been two years (the official target for completion in 2009), or more realistically 10 to 50 years according to people in Zangla, Lingshed and Padum. On a daily basis, when blasting and carving the road through the cliffs, 3 to 5 meters a day was considered a good pace, or 1 meter a day in particularly difficult places and conditions (Chilling, June 2007). When soling, each worker was assigned 2 meters a day, and when blacktopping, groups were assigned a target of 10 meters a day, while the same operation took place 60 meters further on the following day (Zangla, August 2007).

As with a walking journey, Guru Padma Sambhava is always present: on the dashboard or on a large picture placed above the conductor (along with a photograph of the Dalai Lama or Karmapa) to remind passengers that they travel under his protection. Passing religious monuments and *gonpas* is marked with a prayer, as the most fervent passengers close their eyes, bow their heads in deference and recite a mantra. Numerous monuments – *stupas*, *mane* and *mani* walls – are displaced or built along the road, as the religious landscape also aligns with the roadscape. One does not necessarily stop when going over passes, but horn at the view of prayer flags, an alternative to the traditional “*Ki ki so so lhargyalo*” (May the gods be victorious). The sites of accidents and remarkable events are known, remembered and commented upon. Standardised halts, in Nimmu or Khaltse, provide the opportunity to meet other travellers, drink sweet tea and *raksi*, and buy essential commodities that are unavailable in the village at an unbeatable price from the army shop. When passing through villages, the bus generally slows to walking pace, as it stops to load and unload passengers and goods every 50 meters, offering ample time for discussion between those in (and on) the bus and those along the road, as a new medium for the circulation of news and gossip.

The deepest alteration is in terms of landscape. By moving through the landscape one constructs it: “The landscape is the world as it is known to those who dwell therein, who inhabit its places and journey along the paths connecting them” (Ingold 2000: 193). By structuring movements and changing patterns of mobility, roads determine which places are visited and therefore known, and which places are not visited and become unknown; accordingly, the landscape changes.

So roads change mobility because they physically shape journeys, while the landscape – imagined as well as material – realigns with the roadscape. Yet, as in Lingshed (see Chapter 3), mobility patterns are also indirectly structured by people’s livelihoods, consumption and resources use. Transformations in mobility are explained by wider socioeconomic transformations that happen in society, and to which roads contribute. It is to these changes that I am turning to: changes in consumption, production and livelihoods.

2. Experiencing change and connectivity on the road

Chapter 3 showed that the experience of isolation in Lingshed was ambivalent: the village is isolated at the same time as it is connected, and isolation is a multidimensional concept. It is mainly political and economic, and one of the main difficulties that people face is the paucity (and seasonality) of livelihoods. At the same time, Lingshed is not culturally insulated but presents hybrid features and signs of a society that is truly changing. Lingshedpas are not self-sufficient either but connected to different networks through which resources are obtained and incomes generated. It is in light of this contrasted picture that the changes happening in on-road locations must be examined. Many of the changes attributed to roads happen within a continuum of change, are changes in magnitude rather than in absolute terms, and are linked to other socioeconomic transformations. Sometimes, roads simply allow people to adapt to change but do not directly initiate change. However, the road has important effects on livelihoods and consumption and production patterns, as the following four life histories demonstrate.

These life histories are exposed in details in order to (1) remain faithful to people's perceptions of their history, (2) understand why their well-being has changed, and (3) represent the plurality of factors that shape livelihoods and other aspects of existence: as it emerges, the road is one of them. These are the aspects I will single out in the analysis. Another element that matters is the sequence between road construction on one hand, and transformations in livelihood and improvements in well-being on the other. Increases in well-being can be anterior, simultaneous, or posterior to road construction. Finally, the life history of *Meme* Tashi in Chapter 5 illustrated some of the potential consequences of roads and road construction in terms of livelihoods. It showed that people can benefit from the road but also to a large extent from road construction, directly through employment and indirectly through their ability to influence the road's trajectory and therefore to extract future gains from it. The four life histories presented here provide other illustrations of the complex ways in which roads and road construction transform livelihoods.¹¹

¹¹ A more analytical interpretation of the consequences of roads on livelihoods is conducted in a separate sub-section after additional material has been presented.

Four life histories

The story of Thundup

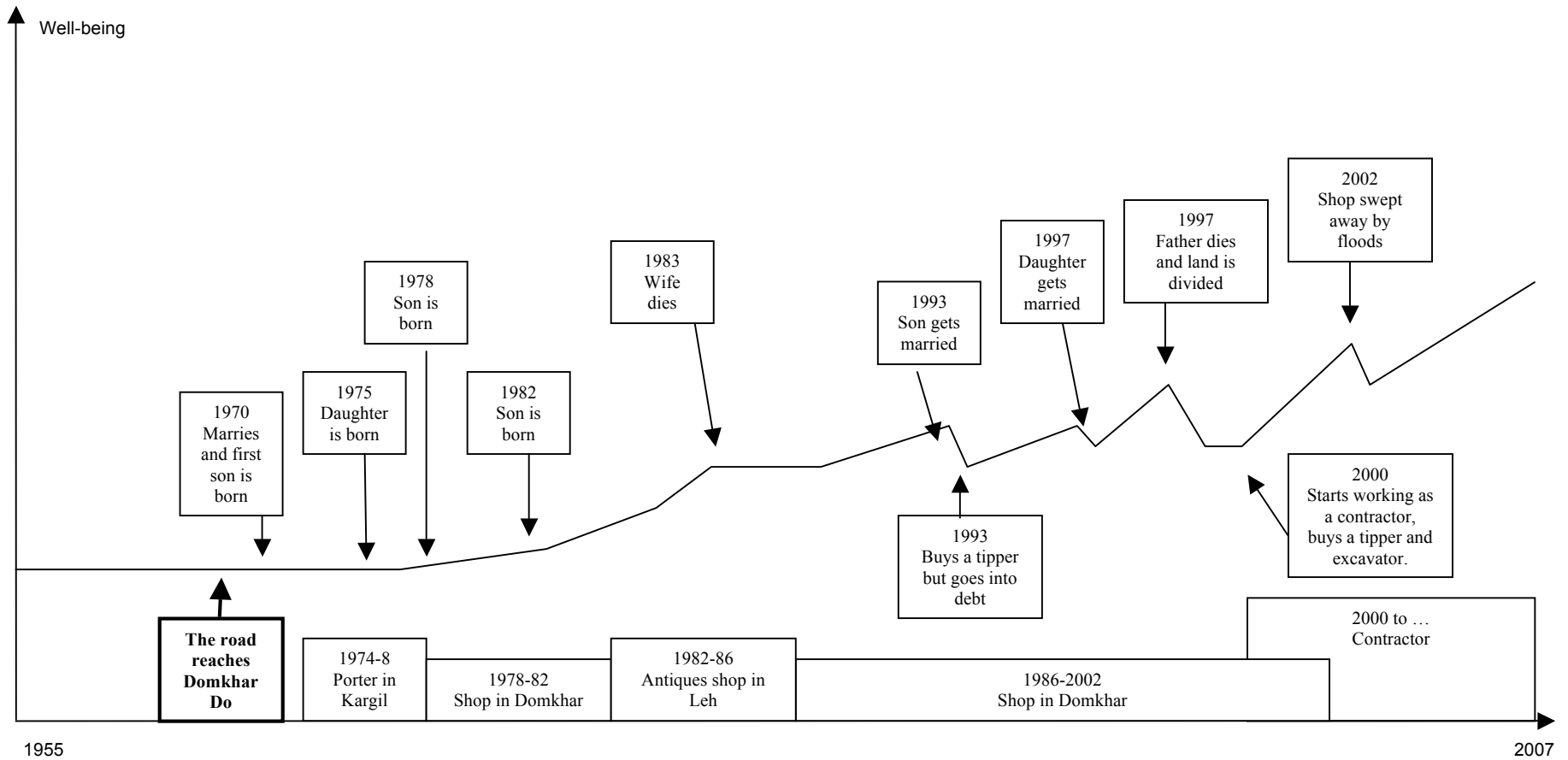
The first life history is that of Thundup from Domkhar Do, a village situated along the Indus on the road to Skurbuchan, about 16 km after Khaltse. According to villagers, the road would have reached the village approximately in 1966. At that time, Thundup was 26 years old so that there is a pre- and post-road period in his life, which illustrates the effects of the road on his well-being. Thundup has benefited most from the road by far and his material and financial ascension has no equal among the people I interviewed (see Figure 7.5). What matters more, however, is the trend rather than his absolute wealth, and how the road has contributed to it. I met Thundup in his ‘office’ by the school – built on a former cremation site, a barren piece of land thought to be haunted. Thundup was the *goba* of Domkhar Do. We sat on the floor in front of a small table on which stood a full bowl of *phatings*¹² and a bottle of home-brewed *arak*. Thundup started telling his story, which he wanted me to record for his children and for posterity.

Thundup was born in Domkhar Do in 1940. He grew up with his two fathers and three sisters as his mother passed away when he was 12. He remembers that life was particularly difficult and his family was rather poor: they only had 15 *kanals* (0.75 ha) of land and three sheep, went into debt every year, and had to repay with high interest. When he was not working in the fields, his father worked as a carpenter. When his mother died, Thundup had to drop out of school and start working for the PWD on the construction of the bridge in Khaltse for Rs1.4 a day. With the additional income from road construction, their material situation started improving.

Thundup first got married when he was 15, divorced five years later (they suspected his wife of stealing), and remarried two years after that. In 1964, his first son was born but he died after nine days.¹³ Between 1965 and 1975, Thundup and his wife had nine more children (four sons and five daughters): two sons and one daughter died in infancy and one daughter while giving birth at the age of 22.

¹² The best variety of apricots, eaten dried and prized for their white, non-bitter almond nut.

¹³ “He was like a *rinpoche*: he didn’t want to touch his mother’s breast to drink milk. His head was big and square with bumps [...]. Every time we had boys, my wife didn’t have milk. They were all fed on goat’s milk” (Thundup, Domkhar Do, 28 September 2007).



7.5. Life history of Thundup (LDoD2)

In 1967, after the road reached Domkhar, Thundup secured a permanent position with the PWD as a road cleaner,¹⁴ which he held until he retired in 2003. Like *Meme* Tashi in Khaltse, having a permanent job with the PWD was instrumental in improving his condition (Thundup, Domkhar Do, 28 September 2007):

My life started improving about 30 years ago. I used to work as a coolie and managed to save about Rs10 a month. But I could not buy much, especially when I was living in Domkhar. When the road came here, our situation improved. I could buy from other villages, from Khaltse, and have access to what they produced. I used to have 15 to 20 *kanals* of land; now I have more than 100 *kanals* [5 ha].

Thundup transformed acres of barren land into fields and plantations.¹⁵ His job gave him a stable income (Rs5,600 a month by the end of his career) and plenty of spare time to grow and manage his plantations, while the road allowed him to export wood, beams, pillars, and apricots. Through a government demonstration programme, he learnt how to graft apricot trees. He stopped working in his fields and instead employed day labourers – initially villagers but now mostly migrant workers. Thundup retired in 2003, received a hefty pension, and was elected *goba* in 2005. He is partly self-subsistent and receives rations from the government. He has 465 apricot trees of the best variety (whose annual harvest is valued at more than Rs130,000), as well as 4,000 poplars planted over the last 30 years and worth Rs5,000/10,000 each, depending on the size. Thundup also sells beams (Rs10,000/15,000 a year) and *salajit*¹⁶ (Rs30,000 a year). He further diversified his sources of livelihood when he bought a tipper, taxi, and tractor, and also works as a contractor.

Thundup says the road benefited him a great deal, both practically and economically (Domkhar Do, 28 September 2007):

Travelling became easier. Leh became closer: four days used to be necessary to go to Leh on donkey, now you can go in four or five hours. I was able to buy cars and

¹⁴ When asked how he got the job, he said it was because he lived in the beginning of the village and always invited PWD engineers for *chang* and tea.

¹⁵ If water is available in sufficient supply, people are entitled to claim and use unoccupied land in the vicinity of the village.

¹⁶ *Salajit* (*darkjun* in Ladakhi – literally ‘sweat from the rock’) is used in Tibetan and Ayurvedic medicine and is found hanging under cliffs above Khaltse. A local legend says it is the excrement of a featherless bird that feeds on medicinal plants and which nobody has ever seen.

trucks. Rations come until here and coolies travel easily. I can sell apricots and wood in Leh.

Thundup was from a relatively poor family with small land endowment and few assets, and the road allowed him to change this. Like *Meme* Tashi, he benefited from the road at both ends: from his salary as a road builder – at a time when such opportunities were rare – and from the consequences of the road, particularly from better access to markets, which enabled him to export wood, apricots, and medicine out of the village. The road also offered additional livelihood means when he bought a tipper and taxi. The consequences of the road were cumulative since his ability to grow and sell wood depended largely on his salary and spare time from his work in road construction. Thundup's life trajectory corresponds to a steady improvement only altered by personal tragedies. The improvement in well-being is quite spectacular and in many ways linked to the construction of the road to Khaltse and Domkhar Do.

The story of Puntsok

Puntsok was born in Domkhar Do into a polyandrous family of nine children (see Figure 7.6). Puntsok remembers that “People were very poor, but our family was doing quite well” (Domkhar Do, 29 September 2007). Three generations cohabited under the same roof and worked together on 80 *kanals* (4 ha) of family land. Puntsok married Tsewang Dolma, with whom he had four children. His three sons live with him in the *khangchen*.¹⁷

When the road reached Domkhar in 1966/67, it had no immediate effect on Puntsok's life: this only came later. He first worked for the army in Kargil in 1974 as a porter and donkey man. Four years later, he opened a shop with his savings on the road in Domkhar and could afford to send his children to school. He ran the shop for four years, before opening an antiques stall for tourists in the Leh bazaar. Although he earned a great deal, he decided to stop after two years as he found it immoral: “I was afraid of becoming greedy and starting selling *gonpa* statues” (Puntsok, Domkhar Do, 29

¹⁷ His daughter is married and lives in the village. He married off all his children: each marriage was both an achievement and a financial burden.

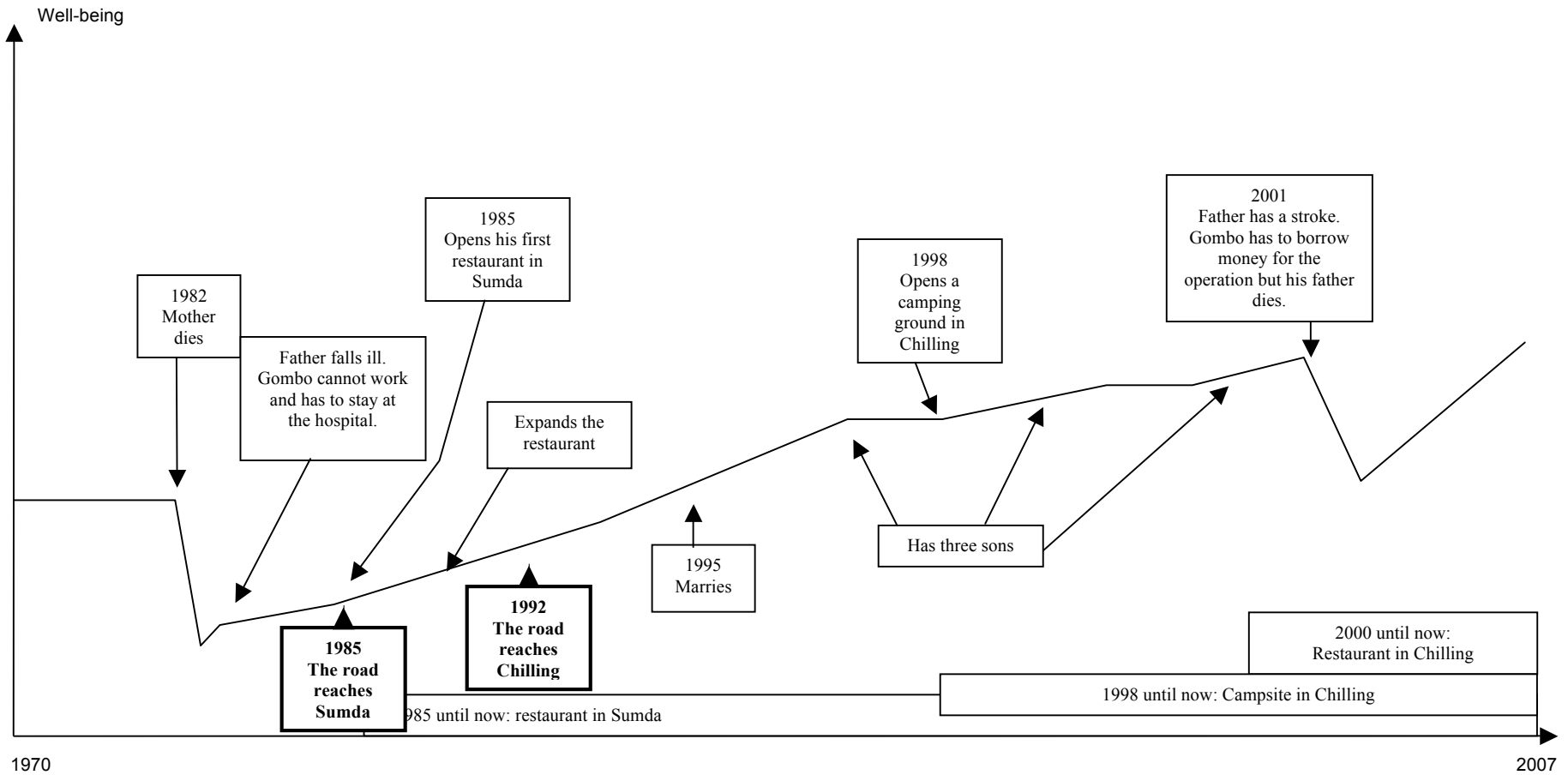
September 2007), In 1984, he returned to his shop in Domkhar and with the money saved (plus a loan) he bought a tipper, which was initially used by his brother.

In 1997, his older father died and the land was divided between the surviving parents – mother and younger father – and three sons.¹⁸ It was a big shock for Puntsok, emotionally and economically: everything was divided between the heirs and he lost the house he had built and the tipper he had bought. In 2000, Puntsok started working as a contractor for the PWD: he borrowed money and bought another tipper and an excavator, which are used by his son. In 2002, the spring floods swept away his shop: he lost Rs300,000 to Rs400,000 in goods and property.

Together, Puntsok and his sons earn about Rs200,000 from construction contracts and Rs60,000 from one salary as a government schoolteacher. In addition, thanks to the road, they are able sell produce from their land in Leh: Rs50,000 worth of vegetables, Rs20,000 of apricots, and Rs6,000 of trees. As Puntsok said, “This was made possible thanks to the road: my father started this business some 30 years ago and was the first to sell vegetables directly in Leh” (ibid.) Puntsok’s family is partly self-sufficient: they grow barley, wheat, and buckwheat; have animals for wool, milk, and manure; and receive government rations, while their expenditures are small (mainly gas cylinders).

Puntsok’s well-being and income improved as a direct consequence of the road, which is absolutely central to his livelihoods in four different ways: (1) it brings customers to his shop; (2) it provides a way to export vegetables, apricots, and wood to markets in Leh; (3) it provided construction work with the PWD; and (4) it is a working asset as his son drives the tipper. However, the sequence is different from the previous case as new opportunities offered by the road were not immediately seized. They required an initial investment, and Puntsok first had to look for work in Kargil and Leh. The money he earned there was then invested in livelihood activities made possible by the road. Overall, the road and the subsequent diversification in livelihood that followed led to a large increase in his well-being and improved his resilience to shocks, even when he had to take a loan, when property was divided, or when his assets were lost in floods.

¹⁸ His late father had opposed this but the land was divided in order to avoid conflicts. His brothers lived in Leh: they did not work the fields but still reaped the benefits. His two brothers now have sharecropping arrangements to cultivate the land while Puntsok has enough relatives to work the land. His sisters had their share of the land until their marriage, when the land was returned to the three male heirs.



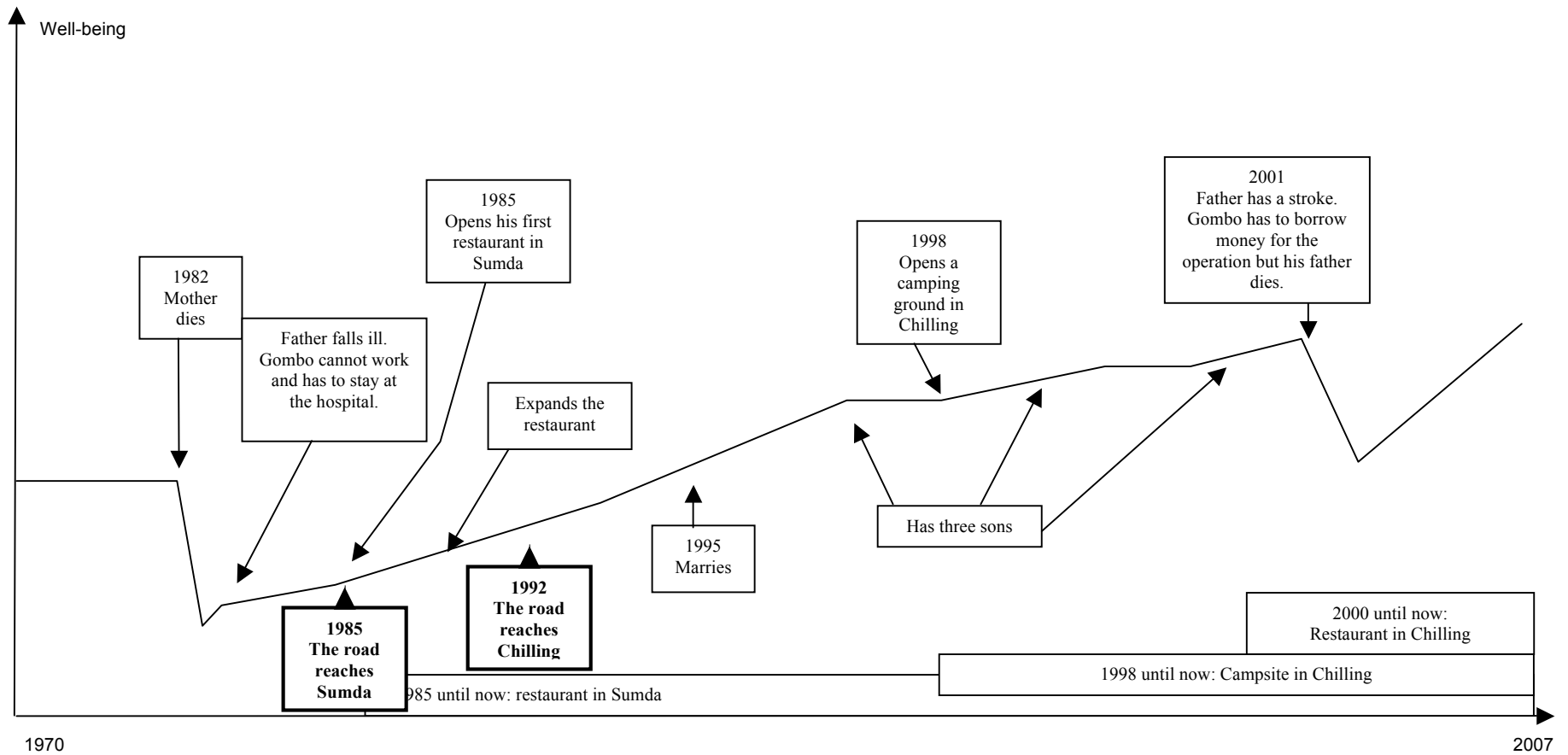
7.6. Life history of Puntsok Angchuk (LDoD3 Graph)

The life of Gombo

Gombo lives in Chilling, the village given to Newari craftsmen in the sixteenth century (Kaplanian 1981: 31; Rigal 1985: 86), where six *sergar* families now live. I documented his story in the restaurant he built by the road, where the bus stops twice a week to unload goods and passengers. Gombo was the first to build a shop and restaurant by the road; there are now three of them. Customers include tourists, their drivers, pony men and guides, road workers, and people from Chilling, the Markha Valley, the Trans-Singge La *Lok*, and Zanskar, who travel on the frozen Chadar. Gombo's livelihoods are linked to the progression of the road.

Gombo was born in Chilling in 1970. His mother died when he was 12. His family had 40 *khals* (less than 1 ha) of land spread between Sumda (10 km before Chilling) and Chilling. Part of it was sloping land with bushes, adjacent to the road: this is where he built his restaurants. In 1985, when the road to Chilling approached Sumda, his father built a first restaurant, which he extended in 1992 after the road had reached the village. For Gombo, in addition to making life easier, "It is the road that brought customers" (Chilling, 26 September 2007). A few years after the 30-kilometre-long road reached Chilling, the number of tourists increased and Gombo opened a campsite for trekkers below the village. As the road ferried more and more trekkers en route to Lamaguru, the Markha Valley, or the Chadar, Gombo opened a second restaurant in Chilling. He still works as a *sergar* – like every man in Chilling – and cultivates his fields but his main income is derived from the campsite (Rs10,000 a year) and two restaurants in Sumda and Chilling (respectively, Rs15,000 and Rs20,000). Gombo says that if there was one important event in his life, it was the construction of the road. He has further plans to exploit new business opportunities and in 2007 he was building a small museum atop his restaurant. Other families in Chilling have opened a home stay and rent one or two rooms to tourists but, unlike Gombo, they still derive most of their income from their original activities as farmers and *sergars*.¹⁹

¹⁹ However, the production has changed: from utensils such as cups, pots, and ladles (for Ladakhi customers that were sold or bartered in the Leh bazaar) to spoons and bracelets for foreign visitors.



7.7. Life history of Gombo (LChi16)

Although Gombo's gains are modest compared to the two previous cases, his well-being and resilience have increased as a consequence of the new livelihood opportunities brought by the road. As Gombo was able to seize them as the road progressed, transformations and improvements in well-being were concomitant with the construction of the road and previous gains could be invested in new assets.

However, the potential for growth is not unlimited as the number of visitors who make their way to Chilling is relatively stable and could even decrease once the Zaskar Highway opens up. The road will become the main artery to and from Ladakh and its potential effects on the local economy are widely unknown. On one hand, Gombo and the others could benefit from the dramatic increase in traffic; on the other hand, Nimmu is situated only 30 km away at the crossroad with the Srinagar Highway, and will become a more important stop for cars, bus, and trucks travelling on the Zaskar Highway. As other roads are under construction in the Markha Valley and on the Lamayuru-to-Chilling circuit, trekking might become less attractive and the number of tourists stopping in Chilling could fall. Roads improve access to the market and are sources of new livelihoods but they can also destroy market opportunities and livelihoods based on trekking and tourism. Hence, the road has brought about important gains but as new livelihoods depend nearly exclusively on tourism, they remain fragile.

The story of Tsering Dolkar: a woman's perspective

In a male-dominated money economy in which new opportunities are seized largely by men, women are often left to carry out household chores and agricultural tasks (see Grist 1998 for instance). Therefore, the effects of roads can differ for men and women. This life history exposes the perspective of Tsering Dolkar and reveals some of the gender-specific transformations linked to roads and road construction (see Figure 7.8). Tsering Dolkar was born in Domkhar Barma in 1967. At that time, livestock was one of the main sources of wealth so that this high-elevation village with its many pastures was relatively richer than the rest of the valley.²⁰ Her family had many *dzos* and *dzomos*, about 50 goats and sheep, and 20 *khals* of land. As Dolkar worked as a shepherd, she was not able to attend school. She was married off to Tashi Yangjor at the age of 14 and

²⁰ With its relative isolation in comparison with Domkhar Do, today it is rather the opposite.

moved to his house in Domkhar Gongma.²¹ Between 1990 (approximately) and 1997, they had five children: four daughters and one son.

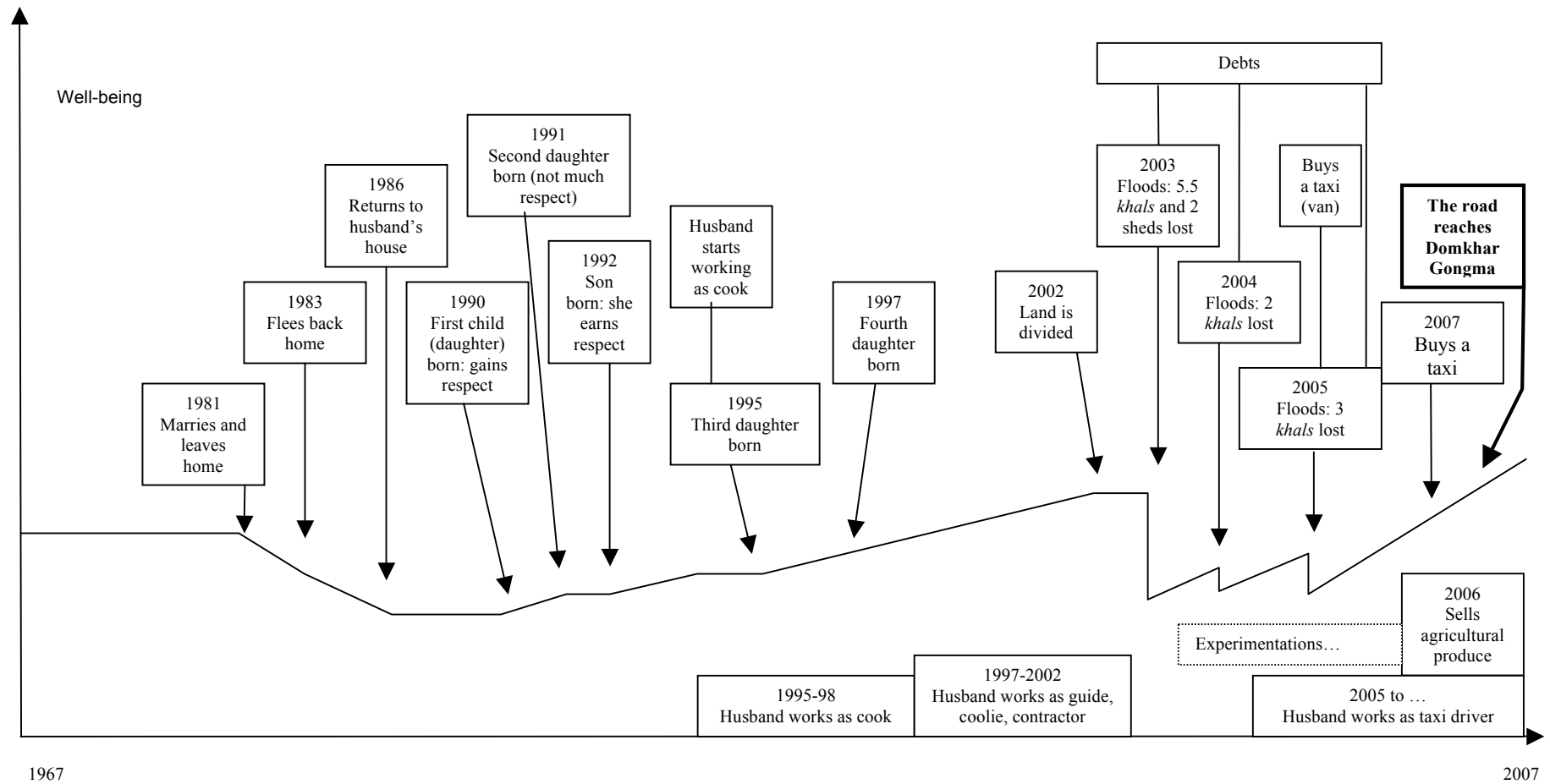
Over the years, her husband has worked as a cook at the school in Khaltse, a trekking guide, a coolie for the army on the Siachen glacier, and a contractor (for a year, which did not work out). Finally, in 2005, he bought a taxi, which he replaced in 2007 with a bigger one. Dolkar does not know how much her husband earns: “He lives in Leh and just sends some money home” (Domkhar Gongma, 30 September 2007). Due to his absence, Dolkar is left in charge of all agricultural operations, domestic chores, and village obligations. Her father-in-law is also absent: he buys apricots in Domkhar Do and sells them in the bazaar in Leh. She also brews *arak*, which she used to sell to road workers, but stopped as they would keep quarrelling.

Over the last few years, as the road began to approach Domkhar Gongma, she started growing peas and potatoes as cash crops. With help from the government and some NGOs, she experimented with new cultures and grew small quantities that had to be carried to the road. This worked and so she produced more. Once the road was operational, Kashmiri wholesalers even began come to the village to buy and export products to Srinagar. In 2007, she sold 3.6 tonnes of peas and expected to harvest 6 tonnes (100 *buris*; 1 *buri* being a 60-kilogram-bag) of potatoes.

Since she manages the fields alone, some arrangements had to be made: (1) the land was divided between her parents-in-law, brother-in-law, and husband; (2) she stopped cultivating barley, which has no market value;²² (3) some land is now left fallow, from which she only collects fodder for animals; and (4) they got rid of more than half their livestock (keeping only 20 goats and sheep, 3 *dzomos*, and 1 *dzo* were kept). As a result, they do not have enough manure anymore and have to buy fertilizers. Their main expenditures comprise fertilizers, hiring coolies, and buying government rations and gas cylinders, which are now brought by bus. They suffered as a result of floods that swept across part of their land in 2003, 2004, and 2005: more than 10 *khals* were lost, as well as sheds full of manure, for which they received no compensation.

²¹ She escaped after two years and stayed with her family for three years, during which time her family had to pay compensation to the groom’s family.

²² The price of grain is depressed by the price of subsidized rations of wheat and rice. Dolkar still has the equivalent of four or five years of consumption of barley stored at home.



7.8. Life history of Tsering Dolkar (LDoG2)

As a woman in charge of a household, Dolkar has had a rather mixed experience with the road. The road has made life easier but also more expensive: “Since there is a road, the children can go to school alone but we have to spend more on coolies and school and transport” (ibid.). They used to bring in coolies from Khaltse and now hire those working on the road. The road enabled her and her husband to diversify their livelihoods but he does not work and live in the village. By turning to commercial agriculture and taxi driving, Dolkar and her husband were able to overcome the temporary hardship caused by floods and debt; their resilience has increased and their well-being improved. However, she strongly resents her situation: “My parents wanted me to be in a good house, prestigious and prosper... but this is ‘bullshit’, being in a big house when everyone is away and having to do all the work alone in the home or the fields... plus being scolded by your in-laws...” (ibid.). In this, the road has done little to help her. On the contrary, by encouraging the transformation of livelihoods towards commercial agriculture – a task that is solely her responsibility – the road has increased her workload. Women’s well-being graphs often follow the same trend as those of men in terms of well-being, but the experience in terms of workload and mobility is often different.

Dolkar’s story also sheds light on a complex chain of processes that leads from general socioeconomic changes to a radical reorganization of production at the household level, in which the road participates. As villages become more integrated in the money economy, husbands look for alternative livelihoods – often outside the village – and cease to be involved in agricultural work. Children go to school, and households – basically the wives – are left with insufficient labour to work the fields. As a result, less land is cultivated, crops such as barley are abandoned, and livestock is sold or not replaced. When livestock is insufficient, less manure is available and fertilizer must be bought; as labour is insufficient, coolies must be hired. As a consequence, more cash is needed and the household has to produce more for the market. At the same time, it reinforces the need for household members to work outside the village to earn more cash, contributing to the lack of labour at home and to the overall process of transformation. In this process, the road intervenes in different ways, although it is not the only factor. The road is necessary to import fertilizers and other agricultural inputs, to bring in labour to work the fields, and to export agricultural produce to markets in Khaltse, Leh, or Srinagar. The road is also necessary to bring in machines that will later

compensate for the lack of labour. The road offers new and alternative work opportunities. But it also increases the need for cash since transportation must be paid for and what is not produced at the household level anymore is now brought in by road and must be bought. In the end, those who stay in the village – mainly women and elders – are left with more work, expenses, and responsibilities.

Dolkar's life history points to several downsides: as she says, life has become more expensive and her workload and responsibilities have increased. Her story shows that a multidimensional and subjective approach that goes beyond household unity and gender blindness is necessary to evaluate the effects of roads. Some of these are contradictory as they act differently on income, costs, workloads, and other dimensions that constitute people's well-being. More importantly, the effects of roads are not homogenous but are differentiated along gender lines. Finally, one must note that the road contributes to these transformative processes but does induce them. The road encourages transformations but does initiate them.

These four life histories reveal different patterns of road-related effects on people's livelihoods. In all four cases, the road has affected people's livelihoods but the sequence of events has differed. In the first case, Thundup's well-being had improved before the road reached the village. He started working on the road in Khaltse and when the road reached the village it enabled him to diversify his activities and consolidate improvements in well-being. The case of Dolkar is similar as her husband began operating a taxi and they started growing cash crops in anticipation of the road: when the road reached Domkhar Gongma, they were able to sell their products. In the second case, the road played a role later in Puntsok's livelihood. He first went to work in Kargil before opening a shop in Domkhar Do. This pattern was observed in many cases in which young people migrate to Leh or Kargil at the beginning of their lives before settling down in another business later in their village back home. In Puntsok's case, the improvement in well-being came eight to ten years after the road had been constructed (although there were some advantages in terms of comfort before that). Finally, in Gombo's case, well-being improved gradually as the road progressed towards Chilling. Gombo did not benefit from road construction (he does now, since workers are among his customers) but seized the benefits of having often uncultivable land on the road to open up restaurants and tap into the increasing flow of travellers. To sum up, the road

had three different effects: in the first case, the road consolidated an improvement in well-being or a recovery; in the second case, improvements in well-being came later, with the opportunity to take advantage of the road; in the final case, well-being increased with the advancement of the road. What mattered in all cases was people's ability to make the initial investment (sometimes generated through work on the road itself), which enabled them to take advantage of new opportunities offered by the road.

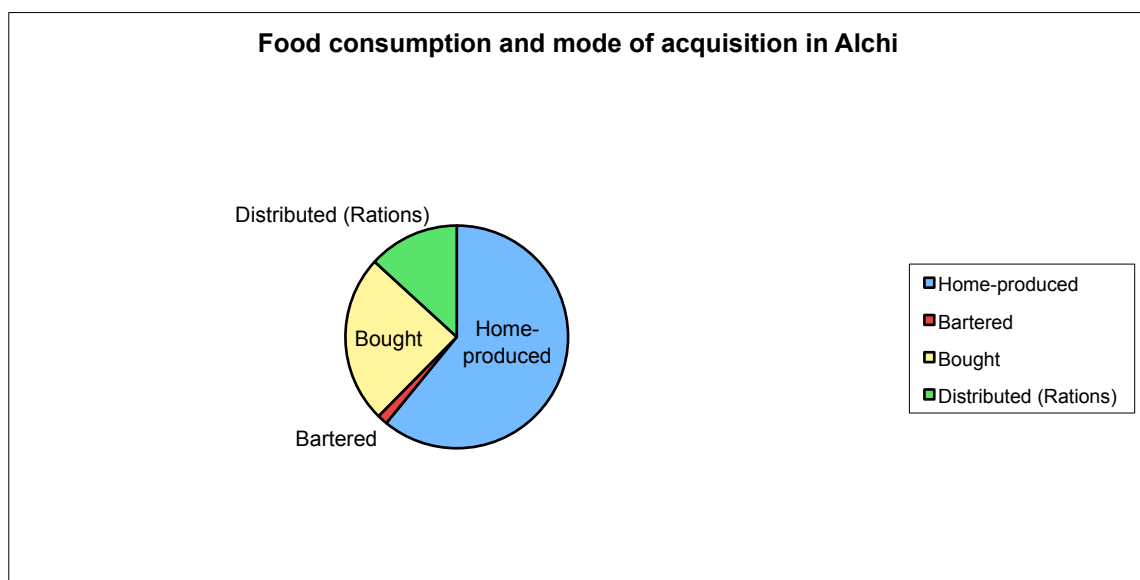
In conclusion, the four life histories demonstrate that the road participates in transforming livelihoods and improving people's well-being but it is not the only factor that matters: structural conditions also change, while institutional factors and processes influence people's ability to take advantage of newly created assets. The presence of the army and the development of tourism, which created employment and demand for agricultural products; the role of the government and NGOs through demonstration and distribution schemes as well as material and financial help; transformations occurring within the economy; schooling; access to credit; and finally road construction as a source of employment all played an important role in transforming livelihoods and well-being. Roads improve access to markets but they can also undermine market opportunities, for instance, those based on trekking and tourism. More importantly, accessing new livelihood opportunities requires the ability to make the initial investment.

The life histories also point to several changes in terms of consumption and production, and in the next section I compare these to what I observed in Lingshed in Chapter 3. I try to deal separately with consumption and production although it is evident that, in a partly self-subsistent economy, both change together: what is produced is consumed, what is not produced anymore must be purchased, and in order to buy from the market people have to generate cash so that changes in consumption lead to changes in production and vice versa.

Consumption

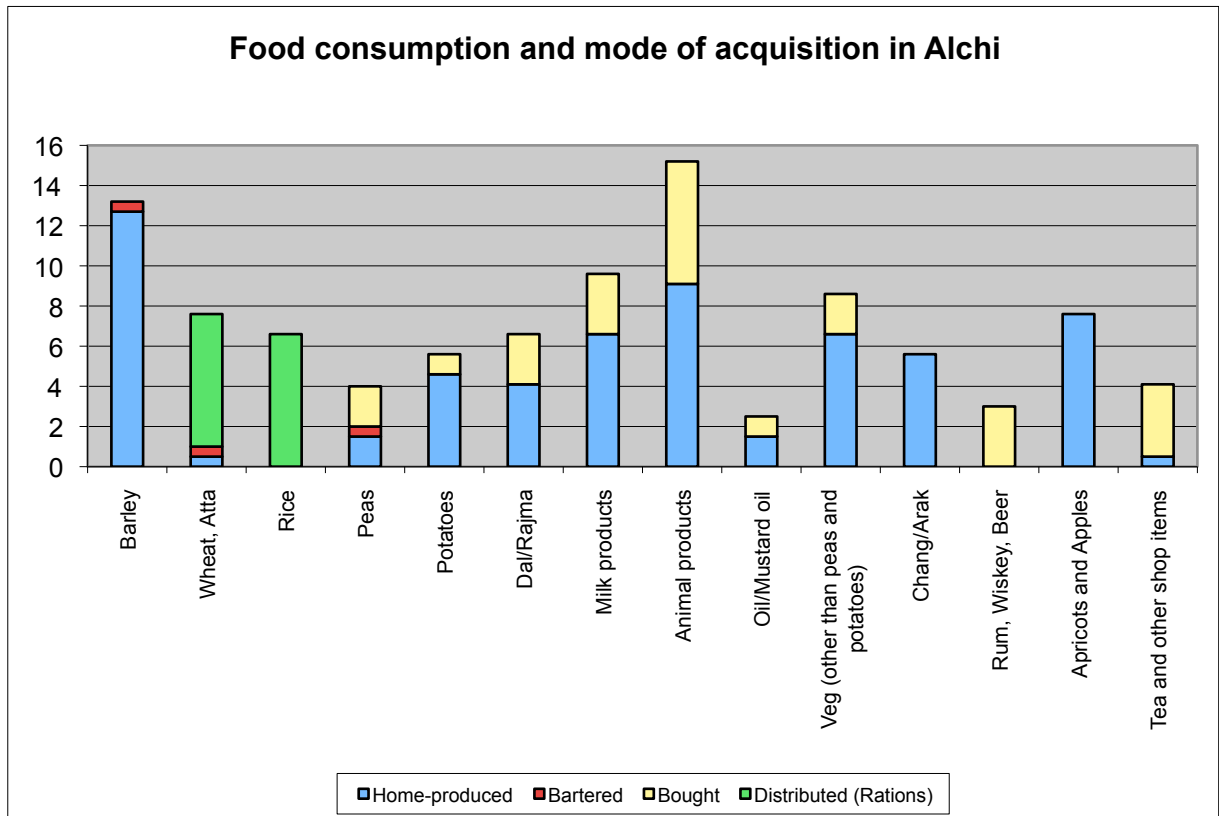
In terms of consumption, Lingshedpas had mentioned the introduction of subsidized rations and the monetarization of the economy, and the introduction of new construction

materials leading to architectural transformations: the same happens in on-road locations but to a higher magnitude. Architectural transformations – dominated by the use of concrete and glass windows, the import of wood and stone, and the use of bright acrylic paints that replace whitewashed external walls – are probably the most visible change to have occurred in on-road locations. In terms of food consumption, Chapter 3 showed that Lingshedpas were only partially self-subsistent (at 69%). This is also the case in Alchi, where 61% of the food consumed was produced in the village while the rest was either bought or bartered (26%) or obtained through the public distribution system (13%; see Figure 7.9). Hence, the degree of self-reliance is lower.²³



7.9. Food consumption and mode of acquisition in Alchi

²³ These figures are taken from a food matrix made in Alchi. The figures are very similar to those gathered in a survey in 2004, when it was found that Alchipas were self-reliant at 57% (Demenge 2005). In this previous study, I had attempted to measure the EFs of two clusters of villages: Alchi-Saspol, situated on the road; and the Trans-Singge La region, situated off-road (see also Demenge 2006, 2007). The findings highlighted Alchi-Saspol's higher reliance on cropland, and food and energy imports, and Lingshed's higher reliance on pastures, livestock, and local resources.



7.10. Food consumption per category and mode of acquisition in Alchi

The food matrix also shows that food consumption in Alchi differs from that in Lingshed (see Figure 7.10, compared to Figure 3.7, Chapter 3). More rice, *daal*, *rajma*, and meat, but less wheat, fewer peas, and significantly fewer milk products are consumed in Alchi. The consumption of apricots and apples is also much higher in Alchi, which is a major producer, while Lingshed is too high to grow them. Alchipas tend to rely relatively more on marketed and distributed goods (such as *atta* and rice, and marketed meat) while Lingshedpas tend to consume food (such as wheat and milk products) that is produced locally. Wheat, for instance, could be grown in Alchi but it comes in mainly as subsidized rations of *atta*. The consumption of animal products (notably eggs, which are non-existent in Lingshed) is higher in Alchi but, unlike Lingshed, meat is largely purchased. Hence, a significant part of Alchipas' diets is determined by their ability to import food items, which depends on the road. Such ability sometimes seems to replace production, as in the case of wheat or meat products. However, most of the diet in Alchi still depends on locally produced items, on which the road also has an influence, since marketed items are also consumed: this is notably the case for vegetables, *rajma*, peas, potatoes, apricots, and apples.

A broader range of vegetables is consumed in Alchi, especially ‘new’ varieties such as spinach, cauliflower, capsicum, and tomatoes (Dame 2009).²⁴ As Dame (ibid.) and Crowden (1995) conclude, such changes necessarily have positive effects on nutrition. In 2004, I could also observe a higher calorie intake in on-road locations than in off-road locations: the daily energy intake was 12,398 kJ/capita/day for Alchi-Saspol while it was 8,432 kJ/capita/day in the trans-Singge La area (Demenge 2005: 74). Interestingly, since many species that are consumed are produced for the market, villages that produce cash crops tend to have a much more diversified diet than those that do not. Hence, in Ladakh, commercial agriculture leads to diversification, not to monoculture.

I have mentioned at the beginning of this chapter the impacts of roads on transportation times and costs, and one could expect these to decrease the prices of consumption items (Blaikie et al. 1980).²⁵ In Ladakh, the road has little effect on the prices of numerous imported goods, as the majority of items are provided through the public distribution system or through cooperative shops. In both cases, transport is subsidized so that staple items such as butter, pulses and cooking oil are available at the same price in Lingshed, Leh or Alchi. This also explains why the consumption of imported items does not increase dramatically with road connectivity.

However, one of the most fundamental differences concerns energy consumption, as sources of energy can easily be transported by road and motorized transport requires new sources of energy.²⁶ Like Lingshedpas, Alchipas rely partly on dung and wood gathered in and outside the village but to a far lesser extent since energy is mainly imported. Therefore, wood consumption is far greater. Lingshedpas use photovoltaics and solar heaters while Alchipas produce electricity using a diesel generator located in

²⁴ The unexpectedly high share of vegetables seen in Lingshed’s food matrix contradicts my figures from 2004 – when it was found to be five times higher in Alchi-Saspol than in Lingshed. It also contradicts my observations regarding people’s diets and the presence of big kitchen-gardens in Alchi, as well as those from the agriculture department. In 2004, I found that households in Alchi-Saspol produced between 9 and 16 species of vegetables, with an average of 11.4 species per household; in the trans-Singge La area, households produced between 4 and 11 species, with an average of 8.3 species per household.

²⁵ However, the authors also note how, in the case of Nepal, changes in the price of imported commodities were offset by increases in the price of manufactured goods, the devaluation of the Nepalese rupee, and illegal exporting of rice to India (ibid.: 174).

²⁶ Ladakhis often cited this as the biggest transformation to have taken place and attributed it partially to the road. As a participant of Domkhar Gongma put it: “Now that we have the road, at the same time we have electricity. Both coincided, the whole thing came with the road. Poles and wires could not be brought on yaks, only by road.” (Namgyal, Domkhar Gongma, 1 October 2007).

Saspol. Both villages receive subsidized kerosene but consumption is much higher in Alchi: 95 litres per household (or 22.3 litres per person) per year in 2004 against 49 litres (8 litres per person) in Lingshed. Gas cylinders – for cooking, heating, and lighting purposes – were used by 93% of households in Alchi in 2004 but none in Lingshed.²⁷ Moreover, since many Alchipas have acquired motorbikes and cars, petrol and diesel have also become widespread sources of energy. In 2004, people from Alchi-Saspol consumed on average 32.8 litres of gas, 12.9 litres of petrol, and 78.8 litres of diesel (plus 21.1 litres for electricity generation). The shift from local energy sources to gas and oil is a major change that can be attributed to the road.

Production

Changes also occur in production but, as households remain self-sufficient to a large extent, farming is still the main livelihood. Compared to off-road locations, similar changes occur in agricultural production but of a higher magnitude. Hence, less land is cultivated, it is divided between heirs, and houses and roads are now built on fields. Distributed and marketed foods have further displaced production. In Alchi too, the economy is becoming increasingly monetarized, with the difference that the farming system itself becomes monetarized. Alchipas tend to replace existing crops with cash crops so that less wheat, less barley, and more vegetables are grown. The phenomenon is amplified by the existence of subsidized rations (rice and *atta*), which decrease the market prices of barley and wheat below profitability levels, making them unattractive options. In contrast, the ability to export vegetables for the internal (army) and external markets while offering direct access to wholesalers encourages the production of cash crops.

Less livestock is owned because animal power and pack animals are less necessary: animal products can be bought and the labour that would be required to take care of livestock is now in short supply. Hence, livestock ownership in Alchi is less than half that of Lingshed: 202 animals per 100 inhabitants in Alchi against 469 in Lingshed. Cows (46 per 100 inhabitants) and hybrids such as *dzos* and *dzomos* (20) replace yaks

²⁷ This had changed in 2007 though. See Chapter 3.

and *dimos* (1 per 100 inhabitants). The deficiency in manure has to be compensated for by using different farming techniques, HYVs of seeds, and chemical fertilizers. Three-quarters of households in Alchi-Saspol use HYVs and nearly all households use chemical fertilizers.²⁸ Motorized vehicles and machines are used for transport and agricultural work, instead of animal power and pack animals (although these are still used for short distances), and day labourers – generally migrants from Nepal, Jharkhand, or Bihar – are employed. Machines and coolies have become necessary (Namgyal, Domkhar Gongma, 1 October 2007):

The children who used to help us are out of the village: we have to use machines. We have to *kuyu* [thresh] using a machine. We have to grind using a machine. [...] What's the use of the land if we don't use it? Machines are better than not cultivating.

The other transformation in production is the diversification of livelihoods, which I study in the next section.

Livelihoods and well-being

The four life histories showed that the road contributed to livelihood diversification, increased incomes, and improved well-being. However, the effects of roads on livelihoods are difficult to measure, notably because transformations in livelihoods are also linked to more general socioeconomic changes. Livelihoods must also change as a result of new structures of needs, which are shaped by consumption and production, as both are increasingly monetarized. In this section, I attempt to measure the effects of roads on livelihoods by (1) comparing livelihoods in on- and off-road villages; (2) looking for a correlation between roads and incomes; and (3) determining the direct contribution of roads to livelihoods.

Further conclusions can be drawn from a comparison between livelihoods in on-road and off-road locations. In Lingshed, livelihood diversification has been relatively

²⁸ In the case studied by Blaikie et al., very few transformations in agricultural production were observed because of the absence of agriculture extension services (1980; see also Seddon 2000).

limited so that well-being has increased only marginally or stagnated, perpetuating a situation of vulnerability for most households. In 2004, only 4 out of 29 households in the Trans-Singge La had at least one member involved in activities other than farming or trekking: there were three health workers and one *onpo*.²⁹ By comparison, in Alchi-Saspol, the figure was 24 out of 42 households: eight men working for the army, six carpenters, three shopkeepers, one health worker, one coolie, one telephone operator, one government peon, and one guard. The trend was similar in 2007 as can be judged from Table 7.11, which represents the different livelihood activities exercised by the 12 people living in on-road locations whose life histories were collected.³⁰ Compared to the same table in Chapter 3, livelihood options are more diversified and people and households often cumulate several of them.

HH	Village	Cash earning activities and annual income						Annual income
LKha1	Khaltse	Cook/chowkidar/mate	60,000	Renting shops	120,000	Selling trees and vegetables	?	180,000 (+)
LDoD1	Domkhar Do	Merchant (apricots)	20,000	Contractor	?	Post office	36,000	200,000 (+)
LDoD2	Domkhar Do	Merchant (apricots, medicine)	210,000	Road cleaner	67,200	Selling trees	930,000	1,207,200
LDoD3	Domkhar Do	Merchant/shop keeper	126,000	Contractor	200,000	Teacher	60,000	326,000 (+)
LDoD4	Domkhar Do	Gara (blacksmith)	?					?
LChi13/14	Chilling	Coppersmith/goldsmith	15,000	Guest-house	6,000	Shopkeeper, soldier (sons)		21,000 (+)
LChi15	Chilling	Coppersmith/goldsmith	Does not know	Guest-house	15,000	Selling apricots	6,000	21,000
LChi16	Chilling	Coppersmith/goldsmith	10,000	Camping	10,000	Two restaurants	35,000	55,000
LDoG1	Domkhar Gongma	Carpenter (lives in Leh)	30,000	Tailoring (wife)	10,000			40,000
LDoG2	Domkhar Gongma	Sells agricultural products	101,000	Taxi (husband)	?	Before: guide, cook, coolie contractor		101,000 (+)
LDoG3	Domkhar Gongma	Farmer	?	Sells apricots in Leh (husband)	?			?

Activities made possible by the road
Activities facilitated or transformed by the road

7.11. Livelihoods and incomes in Lingshed

Incomes are also generally higher in on-road locations than in Lingshed.³¹ Although drawing statistically relevant conclusions from such a small sample is difficult, the

²⁹ Other occupations include that of teacher, *amchi*, shopkeeper, and working for the animal husbandry department.

³⁰ Information on incomes was sometimes unknown or not disclosed by participants.

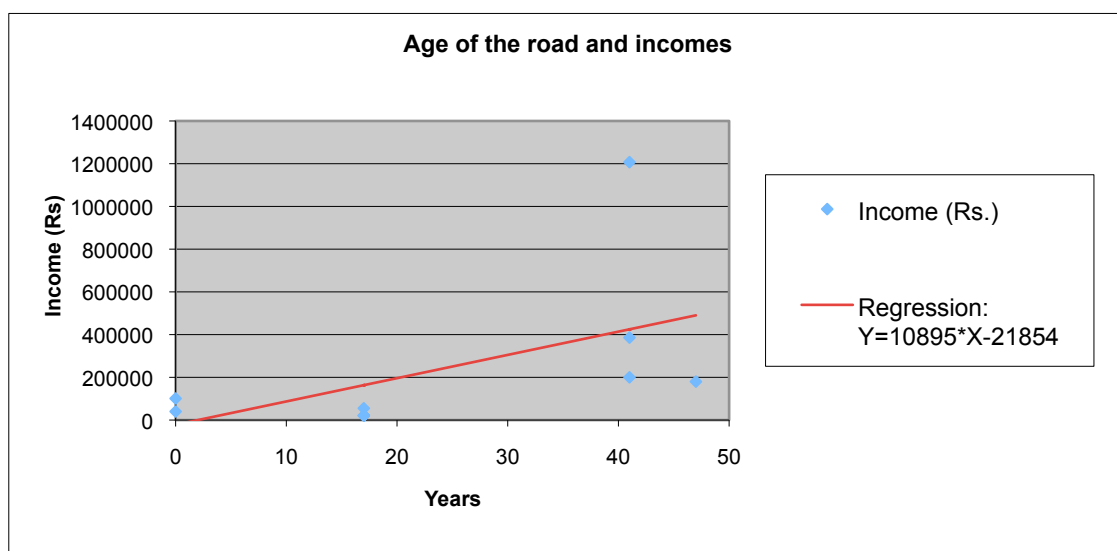
³¹ However, high incomes in Lingshed are higher than low ones in Chilling and Domkhar Gongma, both situated at the end of the road.

differences in income are too obvious to be ignored: among the life histories collected, the average income is six times higher in on-road locations (Rs245,689) than in off-road locations (Rs37,510); the difference between the lowest incomes in both locations is twofold; and the difference between the highest incomes is twelvefold. At the same time, there are huge discrepancies between incomes and inequalities are much higher in on-road locations than they are in Lingshed.³² In general, however, the trend indicates an increase in well-being and resilience, sometimes adversely affected by gender-specific effects such as increased workload, as observed in Tsering Dolkar's (LDoG2) case.

Is there a relation between the age of the road and villagers' incomes? The life histories showed that the road had no systematic effect and that the timing could vary, notably because the ability to take advantage of new livelihood opportunities depends on people's ability to raise the initial investment amount, build up the required capital and know-how, and start a new activity. However, life histories and well-being graphs show that people's well-being and incomes increase gradually after road construction. There also seems to be a correlation between people's incomes and the time since the village was first connected by a road. Figure 7.12 presents livelihoods and incomes in the order that corresponds to when the road reached the village: Khaltse in 1960, Domkhar Do in 1966/67, Chilling around 1990, and Domkhar Gongma, which the road had just reached, in 2007. Statistically, the age of the road and people's incomes are positively correlated.³³

³² Differences are less significant when each village is considered individually.

³³ $Y = 10895 * X - 21894$ with X representing the number of years since the road reached the village and Y the income. However, one should also be cautious given the small size of the sample ($n = 9$) since there are large discrepancies between figures and since other factors matter too: these include livelihood activities, the age of the household head, whether the road is a main road or a dead-end, its proximity to markets and administrative centres, and the presence of other sources of livelihood.



7.12. Age of the road and villagers' incomes

Finally, the case studies provide more evidence of the many contributions the road may bring to livelihoods.³⁴ Framed in “sustainable livelihoods” terms, the first contribution of the road is chronologically through its construction: by creating employment, it enables people to increase their financial capital, but also human (skills) and social capitals within and outside the village. Expectedly, the road plays a fundamental role as physical capital, which enables people to initiate all sorts of new road-side entrepreneurial activities, develop and exploit their natural capital (tree plantations, cash crops), and build up their assets base and financial capital. The road modifies structural conditions such as geography and access to markets, and therefore the set of opportunities and constraints faced by people. As people adapt their livelihood strategies to new opportunities, the relative importance of assets changes (for instance land and livestock), and some degree of substitution operates between financial assets on the one hand, and physical, human and natural on the other (since manure and labour have become scarcer). At the same time, livelihoods gains are unequally distributed, since they accrue first and foremost to those located on the road or able to relocate on the road, and endowed with sufficient financial capital to exploit new opportunities.³⁵ Gains in terms of well-being are also mediated through institutions and may depend on factors such as gender and generation.

³⁴ For a broader analysis of the links between transport and livelihoods, see Booth et. al (2000).

³⁵ Seddon, for instance, notes that “the emergence of a new transport sector based on motorised transport [...] provided new opportunities for locals with capital to invest, [generally] larger merchants and traders” (2000: 19).

As Figure 7.11 shows, most livelihoods are linked to the road either because the road made them possible (highlighted in green) or because they have been facilitated or transformed by the road (highlighted in yellow). Livelihood activities whose existence depends on the road consist of: (1) running or renting shops on the road, as roads bring in customers and canalize movement; (2) working on a bus or tipper, or as a taxi driver or operator; (3) trading activities in trees or perishable goods such as agricultural produce and fresh apricots;³⁶ and (4) working as a contractor or road construction employee (cleaner, cook, *chowkidar*, or mate) – activities that are directly linked to road construction and maintenance.³⁷ Activities that have been facilitated or transformed by the road include other trading activities (such as dry apricots) and managing homestays, guesthouses, restaurants, or camping grounds. While these could exist independently of the road, the road helps ferry travellers back and forth and increases the demand for such services. Even livelihoods such as that of a *sergar* have been transformed: goldsmiths in Chilling who used to produce pots and ladles for the domestic market now fashion cups, spoons, and bracelets for visitors who come to buy from them directly. The road has become central to people's livelihoods and few activities remain unaffected by it.

Also, contributions of the road to people's well-being are not limited to their consequences on livelihoods. Road transport results in saved time (Booth et al. 2000: 37; Edmonds 1998), and often in increased access to health, education and government services, and therefore in higher human capital.³⁸ Yet, these do not depend solely on the existence of a road, but also on service provision, their location and quality and on the existence of other (socio-cultural) barriers to entry.

³⁶ Yet the road is not sufficient in itself. For farmers, growing new species of vegetables necessitates considerable investment, experimentation, and therefore risk. It also depends on local agro-ecological conditions. Farmers are often provided help by the agriculture department or NGOs. The agriculture department distributes new varieties of seeds for the market, inputs, and organizes demonstration sessions (agriculture department, Leh, 16 January 2008).

³⁷ In fact, it is often people involved in such activities – as contractors, mates, *chowkidars*, or sweepers – who have seen the biggest increase in income and well-being. This was the case for *Meme* Tashi in Khaltse (LKha1) and Thundup in Domkhar Do (LDoD2), but also for LDoD1, LDoD3, and LDoG2.

³⁸ For instance, Seddon writes that in Nepal “access to social and welfare facilities [is] inversely related to distance from the road” (2000: 22; see also Porter et al. 2007). At the same time, as we saw in the case of Lingshed, helicopter transfer is provided free of charge for emergencies, and children from remote areas have a wide access to centralised boarding schools in Khaltse and Leh.

Thus, the road makes numerous contributions. It creates new livelihood options, transforms existing ones, and importantly is a resource in itself: for those involved in its construction and maintenance, those working in the transport sector, and those who benefit from the increased flow of travellers. Road construction often contributes first to people's livelihoods, enabling them to take advantage of new livelihood options. However, as livelihoods diversify, there are also some downturns: as incomes increase, so do inequalities. Benefits are not evenly distributed while everyone's expenses and monetary needs increase and the new structure of consumption associated with dependence on the road heavily impacts household budgets. As Rinchen Paldan from Chilling put it (24 September 2007): "Thanks to the road, it has become easier to carry things to Leh, but it has also become very expensive. For everything, we have to pay Rs100 each way, even to get things that cost Rs20. It's the highest source of expenditures for us." Although the benefits of roads do not necessarily favour richer households – as the cases of *Meme Tashi* and *Thundup* illustrate – they often seem to accumulate and accrue to the same people, as they use previous gains from livelihood diversification to take advantage of other livelihood options. As a result, inequalities tend to increase.³⁹

Pondering changes

At the same time, one must ponder the changes linked to roads because many changes happen whether or not there is a road. There are also things that do not change, while some changes are resisted by the population. Finally, one of the main issues in off-road locations – seasonality – also affects people who live in on-road locations. Together, permanencies, resistance, and seasonality affect the rate at which road-linked transformations propagate.

Permanencies

The picture of a radical change has to be somehow put into perspective: some aspects of life remain unaffected, are superficially affected, or only change in magnitude. This is

³⁹ Blaikie et al. (1980) and Seddon (2000) also note the tendency towards greater inter-household inequalities.

the case with trade, for instance. As *Meme* Tashi says (Khaltse, 3 October 2007): “After the road, donkeys were changed into cars. [...] The difference now is that goods that travel through the village are packed. These are the same goods – salt, sugar, rice, etc. – but packed.” Permanencies can also be found in people’s livelihoods. New opportunities are created, livelihoods are transformed, but people do not abandon their original occupations either. As noted previously, farming remains the major source of subsistence for most households. This is the also the case for people who engage in hereditary crafts – such as *garas*⁴⁰ and *sergars* – or villages that have traditionally followed a particular kind of activity: *sergars* in Chilling or merchants in Domkhar. People do opt for new livelihoods but there is no complete specialization, and options tend to follow “pathways” that are “embedded both in a historical repertoire and in social differentiation” (de Haan and Zoomers 2005: 43). More than radical changes, the trend is one of “subtle shifts within an enduring repertoire” (Leach 1997: 162).

Resistance

The socioeconomic transformative processes that occur – and in which the road participates – are also resisted. They create tensions among people who lament over the loss of self-sufficiency (*Meme* Namgyal, 1 October 2007, Domkhar Gongma):

I’ve seen so many changes. But earlier we used to be self-sufficient, we used to take our cows to the mountain and bring milk, buttermilk, *churpe*, *tara*... We used to spin wool and coarse wool, bring cow dung. Today, nobody wants to work like that. I don’t know whether these changes are good or bad.

Many people feel uncomfortable with having less control over their means of existence. Rapid transformations that lead to dependence on faraway resources and fluctuating forces over which they have no control – as consumption gradually becomes disconnected from production – are resisted. Some people compared these processes of change to cheap manufactured imports and roads that need to be constantly rebuilt: “Development or roads are just like blankets: the blankets we buy from Punjab last for

⁴⁰ Although many *garas*, mainly young ones, have abandoned their craft as a way to avoid the social discrimination imposed against people of the caste of *gara*.

two or three years, maximum; the *chali* or *tsuktul* we used to weave lasted for two or three generations. Development is like that: it is not durable.”

Market production, economic rationality, and roads are also criticized (1 October 2007, Domkhar Gongma):

Spalzang - Now, even if there is only one cabbage, people sell it. When they want to cook dinner, they don't have vegetables anymore.

An old lady - Even one potato!

[...]

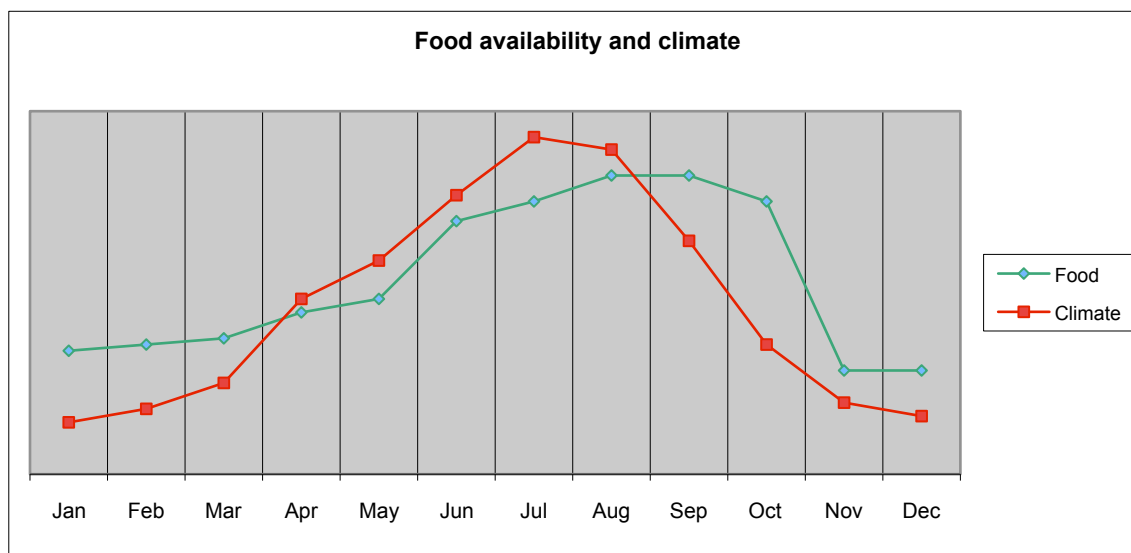
Tsering Diskit - Earlier, people would create fields: now they are giving them to the road. We could well become short of land. People want roads everywhere. The road is useless, people sell everything. Now, people take their hay and sell it in the market, they want money. They sell their vegetables, even the dung they need to burn for heating in winter.

Spalzang, Tsering Diskit, and the others reject the road, the monetarization of the economy, and the new economic rationality that comes with it. Their opposition is not simply rhetoric but should be seen as a confrontation between two irreconcilable value systems. The first is based on durability and self-sufficiency: it rejects greed (like Puntsok, who gave up his antiques stall), which in Buddhism is considered one of the ‘three poisons’ (along with hatred and ignorance); existence depends on valuable resources, of which land is the most essential. In contrast, the new system of values is based on market relations, built-in obsolescence, short-term economic rationality, profit maximisation, and therefore it institutes ‘greed’ as a universal principle. According to the latter logic, the land must give way to the road. Hence, roads and socioeconomic transformations, which are perceived as part of the same logic, are resisted. Like roads, the rate at which transformations progress is non-linear as it depends on how easily these changes are adopted by the population.

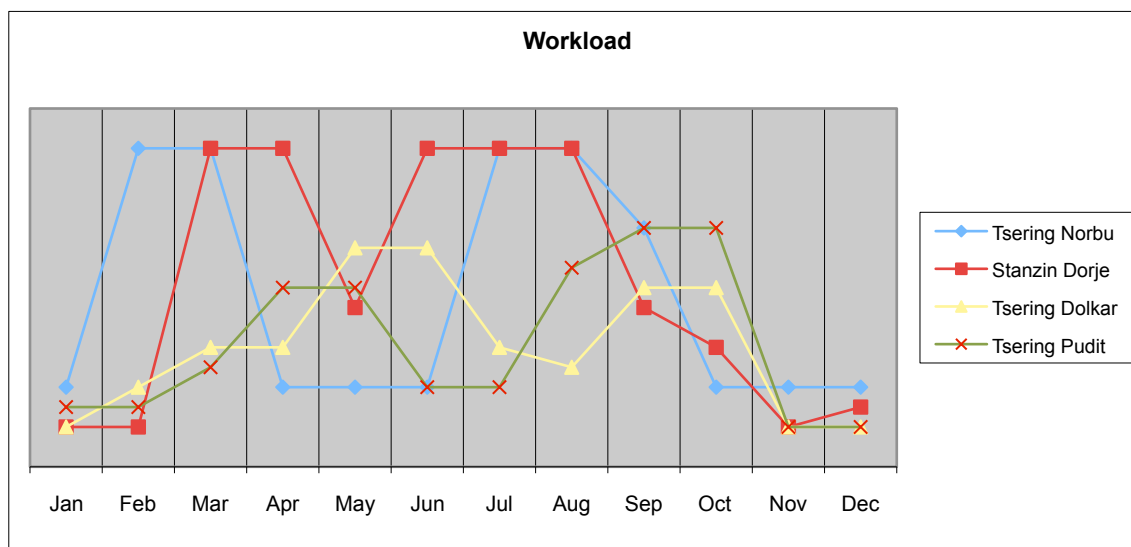
Seasonality

One of the biggest problems that Lingshedpas face is the seasonality of their climate, food availability, workload, expenditures, and income – all parameters that determine

people's well-being. Evidence based on the experiences of two men and women from Alchi and Domkhar Gongma suggests that the road has very limited consequences on them, so that both hardship and well-being remain seasonal (see Figures 7.13 to 7.17).⁴¹



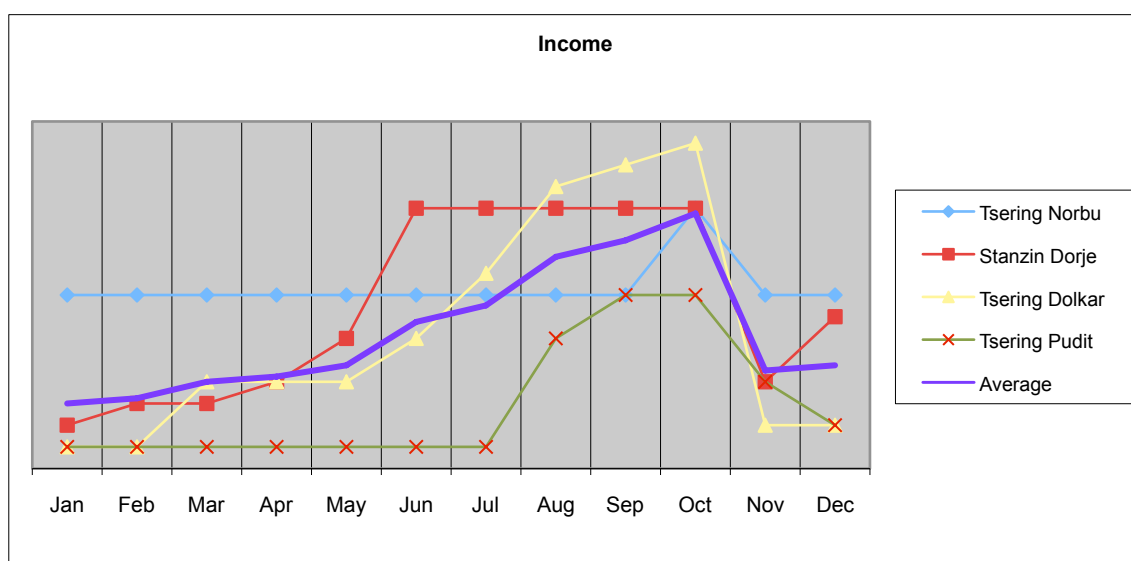
7.13. Food availability and climate⁴²



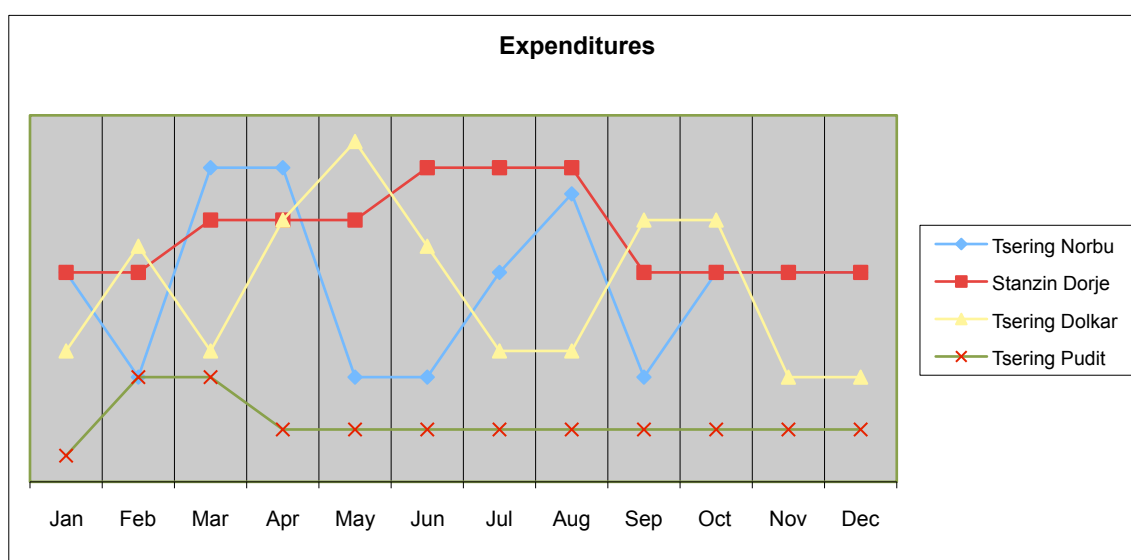
7.14. Workload⁴³

⁴¹ Tsering Norbu lives on retirement pensions from the army and school, and sells vegetables to a company that is building a dam in Alchi. Stanzin Dorje owns a guesthouse and camping ground, and has fields that his family cultivates with the help of paid coolies. Tsering Dolkar (see LdoG2, previous section) practices commercial farming and is in charge of the house, land, livestock, and village obligations as her husband is away. Tsering Pudrit's family is largely self-subsistent, although a home-stay and the sale of some vegetables – which her husband takes to Khaltse and Leh by bus – provides them with a limited financial income.

⁴² For food availability and climate, the four calendars were aggregated into a single curve as differences between them were minimal.



7.15. Income



7.16. Expenditures

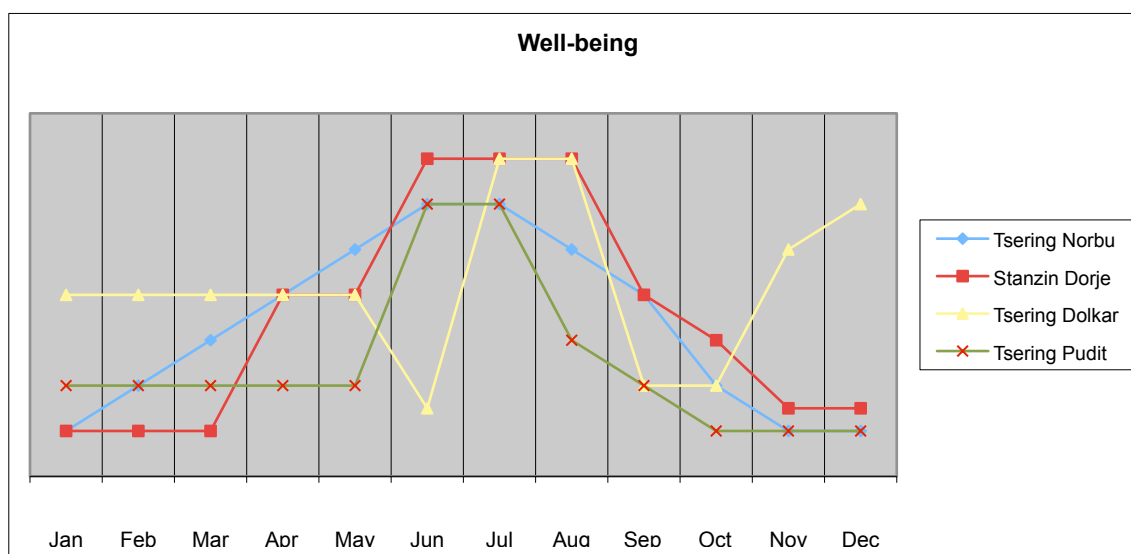
As in Lingshed, food availability and climate vary together (Figure 7.13): first, because food is mostly home-produced and depends on the agricultural season; and second, because food imports (and prices, which can be multiplied by five or six) depend on whether the Srinagar road is open (April/May to October). When the road is closed, people have to rely on stored supplies. Although on-road houses tend to be better insulated, climate and food still have a significant impact on nutrition and health.

⁴³ Workloads in agriculture are concentrated during spring and harvest times but the timing depends on the elevation of villages: hence, in Alchi (3,300 m) work starts earlier than in Domkhar Gongma (4,000 m).

Workloads are also seasonal (Figure 7.14): first, because people remain involved in agriculture; second, because most additional livelihoods (such as in construction or tourism) are also seasonal. These take place during the summer months and only add to the seasonal workload. Incomes – which are highly correlated to workload – are also seasonal (Figure 7.15), being concentrated mainly in the summer and harvest time (except for people like Tsering Norbu who have a stable income, such as from a government job or pension). Except for the summer period, sources of income are nearly non-existent. Hence, the road is likely to affect the magnitude of people's incomes but it rarely affects their seasonality. However, the road affects expenditures (Figure 7.16) through changes in production and consumption. Expenditures reflect both people's activities and inequalities between households: those with a low income have low expenditures throughout the year (peaking around *Losar*) while those with a higher income or who run a guesthouse, for instance (Stanzin Dorje), have higher expenditures. Those involved in commercial agriculture (Tsering Norbu and Tsering Dolkar) spend more on labour and agricultural inputs (seeds, fertilizers, pesticides) and see their expenditures peak at sowing and harvest times.⁴⁴ Transformations linked to the road affect the magnitude and seasonality of expenditures but without modifying the seasonality of incomes.

As a result, the way people subjectively estimate their own well-being – based on diverse parameters that fluctuate, that people evaluate positively or negatively, and that affect their well-being with more or less intensity – is also seasonal (Figure 7.17). It culminates with better climate, higher income, food availability, and maximum leisure and social time, and it decreases with cold weather, low food availability, heavy workload and low incomes: these are circumstances that the road can hardly alter. The road affects food availability, expenditures, and income, but it does not affect their seasonality. Moreover, permanencies, resistance and seasonality suggest that transformations linked to the road spread in a complex, non-linear and cyclical way, making road effects even more difficult to measure.

⁴⁴ This is also the case, although to a lesser extent, for all households involved in subsistence agriculture, as those living on the road rely increasingly on agricultural inputs and labour.



7.17. Well-being

Roads, migration, and mobility

One of people's main concerns in Ladakh is the fear of seeing villages depopulated, but what are the effects of the road on out-migration? In Domkhar Barma, I was told that among the 25 or so men aged between 20 and 35 years, only one lives in the village while all the others live and work in Leh or Khaltse (and 10 out of 25 girls the same age). They send money to their parents or wives and return to the village occasionally. But people do not blame this situation on the road: the trend started well before the road was constructed. The idea that people migrate just because there is a road should readily be dismissed. People migrate regardless of whether there is a road. They migrate due to economic imbalances between urban and rural areas and the relative paucity of livelihoods in their villages. Young people leave for education and work. In Lingshed also, children go to school in Leh or Khaltse, young people look for jobs in the city, 23 families have a house in Leh (where they often spend the winter), and four families have left the village for good. This happens despite the absence of roads.

In fact, by increasing livelihood opportunities, raising incomes, and making villages more attractive, mobility easier, and life more comfortable, roads are more likely to retain people than to encourage out-migration. However, by increasing consumption, aspirations and monetary needs, the road is likely to encourage people to look for work

elsewhere and increase out-migration. Hence, the effects of the road are largely ambiguous but in any case it is not only the road that encourages migration.

The effects of roads on those who stay are also ambiguous. “If there is a road”, says Sonam Chosjor, “youths can come back more easily. Otherwise, they come back only once a year” (Domkhar Gongma, 1 October 2007). Some people who have left say they will return to take care of aging parents but, in practice, people complain that this does not happen. They fear that one day they will be the only ones left at home (Namgyal Nangso, Domkhar Gongma, 1 October 2007): “The same could happen to others as what happened to *Meme* Malik: his two children have settled in Leh and they never come to see him in spite of the road. When Malik dies, his house will be locked.” Other remarks also corroborated this statement (Domkhar Gongma, 1 October 2007):

Namgyal Nangso - Our children, when they come, they come on a scooter and they leave in the morning. They go back and stay in Leh. Only the old parents are left in Domkhar. People try to sell their animals and later they will sell their land...

Sangdup - Nowadays, it is difficult to recognize our relatives. For *bakston* [marriage], people come in a bus or car, leave their *kataks* and go back.

Thus, the road makes it easier for people living outside to return to their villages but it also makes it easier to leave. As a result, this does not ease the burden of those who are left behind. As Yangses expressed out of frustration (*ibid.*):

The children in Leh, they come by bus in the evening. We think they will stay and help us. But they say, “We will go back tomorrow by bus because we don’t have holidays. Why do you invite us here? Don’t invite us, employ some labourers. If you invite us, we have to spend Rs100 to come, Rs100 to go, and Rs100 on the way for lunch and tea. You can employ anybody for that price.” When they say that, *Ama*’s brain gets destroyed, I feel confusion and pain. [...] The road is like that...

Roads also affect service delivery (Bryceson et al. 2008; Molesworth 2001) but not necessarily in a positive way. Roads enable teachers and health workers to reach villages easily but, in Alchi, this has also encouraged absenteeism and limited hours of presence as teachers choose to live in Leh, commute to Alchi, arrive by bus at 11 a.m.

and leave by 3 p.m. Alchipas chose to restrain their mobility by cancelling the morning bus service so that government employees now have no choice but to stay in the village.

Roads are also criticized because they increase feelings of insecurity and fear of contagious diseases brought by visitors. As Thinle Angmo put it (Domkhar Gongma, 1 October 2007): “Before the road came we didn’t lock our houses. Now we must lock them and keep an eye on everything.” And as one participant in Alchi said (anonymous, 16 October 2007): “Because of the road, too many people come here, and along with them, many contagious diseases, especially breathing illnesses [tuberculosis].” Visitors are blamed for polluting and spreading bad habits such as drinking alcohol and smoking. Because of the road and the presence of visitors, “women cannot walk alone at night anymore” or even during the day, as Alchipas have asked for a bus to drive schoolgirls from Alchi to Saspol (ibid.). New security threats arising “because of the road” are backed by officials (*Daily Excelsior* 13 May 2008). According to the superintendent of police in Leh, crime increases “when the Leh-Srinagar and Leh-Manali road connecting Ladakh with the rest of the country are opened [*sic*]”, a situation blamed mainly on the presence of migrant labourers (*Kashmir Observer* 21 May 2008). At the same time as roads connect people and bring them together, they also pitch them against each other and convey fear of the other.

The paradox of roads and isolation

Here is a paradox: Roads link people and places at the same time as they isolate them. The absence of roads is often associated with ‘isolation’ but, in Ladakh, people tend to be less mobile when there is a road than when there is no road. Roads transform practices of mobility and these transformations disconnect people and places: older paths are no longer travelled, places are not visited anymore, and people who live in these places find themselves more isolated than before (see also Fernando and Porter 2002). So a first lesson is that roads certainly facilitate mobility but do not necessarily increase it. Rather, roads tend to canalize movement along a few axes. This paradox was

noted by van Beek and Pirie (2008) at the scale of Ladakh⁴⁵ and this chapter shows that what is true for the region is also true for villages.

Different reasons explain this paradox: (1) one is physical and technical, while (2) another is linked to the socioeconomic transformations that occur with the road. First, we saw in the first section that roads physically structure movement. Also, mobility is constrained by modes of transportation. As Rizvi writes (1994: 27), technological progress and the development of transport “have rendered the mountain barriers between different regions not less but more formidable than they were before”. Whereas “ancient routes [...] could be negotiated by the feet of traders and pilgrims and their pack-animals [...] it is only those whose gradient is gentle enough for the road and the rail system [...] that remain in use today” (ibid.). Similarly, passes such as the Zoji La⁴⁶ that were regularly crossed in winter by mail runners and traders are no longer crossed once the road has been closed by the first snowfalls (Rizvi 1996: 18). Roads tend to simplify and concentrate mobility patterns in space but also in time.

Second, mobility is affected by socioeconomic transformations to which the road contributes. In Chapter 3, we saw that practices of mobility are linked to consumption, production, and livelihoods in Lingshed. They depend on people’s “dwelling activities” (Ingold 2000). The consumption of imported items (such as goods, food, and rations), productive activities, and livelihoods – which are often based on trekking and tourism – all imply considerable mobility. Particularly, the use of local resources from different ecosystems – fields, high mountain pastures, valley forests – that are disseminated in space and often associated with a specific resource or activity – cultivation; trading; trekking; grazing yaks, donkeys, or goats and sheep; and gathering wood, plants, and fodder – implies that mobility patterns are characterized by numerous destinations and trails radiating in every direction, which change with climatic conditions and the seasonality of tasks and resources.

⁴⁵ “It is ironic that it is with the coming of better communications to Ladakh, as a whole, and its more secure integration into the rest of Jammu and Kashmir and India through the road and air links with Srinagar, Jammu and Delhi, that the old routes should, effectively, have been abandoned. Ladakh’s former links with the regions to the south, and west [...] have, as a consequence, practically been cut” (ibid.: 14).

⁴⁶ One could add the Karakoram Pass and the Pensi La, among many others.

In on-road locations, different patterns of consumption, production, and livelihoods shape mobility needs. As the road brings to the village numerous resources – energy in the form of gas cylinders, food, or consumption goods – that people used to gather from their surrounding environment or trade in distant places, the need to visit these places disappears and so do the trails that link them. On the other hand, administrative requirements and economic activities that take place at the block or district headquarter link villages more strongly to urban centres. People's livelihoods also necessitate visiting fewer places: generally, markets and administrative centres. As people's dwelling activities are transformed, so are mobility patterns, which tend to concentrate on roads that link a village to the main economic and administrative centres.

Therefore, roads do not increase mobility, because (1) people have diverse reasons to travel, and when they need to travel they do so whether or not there is a road; and (2) practices of mobility are socially defined and differentiated along gender and generation lines, on which the road has no effect. These elements partially explain why roads and its associated socioeconomic transformations actually tend to decrease mobility, and why the multitude of pathways that existed tend to be replaced by fewer routes oriented towards regional centres. As destinations and places disappear from the map, as other routes are travelled at a different pace, as the experience of travelling is modified, such transformations are also likely to affect the way the landscape is perceived, constructed, and transformed.

Conclusion

The consequences of roads are ambiguous. The general picture is that off-road villages are less isolated than they appear whereas on-road villages are more isolated than they seem. Roads disconnect at the same as they connect, and in some regards, they fail to reform certain aspects of isolation, especially those that are seasonal. The consequences of roads are often complex, contradictory, and linked to other transformations that affect society, in which the road is often one factor among many. It sometimes accompanies, promotes, enables adaptation to, or affects the rapidity and magnitude of transformations.

The role of the road is better understood as a facilitator rather than an initiator of change. For instance, mechanization, intensification, and commercial agriculture do not happen directly because there is a road but also because cash is needed, because people migrate and there is a lack of labour, and because it is encouraged by state development policies and NGOs. Yet, without a road, mechanization, intensification, and commercial agriculture could not happen. The consequences of roads occur along with other transformations triggered by the state, the army, tourism, NGOs, schooling, increased access to credit, and other socioeconomic changes.

This chapter has also illustrated the consequences of the road for mobility, directly and indirectly, through its effects on consumption, production, and livelihoods. As mobility needs are redefined, the road does not increase mobility but canalizes movement along fewer main axes. In Ladakh, the road even decreases mobility.

Where the road has significant consequences is in terms of livelihoods as it opens many new opportunities and transforms existing ones. However, the ability to seize new opportunities often depends on people's ability to raise the initial investment, and changes are sometimes resisted. One of the most important economic contributions of the road is linked to its construction and maintenance. The effects of new livelihoods on well-being and resilience are positive although they remain seasonal and are often unequally distributed: they can result in increased workloads for women, and income inequalities generally increase. While roads facilitate access to markets, other conditions matter too. Roads can effectively be used as a development tool but they are not enough: they need to be accompanied by adequate policies – such as education, demonstration schemes, and access to credit – and by the right set of conditions – such as functioning markets and employment opportunities.

Chapter 8. Conclusion

This thesis sought to assess **the political processes of road construction and the nature and consequences of changes that roads bring for local and migrant populations in Ladakh**. My conclusions showed that the two phenomena are complex, intertwined, and involve a plurality of agents whose diverging priorities and interests put in motion, steer, and constrain the construction process and determine to a large extent the distribution and nature of the effects of roads among local populations and migrant workers. My thesis also questioned the neutrality of road interventions and pointed to several misconceptions of their consequences.

1. Four questions, four paradoxes

In this thesis, I have attempted to answer four specific research questions, which lead to four paradoxes. My first question was: *what can be learnt about the political economy of roads from the experience of road construction in a ‘remote’ border region?* The links between roads and development have been debated and criticized, leading to successive contested and largely unproven theories. At a macro-level, I argued that states build roads to serve several purposes, and the cases of India and Ladakh illustrate how road construction has been driven by different and changing sets of priorities and policies – from resource extraction to administration and nation building, agricultural production, employment generation, socioeconomic development, and security – which explain the historical development of the road network. Fundamentally, the situation and construction of Ladakh as a ‘remote’ and contested border region largely account for road development in the area, as roads were built mainly to secure the region and territorialize the land and its people within India. The paradox is that roads are still built in the name of ‘development’ although the connection remains debated, and the state’s motivations seem more linked to political and strategic considerations. Far from being a neutral intervention, road construction in Ladakh ends up being an eminently political process embedded within state rivalries, political struggles, and people’s aspirations.

My second question was: *what expectations and processes of change are set in motion by road construction in 'isolated' villages in a mountainous region?* Roads are shaped by macropolitics but *in fine* their construction is an erratic process that depends for its advancement on the active involvement of people at the local level. Roads' micropolitics can be divided into two distinct stages. During the first stage, people collectively 'fight' to have a road built to their village: they mobilize material and discursive resources; lobby officials, representatives, and contractors; and closely monitor the progress of and threats to the construction of the road. Because disunion can lead to road projects being postponed or cancelled, unity is required among villagers and tends to be built around a manufactured notion of 'isolation'. The case of Lingshed showed that off-road villagers do feel isolated but that 'isolation' is experienced in a contingent and ambiguous way; it is not physical – as Lingshedpas appear mobile and connected – rather, it is politically and economically felt. Paradoxically, people seem to adhere to a manufactured notion of 'isolation' that presents the village as unconditionally isolated and backward in order to build the case for the construction of a road. Ironically, road construction programmes that are justified in terms of socioeconomic development and want to be based on objective, neutral, and physically measurable criteria of selection end up encouraging the use of subjective discursive concepts and the manufacture of a rhetoric of backwardness around the notion of 'isolation'.

The second stage of road politics concerns the trajectory of the road within the village. Roads bring benefits to villagers but they also destroy existing resources and assets. The gains and losses that occur because of the road are unequally distributed and depend on its trajectory. As a consequence, road negotiations tend to be divisive: the initial unity breaks up and individual strategies of negotiations are used. During this process, people negotiate the road's trajectory through power relations and institutions. Engineers tend to delegate decision making to village institutions and instrumentalize power relations in order to silence dissent and manufacture consensus around a single road trajectory, running the risk of re-enforcing power relations and harming vulnerable households.

The most unequal distribution of roads' consequences takes place between local populations and migrant road workers. In Ladakh, the immense majority of road workers are migrants, a condition that is partly due to the abysmal working conditions

and low salaries on the road. My third question was: *how and why are migrant workers involved in the 'micro'-economy of road construction, in what capacity, and under what conditions?* Through an ethnography of migrant workers on the Zaskar Highway, I documented the life and work of road builders, showing how they cope with risks as part of a daily routine, the normalization of danger, and the ways in which the road and environment shape their existence. Here, the paradox is double. First, whereas one of the alleged purposes of road construction is to provide employment, generate livelihoods, and alleviate poverty, evidence shows that migrant workers see no or only marginal improvements in their well-being. The reason for this, I argue, is that their agency is constrained by exploitative conditions and structural factors that in many cases prevent them from benefiting from the redistributive effects of road construction. Yet – and here is the second paradox – the lack of agency that migrants seem to have over their own situations contrasts starkly with the agency they exercise on the road. As the episode of the Lamaguru sanctuary illustrated in Chapter 6, when the road's trajectory is linked to questions of survival, migrants participate fully in the transformation and construction of the Ladakhi environment by shaping the trajectory of the road.

Finally, I asked: *what are the consequences of roads and road construction in terms of resource use, mobility, isolation, livelihoods, and well-being?* I concluded that the consequences of roads are complex and often contradictory, affecting people in different ways. Therefore, they are difficult to evaluate. Transformations linked to the road happen within a continuum of change, often in combination with other factors, and can be resisted so that their progression is non-linear. Roads are better understood as facilitators than initiators of change as they affect the magnitude and rapidity of transformations. Where the road appears to have significant consequences is in terms of livelihoods as it creates new livelihood opportunities and transforms existing ones, notably in construction and maintenance. But the road is not the only factor responsible for improving livelihoods and well-being. The most paradoxical effects of roads concern isolation and mobility. Roads connect at the same time as they disconnect; they facilitate mobility and transport but, in Ladakh, they do not increase mobility: on the contrary, they decrease it. This has to do with the way in which the road works: through complex inter-reactions, interplays, and adjustments. As mobility needs are redefined by consumption, production patterns, and new economic activities, the road decreases

mobility needs and canalizes movement along a few main axes. This is probably one of the biggest misconceptions about roads.

2. Gaps and limitations

All studies necessarily have gaps and limitations, and this is no exception. I have noted specific gaps in the introduction and main chapters but I will limit my analysis here to two major gaps: the breadth of the approach and the choice of political ecology as an overarching framework.

A broad approach

The breadth of the approach was necessary and is at the same time limiting. A study that drew the links and mechanisms between the consequences of roads and their politics was missing. I looked at roads and their construction as both matter in terms of their consequences. I wanted to document the influence of political choices and individual practices on road construction and thus focused on micropolitics. But it soon became clear that macropolitics mattered too, at least to understand the general context in which road construction was taking place. I also chose to look at what happens before, during, and after the construction of a road: road negotiations in particular were a pivotal and so far untreated aspect. I looked at the whole range of agents involved in this process, which includes local populations and migrant workers. Finally, I looked at a wide array of transformations linked to roads – mobility, resource use, consumption, production, and livelihoods – because all are interrelated. An all-encompassing study was necessary in order to cover this ambitious research agenda and I voluntarily chose to impose very few limits on it.

Where it becomes limiting is that each of these aspects – roads' consequences, road construction, the macro- and micropolitics of roads, road negotiations, migrants in Ladakh and migrant road labour, the effects of roads on resources, consumption, production, and livelihoods, etc. – could have been investigated further as the object of a separate work. Not only did this make it difficult to restrict the thesis to a manageable

size (or to a specific word-count), it also required making strategic choices about what to research, how to allocate time between different groups of participants, which data to present, which themes and debates to develop, and which literature to review. All the themes I have introduced in this thesis deserve to be studied further as avenues for future research.

Certain specific points also escaped my research agenda. More particularly, while I focused on micropolitics and gave an overview of macropolitics, a ‘meso-level’ is missing. For instance, we saw that the road was claimed in Lingshed as a human right but how is the global/national discourse transmitted to the local level and inversely? Researching this aspect would require investigating how specific road projects are debated within the local, state, and national governments – institutions that are not open to foreigners. It would require being present at negotiations with officials and politicians. What is also missing from my study – for it to have been representative of road negotiations in Ladakh – is a treatment of negotiations among Muslim populations. I dealt with communal issues surrounding the construction of the Zaskar Highway, showing that Ladakhi institutions (which people sometimes referred to as ‘Buddhist’) played a role in road negotiations, but most places where I conducted research were Buddhist and the only non-Buddhist participants were engineers and contractors. Religious differences should certainly not be essentialized but in terms of negotiations they might make a difference. What would be the impact of non-Buddhist institutions on road negotiations? This would certainly have complicated my research design and findings, and would have required doing research in places I am not familiar with; nevertheless, it is a point that deserves further exploration.

Where is the ecology? Where is the policy?

Since I started researching the political ecology of roads, two criticisms of political ecology in the form of two published articles have come to my attention. The first one asked, “Where is the ecology?” (Walker 2005) while the second one asked, “Where is the policy?” (ibid. 2006) in political ecology. Both criticisms are relevant to my thesis and I will address them here.

I chose ‘political ecology’ as an overarching framework because (1) I was dealing with society-environment relationships, (2) I was looking at the transformation of an environment, and (3) political ecology offered a large body of tools, approaches, and theories that would allow me to comprehend the hazy issue of the politics and consequences of road construction. Political ecology also offered the inter-disciplinarity I was looking for. It enabled me to combine environmental concerns with what Ferguson would call “a left-populist perspective”¹ (Ferguson 1994), and many works and authors of political ecology provided guidance and inspiration for this work. My work also contributed to the field by introducing the concept of “roadscape” and linking it to the ecology of practice: it illustrated how the shape, trajectory and pace of advancement of the roadscape are determined by macro- and micro-politics, and by individual’s practices.

One of the concerns, however, is that there is no ecology in political ecology. As Walker writes: “In much contemporary political ecology the ‘concerns of ecology’ [...] become primarily questions of power, struggle and representation, while the connections of these struggles to the biophysical environment remain unexamined” (2005: 78). In other words, as the social becomes central while the biological and physical aspects of political ecology tend to be forgotten, there is the risk that political ecology might become, citing Vayda and Walters, “politics without ecology” (ibid.).

Undoubtedly, this thesis focuses more on the social and political aspects of human-environment relationships than on the ecological. Whereas I flirted with ecological economics a few years ago when I dealt with EFs – and this might be the most ‘ecological’ material I have on roads – the orientation of this thesis is definitely towards politics. There are several reasons for this.

My thesis looks at how people transform the environment and how the environment transforms people, though road construction. The approach is still based on “the study of the interrelationships between living organisms and their physical environment”,

¹ He defines this as a sense of sympathy “with popular causes” and suspicion “of the usual claims that the elites and experts know best” based on the experience of work with “a broad range of ‘ordinary people,’ often for long periods of time and with at least a certain degree of intimacy and affection” (ibid.).

which is the definition of “ecology” (ibid.), but the road itself is a very social element of “socio-nature” (see Chapter 1) and my focus is social. Environmental and geological factors – the topography, gradient, and lithogeochemical characteristics of the place, the different kinds of ecosystems crossed by the road, and climatic conditions – do play a role in shaping road trajectories, working conditions, and the pace and techniques of construction, and some of these aspects were mentioned. Roads also tend to follow valley floors, wind their way across passes, cross rivers where they are narrower, avoid overhanging or unstable slopes, and look for shelves for respite. In the end, however, it is mainly political decisions that guide road trajectories, as states decide to build roads, villagers ask for them, engineers draw them, contractors execute them, and a plurality of agents on the ground – villagers, engineers, contractors, and workers – negotiate and modify road plans, spare or destroy agricultural land and forests, blast through whole mountains, and build across crumbling slopes and gullies. The environment does shape people’s perceptions of it but the way in which the landscape is transformed and whether or not a road is built is ultimately a question of power. Environmental and geological factors play a role but there is no environmental determinism: the absence of roads is explained by political factors more than natural ones, as humans make the final decisions, translating engineers’ unshakable conviction that “everything is possible”.

The consequences of roads are broad too. The impact of roads on biodiversity, the disturbances that the Zaskar Highway will create for populations of *panthera uncia* (snow leopards, whose footprints we found along the Chadar), *canis lupus* (wolves), and *capra ibex siberica* (Asian ibex), and the destruction of habitat for valuable plants such as *aconitum heterophyllum*, *meconopsis aculeate*, and *dactylorhiza hatagirea* would all make fascinating research topics, which I leave to real ecologists. The consequences of roads that I was interested in were the transformations that occur in resource production and consumption; here again, the thesis showed that consequences are socially, culturally, and politically mediated.

Another concern raised by Walker is that there is “no policy” in political ecology (2006),² another issue I would like to address by answering three questions, whose

² Walker attributes the lack of policy concerns in the discipline and lack of influence on policymaking to (1) its failure to provide simple, clear, compelling, and powerful narratives (ibid.: 384); (2) its focus on “research at the scale of the individual ‘local’ case study, making it difficult to ascertain the significance

relevance extends beyond the specific case of Ladakh.³ My first question is ‘*what will be the effects of the road on a ‘remote’ village like Lingshed?*’ The road will certainly not increase mobility, as this will still be shaped by livelihoods, resource use, consumption, and production. Mobility will remain gendered and, like ‘isolation’, it will remain seasonal. The road will link Lingshed more closely to Leh in the north, to Padum in the south, but most of all to Himachal and the rest of India, as the Zaskar Highway will become the main access route to Ladakh.⁴ The road might alter the origin, direction, and pace of change. Politically, the road will reduce the time needed to access the capital and block headquarters: from four days to one for Leh, and from three days to one for Khaltse. Access to and from political and administrative centres will become easier so that Lingshed is more likely to be visited by administrative staff and officials bringing development packages and electoral promises. Access to all sorts of institutions – schools, hospital, banks, and cooperatives – will also be facilitated and the road will act as a symbol of political and social inclusion.

Materially, the road will affect people’s consumption, production, and livelihoods. It will ease transportation and lower its costs, which will probably increase the consumption of imported goods and lead to further changes in production. Monetary needs will also increase. Although Lingshedpas currently have relatively little to sell, easier access to markets means that they might also be able to export – vegetables, for instance – and this will affect production. In terms of livelihoods, those who work as contractors (like Tashi; see Chapter 3), needing to bring in large quantities of material and workers, will benefit most from the road but also possibly from its construction. Easier access to labour markets and the presence of the Zaskar Highway – notably the construction and service economy linked to the road – will also provide additional livelihoods, while those who depend on trekking and tourism – presently the majority of Lingshedpas – risk being negatively affected. However, as Leh and the rest of Ladakh face serious unemployment problems (van Beek 2001), and as many livelihoods on the road remain seasonal, the economic effects of the road will be ambiguous. Adjustments will take time and the road is unlikely to solve every problem met by Lingshedpas.

of such studies to broader development concerns” (ibid.: 386); and (3) “weakly developed efforts to compare or contrast these case studies, or to synthesize these studies into broader, integrated regional [...] or global analysis” (ibid.: 387).

³ Morally, I feel even more compelled to put forward policy recommendations since my participants – both Ladakhi and migrant workers – often asked me how my thesis would benefit them.

⁴ “When” is a question I refuse to answer.

A second policy-relevant question is ‘*what should be done for Ladakhis and road workers?*’ Ladakhis in general will benefit from roads and from their construction, although these benefits will remain unequally distributed. As the story goes: “Roads are not enough.” To be used as development tools, roads need to be accompanied by adequate policies – such as education, demonstration schemes, and access to credit – and the right set of conditions – such as existing market and employment opportunities. This has already been said before. Another policy-relevant finding concerns road construction: general recommendations that encourage inclusive participation in road negotiations are not sufficient. Road construction within villages inevitably causes damage but if vulnerable households are to be spared, one cannot rely solely on village institutions as these embody certain power relations. The functioning of village assemblies and the question of power within institutions should first be addressed, so that dissent can be expressed and vulnerable households can be positively discriminated towards.

For road workers, it is undeniable that a lot more could be done: first, to reduce their suffering, and second, so that they also benefit from road construction. Casualties on the road are inevitable but many could be avoided. Inexperienced and untrained workers are sent into dangerous situations without proper equipment, in which survival depends merely on luck. Training and equipment could be provided; simple mountaineering techniques could be used to secure workers and clear slopes before drilling; when the slope is too unstable, tunnelling techniques could be employed; and when accidents happen, proper medical facilities should be provided. Also, promised rations should be delivered, along with better housing. When asked what should be done, workers mainly cared about their children as they did not want them to suffer as they did. Schools (or transport to village schools) and child care are needed, especially when young mothers are forced to work on the road in order to make a living.

As previously noted, roads are built in order to provide employment but working conditions tend to perpetuate situations of precariousness, dependence, and exploitation. As a result, workers do not benefit from road construction. Realistic labour regulations should be adopted with the aim of being implemented and labour conditions should be monitored. Workers mentioned that their wages were too low given the tasks and risks

involved. Low wages also result in resources being wasted: if workers were better paid, human resources would be more efficiently employed. But for these to improve, the immense ‘casual’ workforce of BRO should be allowed to organize itself politically and the situation of casual workers should be regularized. Presently, the situation is in balance: that the Supreme Court raised the issue in March 2011 and denounced BRO’s “unfair labour practices” could be received with a lot of hope (Outlookindia 2011; Venkatesan 27 March 2011); that the central government has endorsed BRO’s labour policies in a case that has been pending since 2001 appears less promising. I do not want to sound fatalistic: the agency, ingenuity, and sense of solidarity that prevails among most workers should be trusted. But to enable them to develop their full potential and use road construction as a real development tool, fair conditions should be set.

Finally, the last question one might want to ask is, *‘should roads like the Zaskar Highway be built?’* This is an ethical dilemma that has obsessed me since I started researching roads in Ladakh and over which I still feel deeply divided. Leaving aside state considerations, if I think of the people of Lingshed, then the road should be built, mainly because they want it. Nobody wants to remain a three-day walk from the road and the kind of transformations happening in Ladakh make the road even more necessary to the social, political, and economic integration of the village. Travelling to Lingshed is tiresome and at times can be dangerous: not later than last month (March 2011), an avalanche buried five Lingshedpas who had stopped in Rong for the night on their way back from the Chadar; among them was my close friend Kunga Tundup, the *gara* of Lingshed. Other accidents will happen once the road is built and it will not solve every mobility issue but it will make travelling quicker and easier. Yet, when I think of road workers and their families, I feel that the Zaskar Highway should not be built. Too many workers have died and many more will inevitably die as the road progresses through the Zaskar gorge. The road has been the cause of too many deaths and too much suffering, and those who pay its price are not even those who will benefit from it. What is the price of mobility? The people of Ladakh deserve the road, but is it worth so much sacrifice? This is an ethical question I cannot answer.

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Abbreviations and Acronyms

ADB	Asian Development Bank
AE	assistant engineer
BADP	Border Area Development Programme
BRO	Border Roads Organisation
CB	cost-benefit
CE	cost-effectiveness
CEC	chief executive councillor
CITU	Centre of Indian Trade Unions
CPL	casual paid labour
CRF	Central Road Fund
DC	deputy commissioner
EF	Ecological Footprint
EXEN	executive engineer
GREF	General Reserve Engineer Force
HYV	high-yield variety
ICPL	imported casual paid labour
ILO	International Labour Organization
IRAP	Integrated Rural Accessibility Planning
ITBF	Indo-Tibetan Border Force
J&K	Jammu and Kashmir
JE	junior engineer
JNU	Jawaharlal Nehru University
LAC	Line of Actual Control
LAHDC	Ladakh Autonomous Hill Development Council
LBA	Ladakh Buddhist Association
LOC	Line of Control
LUTF	Ladakh Union Territory Front
MLA	member of legislative assembly
MLC	member of legislative council
MNP	Minimum Needs Programme
MP	member of parliament
MRP	maximum retail price
NABARD	National Bank for Agriculture and Rural Development
NGO	non-government organization
OC	officer in command
OECE	Overseas Economic Cooperation Fund
PAP	project-affected person
PMGSY	Pradhan Mantri Gram Sadak Yojana
PWD	public work department
RAP	Rural Access Programme
SC	Scheduled Caste
SHG	self-help group
SOC	Social Overhead Capital
SSATP	Sub-Saharan Africa Transport Policy
ST	Scheduled Tribe
UNDP	United Nations Development Programme

Glossary

<i>Ajhang</i>	Literally, uncle
<i>Ama tsogspa</i>	Women's society
<i>Amchi</i>	Traditional doctor trained in 'Tibetan medicine'
<i>Angres/angrespa</i>	Tourist or foreigner
<i>Arak</i>	Ladakhi distilled Alcoholic made out of fermented barley
<i>Atta</i>	Wheat flour
<i>Baboo</i>	Engineer/Official
<i>Bakston</i>	Marriage
<i>Beda</i>	Musician (caste)
<i>Begar</i>	Obligatory labour (in Persian/Urdu)
<i>Bey</i>	Volumetric unit measured with a wooden mug; equivalent to about 1/20 of a <i>khal</i>
<i>Bidi</i>	Cigarette made of tobacco wrapped in a tendu leaf
<i>Bral-go</i>	Sitting order (denoting a social hierarchy)
<i>Buri</i>	Measure of weight equivalent to 60 kg
<i>Cha ngarmo</i>	Sweet tea
<i>Chali</i>	Heavy blanket made of yak hair
<i>Chang</i>	Fermented barley beer in Ladakh (or rice beer for Nepali)
<i>Chikpo</i>	Alone
<i>Chomo gonpa</i>	Nunnery
<i>Chorten</i>	Religious monument
<i>Choskhang</i>	Altar room
<i>Choskor</i>	Temple
<i>Chowkidar</i>	Watchman
<i>Churpe</i>	Dried cheese
<i>Chuti</i>	Ponytail or plait
<i>Chutsoh</i>	Group of households that exchange work, celebrate religious events, and assume responsibility for organizing village celebrations
<i>Cröre</i>	Equivalent to 100 <i>lakhs</i> or 10 million
<i>Daal</i>	Pulses
<i>Daman</i>	Drums
<i>Darkjun</i>	Literally, 'sweat from the rock'; a substance used in Tibetan and Ayurvedic medicine
<i>Dimo</i>	Female yak
<i>Drok</i>	Pasture
<i>Dzo</i>	Male yak-cow hybrid
<i>Dzo-mo</i>	Female yak-cow hybrid
<i>Gana skyot?</i>	Where are you coming from?
<i>Gara (or garba)</i>	Blacksmith or carpenter (caste)
<i>Geshe</i>	Educated <i>lama</i>
<i>Ghee</i>	Clarified butter
<i>Goba</i>	Elected village head
<i>Gochak</i>	Religious miracle
<i>Goncha</i>	Standard Ladakhi woollen coat
<i>Gonpa</i>	Monastery
<i>Gral</i>	Sitting order (denoting a social hierarchy)
<i>Gurgur</i>	Long tube used to make butter tea
<i>Gya lam</i>	Motorable road
<i>Haal or haal chaal</i>	Well-being (literally, condition) (in Hindi)
<i>Haspatal</i>	Medical dispensary

<i>Hyuk-rdan</i>	Ladakhi woman's headgear
<i>Jato</i>	Leather shoes
<i>Jeep lam</i>	Motorable road
<i>Juley</i>	Hello
<i>Kagan</i>	<i>Chorten</i> gate
<i>Kambir</i>	Bread made of fermented flour
<i>Kanal</i>	Unit of measurement of land: 20 <i>kanals</i> is equivalent to 1 ha
<i>Kangba-ne yongat le</i>	I'm coming from home
<i>Karma</i>	Literally, action; intentional act through which an individual determines his or her present and future rebirth
<i>Karu skyot?</i>	Where are you going?
<i>Katak</i>	White scarf used for symbolic and honorific purposes
<i>Khal</i>	A measure of the amount of seed needed to sow a field
<i>Khal chuksun</i>	A measure of the number of days needed to plough a field
<i>Khangba</i>	Single house or main house
<i>Khangbu</i>	Small house
<i>Khangchen</i>	Main house
<i>Khangchung</i>	Small house (in Zanskar)
<i>Kraal</i>	Sitting order (denoting a social hierarchy)
<i>Kuttu</i>	Small house (in Lingshed)
<i>Kuyu</i>	To thresh
<i>La</i>	Mountain pass
<i>Lakh</i>	Equivalent to 100,000
<i>Lam</i>	Route or trail
<i>Lama</i>	Monk
<i>Lhato</i>	Altar that marks the presence of a <i>Lha</i> (spirit)
<i>Lok</i>	Area
<i>Lonpo</i>	King's minister
<i>Losar</i>	Buddhist new year (festival)
<i>Lungta</i>	Prayer flag
<i>Lut</i>	Manure
<i>Magpa</i>	Man who has married into a household with no male heir, and who is considered inferior to other household males
<i>Man-rig</i>	Ordinary person, commoner
<i>Mandala</i>	Religious representation of the universe
<i>Mandir</i>	Temple
<i>Mane</i>	Prayer wheel
<i>Mani</i>	Alignment of votive stones on which is carved a mantra
<i>Mar</i>	Butter
<i>Markalak</i>	Mud plastered on a wooden table
<i>Meme</i>	Literally, grandfather; used in deference to elderly men
<i>Mesde chusde</i>	Object of a social boycott
<i>Molam Chenmo</i>	"Great prayer" festival
<i>Mon</i>	Itinerant musician (caste)
<i>Numberdar</i>	Registered representative of a village community for the payment of government dues
<i>Nyima chik-y-lam</i>	A measure of the distance travelled in a day on foot
<i>Om mane padme hum</i>	The mantra of Manjushri, the Buddha of compassion
<i>Oma</i>	Milk
<i>Onpo</i>	Astrologer
<i>Panch</i>	Democratically elected member of a village in the Panchayat Raj system
<i>Panchayat</i>	Ward

<i>Papu</i>	Leather shoes
<i>Pashm</i>	Cashmere wool
<i>Patwari</i>	Village land records keeper
<i>Pemar</i>	Dough made of barley flour, tea, butter, and sugar
<i>Perak</i>	Ladakhi woman's headgear
<i>Phaps</i>	Fermentation seed
<i>Phating</i>	The best variety of apricots, usually dried
<i>Photang</i>	Seminar hall used by a monastery for teaching
<i>Pradhan</i>	Elected village leader
<i>Puja</i>	Worship ritual
<i>Rajma</i>	Pulses
<i>Raksi</i>	Nepali distilled alcohol made of fermented rice
<i>Raluk rgyusphel</i>	Colloquial term for Sheep Husbandry Department
<i>Rdungma</i>	Big beam used to support <i>talus</i>
<i>Res</i>	Obligatory labour for communal benefit
<i>Rgyal-rig</i>	Royalty
<i>Rig sum gonpo</i>	Religious monument made of three <i>chortens</i>
<i>Rigs-ngan</i>	Low caste
<i>Rinpoche</i>	Reincarnated <i>lama</i>
<i>Salajit</i>	Or <i>darkjun</i> in Ladakh; a substance used in Tibetan and Ayurvedic medicine
<i>Sarpanch</i>	Democratically elected head of a village in the Panchayat Raj system
<i>Sergar</i>	Goldsmith or coppersmith
<i>Sho</i>	Dice game (Tibetan/Sherpa)
<i>Skudrag</i>	Aristocracy
<i>Skyot-at le?</i>	So, have you come?
<i>Snambu</i>	Woven cloth
<i>Sngalo</i>	Plant used as fuel
<i>Solja (cha) kante</i>	Butter tea
<i>Stupa (or chorten)</i>	Religious monument
<i>Sukul-a chaat le</i>	I'm going to school
<i>Sunameta?</i>	Aren't you feeling bored or lonely?
<i>Surna</i>	Hoboe
<i>Tagi</i>	Bread
<i>Talu</i>	Small beam used to support roof
<i>Tangka</i>	Religious silk, satin or cloth painting scroll
<i>Tangpe Chonga</i>	The fifteenth day of the first month of the Tibetan calendar (Buddhist celebration)
<i>Teen pathi</i>	Card game
<i>Tipi</i>	Hat
<i>Torma</i>	Potentilla roots
<i>Trims</i>	Village customs
<i>Tsichu</i>	Tenth day of the month, the day of Guru Padmasambhava
<i>Tsuktul</i>	Blanket
<i>U-lag</i>	Obligatory labour for communal benefit (in Tibetan)
<i>Videshi</i>	Tourist or foreigner
<i>Yul-lha</i>	Village spirit
<i>Yulpa</i>	Village assembly
<i>Zho</i>	Yoghurt