

Roadsides

Collection no. 002 • August 2019

Labor



Edited by: Galen Murton

Roadsides is an open access journal designated to be a forum devoted to exploring the social life of infrastructure.



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ISSN 2624-9081

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Introduction

Galen Murton

Centered around the theme of labor, the contributions to this second issue of *Roadsides* are artistically creative and prioritize the visual, the aural, and the aesthetic. Utilizing labor as a common conceptual device, the authors approach roadwork through a rich variety of media, including illustrated cartoons, photo essays, watercolors, etching aquatint paintings, and audio-visual recordings. Experimenting with hybrids of textual and non-textual forms of knowledge representation, the articles illustrate a range of practices whereby infrastructures and mobilities are made, used, maintained, and contested. Driven by imagery and complemented by ethnographic essays that, at times, ride in the back seat, the stories examine and untangle how infrastructures shape and are shaped by social relations of work and employment.

From bulldozers and rock crushers to financial transactions and electoral maneuvering, labor gets things done. Recognizing that road construction and other infrastructural developments are rarely simple and straightforward projects – and much more than just technical expertise translated into material objects – this collection attends to both conspicuous and invisible forms of work that constitute the development of roads, dams, camps, bridges, bureaucratic alliances, political divisions, and other

social and material technologies of transportation. That is, while building a road is always a political project, attention to labor illuminates both the connections and the gaps between the popular aspirations for progress and the inevitably uneven impacts of infrastructure development across the world. By looking closely at the ways in which people, materials, landscapes, and ideologies intersect in everyday forms of work, attention to labor reveals infrastructures not only as things that move other things, but as dynamic processes that both disrupt and reinscribe social positions across a range of scales, locations, and demographics. Following such socio-material pathways, the articles collectively provide views of and into life on the road and in so doing advance understandings of infrastructural work that might otherwise be constrained by the written word.



Throughout *Roadsides* collection no. 002, the authors approach labor and infrastructure both temporally and spatially. Whether waiting for the delayed delivery of massive hydropower instruments in Nepal ([Pigg](#)) or a government's inadequate commitment to complete a "road to nowhere" for indigenous communities in Paraguay ([Correia](#)), the anticipation of promised infrastructure is shown to be routinely deferred by the inevitable frustrations of postponement, both deliberate and environmental. Moving from the challenges presented to pedestrian mobility in London under the state's constant efforts of planned improvement ([van Duppen](#)), the stories take the reader to Sudanese metalsmiths displaying skills of "sonic labor" to transform decades-old British Bedford lorries into desert-capable vehicles with rhythmic and percussive synergy ([Hänsch](#)). Labor migration and exploitation are depicted as durable and

A clear and cracked view ahead. Central Kyrgyzstan.

Photo: Agnieszka Joniak-Lüthi, 2018.

intransigent things, reflected by seasonal road builders traveling today from the Gangetic Plains to the Himalayan highlands of Ladakh India ([Sabhlok and Sharma](#)) as well as historical efforts in Rana-era Nepal to control terrain and secure the state through perverse techniques of corvée labor along non-existent roads ([Plachta and Tamang](#)). The everydayness of what it takes to build a road or make a living along it are further expressed autoethnographically, in one instance through participation with Buddhist nuns constructing motorable paths to a remote monastery in Zaskar India ([Normington](#)) and in another by sitting with Sri Lankan rickshaw drivers in urban Jaffna reflecting existentially on one's lot in life while patiently waiting for a mid-day fare ([dillon](#)). State-led efforts to assemble borderland infrastructures in northeast India and thereby mobilize defenses against China ([Boyle and Rahman](#)) are countered affectively by manual laborers in Afghanistan's Wakhan Corridor endeavoring to help realize national interests of closer Sino-Afghan connectivity ([Marschall and Mostowlansky](#)). Viewed across a global landscape of works and dreams, the pathways of this collection are consistently affective, expressed through the divergent experiences of labor and experienced by a range of road constituencies – builders, drivers, users, and abusers, alike.

There is also a significant effort of labor behind the colorful and provocative contributions that have enabled this issue to come together. As the editor of the collection, I would like to thank the exceptional reviewers who agreed – on short notice and with little or no advance warning – to lend a hand in the peer-review process. These individuals were instrumental in making this project into what it has become: Majed Akhter, Penelope Anthias, Bob Beazley, Mason Brown, Swargajyoti Gohain, Radhika Gupta, Tina Harris, Frank Heidemann, Amen Jaffer, Mark Liechty, Austin Lord, Tim Oakes, Aditi Saraf, and Anna-Maria Walter. Furthermore, debts of gratitude are also owed to David Hawkins, Chantal Hinni, and Antoni Kwiatkowski for their exceptional efforts in the editorial, design, layout, and production stages of this unusual and labor intensive collection. Finally, extra thanks to Agnieszka Joniak-Lüthi, for bringing forth the initial vision of *Roadsides* as well as her ongoing commitment to studious and rigorous publication practices in the spirit of open-source access.

Roadsides is intended to be – and has quickly become – an innovative and alternative-format journal that examines and explores “life on and beside the road” in a variety of ways. Inspired to be short, pithy, and experimental, this thematic issue employs labor in an effort to provide a new space for engaging the “infrastructural turn” across the social sciences. Aesthetically beautiful and grounded in the everyday, *Roadsides* endeavors to offer a new outlet for considering and understanding the infrastructural impacts of technological intervention in both historical and contemporary moments and places. We hope that you enjoy this journey down the road ahead.

Cite as: Murton, Galen. 2019. "Introduction." *Roadsides* 2: 1-4. DOI: <https://doi.org/10.26034/roadsides-20190021>.

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Galen Murton is Assistant Professor of Geographic Science in the School of Integrated Sciences at James Madison University in Harrisonburg, Virginia (USA). Curious about the ways in which power operates spatially through material things like roads, rails, fences, and dams, he studies the processes and effects of infrastructure, investment, and other development dynamics in mountainous border regions of Highland Asia and, more recently, in the United States as well. In addition to teaching courses on cultural geography, critical cartography, development studies, and the history of geography, Galen also enjoys conducting fieldwork with his students in the mountain ranges of Asia and the Americas. The idea for this special issue on labor came about while riding a motorcycle along a really rough road in Nepal.

The Penstocks

Stacy Leigh Pigg

“It’s interesting for two days,” he said. “Then it is very, very boring.”

Kaphle-ji tells me this while we chat over morning tea in the Hotel Dobhani in Singati Bazaar. We have time to kill. A landslide blocking the northward road up valley has left him, once again, bored and waiting. He drives a safety spotting truck for the flatbed lorries that transport penstocks.

Drive. Truck. You would think this implies whizzing along roads, or at the very least, the kind of consistent, effortless forward motion made possible by the internal combustion engine. But Kaphle-ji’s job is to steer a fancy pick-up truck as it creeps along, slower than walking pace. Sometimes his truck cannot move forward at all, for hours or for days. He must stay within a few meters of the massive, heavier vehicles transporting a single penstock to the Upper Tamakoshi Hydropower project in northern Dolkaha district of Nepal. These long trucks do not move easily through the mountains.



There are the landslides, large and small, of course. Vehicles break down. In the rain – hardly an unforeseen event – the road becomes too slippery. Even in the best weather the turning angle must be calculated just right, he tells me. No backing up. It can take half a day to make it around one hairpin bend.

“The local bus and truck drivers don’t like us,” he says. “Their jobs depend on speed. Their bosses enforce time quotas; the drivers get in trouble if they don’t make the maximum number of trips in the allotted time.” Sometimes the police have to come in to manage the high tempers in a traffic jam. The drivers of the flatbeds are mostly Indian. There is a nationality associated with each work role, a caste system of subcontractors: Nepali unskilled laborers; Indian drivers and engineers; Chinese technicians and skilled laborers; Danish and German and Austrian consultants.

The word ‘penstock’ was not in my vocabulary before I walked the 39km road from Charikot (the district center) to Singati Bazaar with anthropologist Shyam Kunwar. Shyam patiently explained to me what I was witnessing but not always observing carefully. He never missed a chance to strike up a conversation with someone, always evincing curiosity and surprise and keen interest in the slightest details of their account. (It took me a while to realize he was staging these spontaneous conversations to offer me the experience of discovery. He himself had heard everything many times, over research trips spanning several years.)

After hearing the word ‘penstock’ all day, I looked it up in my Oxford English Dictionary smartphone app that night.

penstock, *n.*¹

Pronunciation: Brit. /ˈpenstɒk/, U.S. /ˈpenˌstɑk/

1. A sluice or floodgate for regulating the flow
From a pent body of water, as in a watermill
1587 A. FLEMING et al. *Holinshed's Chron.*
Herin.. was laid first a pinstocke, and
afterwards a sluiese of great charge,
the streame whereof meeting with
the course of the great slues increaseth
the force thereof
2. orig. and chiefly *U.S.* A channel, trough, or tube
for conveying water from a lake, dam, etc., esp. to
a waterwheel or turbine
1933 *Discovery* Apr. 110/2 The station is
several miles below Niagara Falls,
the water being led to the ‘pen-stock’
(the tubes which guide the water to
the turbines) by means of a concrete canal
from a point above the falls.

It is an old word, harking back to the days of willow-lined ponds with slowly revolving waterwheels, a term infused with new vigor in the great dam-building projects of twentieth-century USA. And now it is a Nepali word, arguably, due to the enthusiasm for run-of-the-river type electricity-generation schemes such as the Upper Tamakoshi Hydropower project. These projects allow some water to flow downstream but divert most of it into a penstock that accelerates its flow into the turbines. People living along the construction routes take a keen interest in these mechanics of electricity generation. And they hope to earn interest from the stock shares they will receive as compensation to residents of a project-affected area. How, exactly, the road and the river diversion will change their livelihoods no one can foresee.



The road is the infrastructure behind the infrastructure, if you will. Strictly speaking, the road predates the hydropower project. Plans for a road in this area were made by savvy local politicians as early as the 1970s. A narrower and rougher road was built in the late 1990s by local village laborers working almost entirely without the aid of heavy machinery, through a food-for-work program.

At that time, some said it was a road going nowhere, though I suppose what counts as a somewhere and what feels like a nowhere depend on where you are standing. And what you are looking toward. In those days, people told Shyam, it took longer to travel by vehicle than it did to walk the same journey.



IT WAS JUST A DIRT
TRACK ONLY AS FAR
AS SINGATI BEFORE.

AND THEY HAD TO IMPROVE
THE WHOLE ROAD, FOR ALL
THE TRUCKS.

ESPECIALLY FOR THE
PENSTOCKS.

It could be said that in mountain Nepal, the best roads are not built for the convenience of people, but for electricity.

The Upper Tamakoshi Hydropower project dam sits in a narrow valley where a cold, deep, turquoise river flows between eerily looming cliffs. Tunnels were blasted through these mountains, to carry the penstock tunnel and to house the turbines. An entire town came into being, first in order to build, and then to support, this machinery. Inside one mountain the equivalent of a seven-story building now descends into the earth. It houses the immense turbines in a pristine structure. Access is strictly controlled. Glossy enamel paint on the metal walkways reflects the blinking lights of control panels.

Outside this engineered shrine, though, the road is pot-holed, always morphing, as if alive; dusty in the dry season and muddy during monsoon. All that heavy equipment and many thousands of people had to be able to get to this remote site. The road from Charikot to Lamabagar had to be widened. The surface and bridges along the entire route through Nepal had to be rebuilt to tolerate the tonnage. It used to take some three or four days of fast walking from Charikot to reach the project headquarters in Gongar. And another day uphill to Lamabagar, once an entrepot on the Tibet trade route and now a seemingly sleepy village.



When I met Kaphle-ji in April 2018, only a fraction of the seventy-four steel sections needed for the 310m diversion tunnel and the 373m vertical tunnel to the turbines had arrived at the dam site. That October, on the road connecting Charikot to Kathmandu, we would come across a line of these monumental pipe segments chained to flatbed trucks whose wheels alone stood higher than a person, abandoned on the side of

the road. Was it a problem with the road condition? Or the subcontractor's failure to complete the work?

"The drivers just left them there," the locals told us. "We don't know why. We have no idea when they are coming back."

If you do an internet search for Upper Tamakoshi Hydropower Project you will be inundated with superlatives and numbers:

"the largest hydropower plant in Nepal"
 "expected to produce 2,281GWh of electricity a year"
 "22m-high and 60m-long concrete dam"
 "an 8.4km-long headrace tunnel with 32.14m² of cross-sectional area"
 "total construction cost estimated to be \$441 million in 2011 ... escalated by \$41.8 million due to the delay and disruption caused by the 2015 earthquake."

Such representations soar high above the road surface – the plane of everyday life, movement and labor. Penstock was a word unknown to me because my own hydropower-generated electricity in British Columbia, Canada appears daily in my home, as if by magic. But it is a colloquial term in Nepali used by the villagers who watch these behemoth pipe segments creeping along the new road, a road built for penstocks to fulfill their engineered purpose to create export electricity for the project stockholders.

Walking on the fine wide road from Charikot to Singati, Shyam and I turned a corner to see a lone penstock abandoned on the slope side of the road, grass growing up around it. It was incongruous, but it certainly made a handy shelter. Shyam told me that locals said it had fallen off the truck. Standing next to that iron pipe more than twice my own height, I could not get the image of it breaking loose out of my head. So when I met Kaphle-ji again, I had to ask:

"That must have been dramatic! And scary. Did it make a big crash?"

"No. It just slowly, slowly tipped. You just watch it happen and there's nothing anyone can do."

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Artwork:

Drawings by Shushank Kalapremi Shrestha; Inking by Shrijit Rajhbandari. Layout and concept design by Kanchan Burathoki and Promina Shrestha.

Acknowledgements:

This essay presents preliminary work for a forthcoming graphic novel created in collaboration with the "Infrastructures of Democracy" research project <https://infrastructuresofdemocracy.geog.utoronto.ca/>, funded by the Social Sciences and Humanities Research Council of Canada. The travels and work presented here have

also been made possible by the David Lam Centre for International Communication at Simon Fraser University and the Hari Sharma Foundation for South Asian Advancement.

Cite as: Pigg, Stacey Leigh. 2019. "The Penstocks." *Roadsides* 2: 5-13. DOI: <https://doi.org/10.26034/roadsides-20190022>.

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Arrested Infrastructure: Roadwork, Rights, Racialized Geographies

Joel E. Correia

When construction of an access road began in 2016, the promise of leaving the margin of the Pozo Colorado-Concepción highway felt imminent. Indeed, the Yakye Axa Indigenous community has worked for over twenty years to secure rights to their ancestral lands — the absence of an access road is the last thing standing in the way of their reoccupation. Yakye Axa community members were, therefore, excited to see that the Paraguayan Ministry of Public Works and Communication (MOPC) had finally started building a twenty-four kilometer dirt road that would enable them to leave the margin of the highway where they had lived since initiating their land claims in the early 1990s.¹ Yakye Axa gained land rights in 2012, seven years after the Inter-American Court of Human Rights (IACtHR) found the Paraguayan state responsible for human rights violations against the community for failing to ensure Yakye Axa's constitutional rights to land. Although, to satisfy the IACtHR, the Paraguayan state purchased land for Yakye Axa, the property is surrounded by private ranches, which deny community members the free access to their lands.



Construction of a public access road is crucial for the community, calling attention to the role infrastructure plays in social justice and the production of racialized geographies. Larkin (2013) suggests that infrastructure provides an important analytical site to understand how power and affect operate through material practices. Murton et al. (2016) build from this approach to consider the (geo)political, social, and ecological ‘work’ done by infrastructure. Meanwhile, Gordillo (2014) demonstrates that infrastructure works in social memories and political imaginaries even after its destruction, decay, or decadence. Yet aside from Gupta (2015), few scholars consider the work done by infrastructure that has been left in a suspended state, what I call arrested infrastructure. Drawing from ethnographic research I have conducted since 2013 with Enxet-Sur Indigenous communities in Paraguay’s Chaco region,² including Yakye Axa, I ask two related questions: 1) What different forms of labor drive infrastructure projects? 2) How are arrested infrastructures related to the (re) production of racialized geographies and injustice?

MOPC working on the Yakye Axa access road.
Photo: Joel E. Correia, 2016.

The promise of a road

Infrastructure is inextricably related to promise (Hetherington 2014; Anand et al. 2018). Within the broad elements that create the underlying features of system organization (Star 1999), the road is, perhaps, the quintessential infrastructure through which the power and promises of citizenship rights circulate and through which people come to know the state (Harvey and Knox 2015). When roads are built, they tie both people

and place together in new ways. When roads do not exist or are rendered impassable, people are often disconnected from crucial services. Such disconnections expose tenuous relations between different social groups and the states in which they reside, revealing much about how infrastructural development, or the lack thereof, is related to racialized inequalities and violence (see also Rodgers and O'Neill 2012).

Road development in Paraguay's western Chaco region is geared at facilitating agricultural production and commodity exports. To date, state officials have prioritized either major road construction projects that allow Mennonite ranchers and cooperatives in the Central Chaco to access (inter)national markets or dirt, toll roads that are joint ventures between private ranching consortia and MOPC.³ Most Indigenous communities, on the other hand, are only accessible by small dirt roads vulnerable to disrepair or privately owned by non-Indigenous landowners, such as the case with Yakye Axa's land. A chronic lack of access to reliable roads or means of transport ensures that the rights of many Indigenous communities in the region are undermined, as is access to markets and sources of political power. For these reasons, the Yakye Axa community refused to occupy its territory until MOPC completes the promised access road — otherwise they will likely be trapped on that land without ability to leave (Correia 2018).

Rethinking labor–infrastructure relations



The unfinished access road cuts diagonally through the forest, as seen on Google Earth Engine (2019). maps.google.com, 2019.

Construction of the Yakye Axa access road has slowly advanced since beginning in 2016. At the time of this writing, approximately twelve kilometers have been constructed, while more than half the road remains unfinished. Nevertheless, the Yakye Axa community and their allies have been laboring to build the road since gaining land rights in 2012. The years of effort invested by members of Yakye Axa to lobby Paraguayan state officials, maintain communications with the IACtHR, and launch public awareness campaigns are forms of labor just as critical as the non-Indigenous laborers paid by MOPC to construct the access road. The roadwork, though still incomplete, would arguably never have begun without ongoing community efforts to pressure MOPC, thus highlighting the often-unseen collective labor that many actors invest to spur infrastructure development. While such labor is generally mundane, at times it can be spectacular, as when a special IACtHR delegation investigated the stalled construction in November 2017 in an effort to impel the Paraguayan state to complete the road.

Investigating the incomplete road construction.

Photo: Tierraviva a los Pueblos Indígenas del Chaco www.tierraviva.org.py.



Despite constant work by Yakye Axa and allies to ensure the road is built, the Paraguayan state effort has been anemic at best. MOPC roadwork stalled in 2017 because state officials never secured easements for a public right-of-way to construct the access road along the property lines of private cattle ranches that surround the Yakye Axa lands. Securing the right-of-way requires voluntary compliance by area ranchers or a legislative act to expropriate the easement. Ranchers remain in opposition and state officials have failed to muster the necessary political will, despite the clear legal basis for the road and the minimal impact it will have on the ranchers' properties. I suggest that this arrested roadwork highlights the enduring power of settler colonialism that maintains Indigenous exclusions in the Chaco.



Paraguayan officials have not dedicated the necessary legislative and material labor to ensure the access road is well constructed and completed in a timely manner. The incomplete road project works in pernicious ways on Yakye Axa and other Indigenous communities in the area of influence. Indeed, the Payseyamexempa'a and Kelyenmagategma Exnet-Sur communities that border Yakye Axa's land also stand to benefit from the future access road. Both communities eagerly await the new road because the annual rainy season regularly floods this part of the Chaco, isolating them and cutting off access to necessary state services. In the recent past, numerous people from Payseyamexempa'a have died because they could not secure basic medical attention

Existing sections of the incomplete access road regularly flood due to poor construction, rendering it unusable.
Photo: Joel E. Correia, 2019.

*Three years of
intermittent labor
and twelve kilometers
of 'constructed' road
are easily eroded by
floodwaters.*
Photo: Joel E. Correia,
2019.

due to the absence of passable roads during the rainy season (Chaco Sin Fronteras 2019). On the margin of the highway, similar acts of violence have befallen the Yakye Axa community due to the perils of vehicular traffic and the precarious conditions of roadside life (Correia 2018).

As a man from Yakye Axa told me: “They [state officials] bought us land but never built a road. We watch them drive by on the highway all of the time while we are here on the side of the road ... One thing that we have learned is that they do not care about the poor or the Indigenous, if they did they would have built the road a long time ago.” That the Paraguayan state has not dedicated the resources necessary to complete the road knowing full well that lives are literally at stake is not merely an issue of bureaucratic malfeasance, it is a form of pedagogy with a clear lesson: Indigenous lives matter less to the state than the political economy of cattle ranching and export-oriented development that many other roads in the Chaco facilitate. The resulting reiterated forms of violence disproportionately exacted on Indigenous peoples draw attention to how infrastructures intersect with a biopolitics of making live and letting die (see also Li 2010, 2018). In other words, arrested infrastructure works to constrain Enxet-Sur lives through racialized, structural violence.



Numerous people from Yakye Axa have died and been buried on Ruta Cinco's margin, while waiting to occupy their lands.

Photo: Tierraviva, 2017.



MOPC working to construct a new bi-oceanic highway to facilitate transcontinental trade of agro-export commodities.

Photo: Joel E. Correia, 2019.



The end of the road, for now.

Photo: Joel E. Correia, 2017.

The 2019 initiation of work on a new bi-oceanic highway that will bisect Paraguay's Chaco and facilitate transnational soy and cattle exports reinforces the fact that the Yakye Axa road is not a state priority. Construction of the bi-oceanic highway is being done around the clock with much fanfare, while the Yakye Axa access road is arrested by a lack of political will to complete the roadwork. The two road projects point toward different forms of labor invested in infrastructure, from large-scale investments, machinery, and hundreds of workers in the case of the bi-oceanic highway, to leveraging international human rights law and political lobbying in the case of Yakye Axa. The differences between the two road projects move beyond labor, however, to show that infrastructure development in the Paraguayan Chaco is a process that reproduces exclusionary regimes of resource access predicated on racialized geographies of power.

Despite the arrested infrastructure, members of Yakye Axa continue their daily labor of pressuring the state to finish the access road. As one community leader told me, with a slight grin, in June 2019: "We have worked hard to get here. I am hopeful that they [MOPC] will finish the road once [the ground] dries out and that we will be able to go to our land this year. We are hopeful."

Notes:

¹ See Correia (2018) for a detailed analysis and explanation.

² I follow the writing practices of many Indigenous and Native scholars who capitalize the words Indigenous, Native, Aboriginal, American Indian, etc. for two reasons: 1) as a sign of respect; 2) because the term is used as a proper noun to signify a people, not as an adjective (see Yellow Bird 1999: 2).

³ See <https://www.mopc.gov.py/mopcweb/index.php/red-vial>.

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Cite as: Correia, Joel E. 2019. "Arrested Infrastructure: Roadwork, Rights, Racialized Geographies." *Roadsides* 2: 14–24. DOI: <https://doi.org/10.26034/roadsides-20190023>.

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Labor Geographies: Uneven Infrastructures in Nepal's Rana Period

Nadine Plachta and Subas Tamang

On what was probably a cold winter morning in January 1949, Nepali porters carried a German-made Mercedes from Thankot in the Kathmandu Valley to Bhimphedi, forty-five kilometers to the south. The green car was stripped of its wheels and bumpers and was lashed onto heavy wooden beams. Sixty-four men, most of them Tamangs from villages of Makwanpur district, were hired to balance the vehicle on their shoulders. Sweat dripped down their weathered faces. Loose shirts and pants were girded with cotton cloths around their waists. Some men walked barefoot, while others had hand-made slippers woven from straw. They earned less than a rupee for the whole treacherous eight-day journey, which traversed two steep mountain passes. While there were paved roads in Kathmandu, access to the capital was limited to a footpath. Cars and spare tires for the Rana family had to be brought to Calcutta by ship, transported to Amlekhganj in the Tarai by train, driven to Bhimphedi and then carried across the Mahabharat Range. The Mercedes that was heaved up and down the hilly terrain that particular day was to be traded for a new American model in India. When the porters crossed a stream near Chitlang village, National Geographic photographer Volkmar Wentzel captured the scene with his camera (Bhujel 2014; Beazley and Lassoie 2017: 9–13).



From the moment the Ranas established a family rule in 1846, they were confronted with the British in neighboring India. Though Nepal was never officially colonized, its history was largely shaped by having to manage relations with the colonial power on the subcontinent (Des Chene 2007). Tensions with the East India Company had been significant for most of the previous century, and when westward campaigns of the Nepali rulers had resulted in open conflict, they ceded a considerable amount of terrain after a two-season war. In 1816, the Gorkhalis had to accept the territorial limits imposed by the British in the Treaty of Sagauli, which formalized much of the current political boundaries of Nepal as a nation-state. Yet the colonial administration regarded Nepal's sovereign status as ambiguous. It was common knowledge on both sides that the British could have annexed Nepal with little trouble. The Ranas did not want to make that prospect any easier, but they knew that keeping good and amiable relations with the British was essential for any claim to independence. The colonial encounter necessitated constant diplomatic maneuvering.¹

A consolidated system of taxes and forced labor afforded the Ranas a privileged lifestyle.

Subas Tamang, *Study of History IV*, 2018, 46 x 60 cm, etching aquatint.

Given the challenging situation posed by the British, the Ranas developed a complex approach to managing coloniality. Drawing on Fiona Wilson's concept of "territorializing regimes" (2004), Rankin et al. (2017: 52) write that roads have become a vital element in this regard: On the one hand, the elite class refused to build motorable roads to connect Kathmandu to the swelling infrastructural network on the subcontinent to avoid indirect colonialization, while on the other, it expanded footpaths throughout the rural areas of the country to collect revenue and harness workforce from the peasant society. This strategy kept the British at a distance but resulted in the political isolation and economic stagnation of Nepal. Focusing on the historical context of infrastructure development, this essay argues that the earliest roads and tracks in Nepal were used and maintained, even if in a state of disrepair, in an effort to capitalize on a large volume of bodies, labor and resources to control terrain and secure the state financially and against its own people.

At the turn of the century, the British intensified construction of railways, roads, bridges and irrigation canals across the northern parts of India to support industrial development and modernization. The demand for timber for railway ties and bridges increased dramatically, and extensive logging caused deforestation, which programs for the cultivation and conservation of trees could not avert (Sivaramakrishnan 1995: 6–8). The Rana government, sensing a way to cash in on British demand, began to capitalize on virgin forest and grassland resources in the eastern Tarai. It controlled the export of timber and invested in the manufacturing of sawmills to produce railway ties for the expanding Indian rail system. The completion of the Raxaul to Amlekhganj railway line in the Tarai in 1927 boosted the timber industry, and several market towns developed along the southern border in Nepal to accommodate the growing volume of trade in hardwood and other products (rice, grain, tobacco) that had previously been transported by horse and in buffalo carts (Regmi 1988: 149–79; see also Mulmi 2017). The Ranas strengthened ties with the British, whom they recognized as the dominant power on the subcontinent. But they did not upgrade the rugged footpath leading to Kathmandu as a matter of national security.

The restriction of access to Kathmandu did not mean that the Ranas were averse to the comforts that an expanding global consumer culture and colonial economies promised. From the 1920s on, an aerial ropeway facilitated the transportation of up to eight tons of commodities per hour on cables for the ruling class, and paved roads inside the valley advanced the use of cars, which continued to be portered over steep terrain across the hills (Liechty 2003: 44–45). A photo of a car dealer in Lazimpat showcasing a Dodge, a Chevrolet and a Whippet next to several Fords provides an illustration of the extent to which standard European and American vehicles had replaced horses and carriages as the favored mode of transport for the elite by the 1930s (Proksch 1995: 122–23). Paintings, statues, cigarette cases and silverware likewise decorated Rana palaces and homes. These foreign materials carried their own promise, aesthetic effect and affective force. Considered as vibrant matter, they had a life of their own (Bennett 2010; see also Latour 1993).

The Ranas' consumption was based on a centralized agrarian bureaucracy and dedicated commitment to extracting as much revenue as possible from Nepal's resources. The government granted land rights and titles to state functionaries and



The porters did not know what model of car they were balancing on their shoulders.

Subas Tamang, *Study of History*, 2017, 21 x 30 cm, etching aquatint.

revenue officers as compensation for their services, thus creating a landowning class that extracted surplus from the peasant society (Regmi 1976: 225). An extensive postal system (Nep. *hulāk*) – which was established during the expansionist drive of the Gorkhalis and followed a network of footpaths and trails for horse travel throughout the peripheral regions of the country – facilitated the collection of taxes and demanded compulsory labor (Nep. *jhārā*). The *kāgate hulāk* carried official paperwork and communicated orders, and the *thāple hulāk* transported entourages, goods, gifts, arms and ammunition for the state. Interesting enough, *kāgate* means paper, while *thāple* is derived from *thāplo*, ‘forehead,’ referring to the strap attached to a bamboo basket and placed around a porter’s head in order to take part of the load off his shoulders. The postal services represented a form of forced labor that was crucial to the administration of the regime (Stiller 1976: 34–38). The ways in which the Ranas restricted privileges to the elite class based in the center and imposed constraints on the commoners offer an apt example of the “selective exclusion” that roads enabled (Liechty 1997).

The text lists the enslavable groups described in the civil code: the Bhote, a group to which the Tamang and Sherpa belong, and the Thakali, Chepang, Gharti, Hayu, Kumal and Tharu. Subas Tamang, *Study of History I*, 2017, 21 x 30 cm, etching aquatint.



In 1854 Jang Bahadur Rana enacted the Muluki Ain, a comprehensive civil code that provided the legal basis of the regime's extractive economy. It set Nepal's non-Hindu groups within an uncompromising caste system. Complex concepts of purity and pollution placed the clean castes on top and those of low status at the bottom. Though most ethnic communities were in the clean category, some, such as the Tamang, were categorized as enslavable (Nep. *māsinyā matwāli*) (Höfer 1979: 7–10). They carried cars for the elite and built bridges (Bajracharya and Bajracharya 2019), but also worked in paper, but also worked in paper and gunpowder factories and on fruit plantations (Holmberg, March and Tamang 1999). The legal code imposed Hindu moral principles and concepts on Nepal's diverse communities, with offences and crimes being treated differently according to ethnicity and caste. The stigma that has been placed on the bodies of those confined to the lower ranks of society legitimated their regularized labor contributions.

After the Rana regime collapsed, construction work on a motorable road to the south from Kathmandu was completed with Indian assistance in 1956. According to Dhan Bahadur Gole, who was among the last surviving car carriers, the porters ceased lifting vehicles through Tarai valleys and across the hills to Kathmandu once the Tribhuvan Highway linked the capital to the Indian border. That does not mean, however, that social constraints disappeared. The uneven impact of infrastructure development continues, albeit on different scales. The construction of roads, dams, power plants and transmission lines remains a complex process. As Galen Murton and Tulasi Sigdel demonstrate in their research on reproducing marginality through infrastructure, "the engineering challenges of road construction in Nepal are exceeded perhaps only by the social disruptions that they also create" (2019). Roads produce boundaries, prop up social hierarchies and draw lines. They are not setting aside structural differences but rather produce, and reproduce, particular uneven social terrains.

Notes:

¹ Various gazetteers, including a 1909 map of India's political divisions, depicted Nepal as a princely state, thus adding to the complicated nature of the neighboring situation. As a dominant power, the British wanted to exert control, when necessary, over Nepal. But they did not want to overthrow a buffer state that provided what the British considered an important resource: the Gurkha soldiers. Gurkha recruitment into the British colonial armies began in 1816 and continues to this day in both the Indian and British armed forces.

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Acknowledgments:

The authors thank the reviewers for their comments and suggestions, and especially Manik Bajracharya for his knowledge and insight.

Cite as: Plachta, Nadine and Subas Tamang. 2019. "Labor Geographies: Uneven Infrastructures in Nepal's Rana Period." *Roadsides* 2: 25–33. DOI: <https://doi.org/10.26034/roadsides-20190028>.

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Subas Tamang is a visual artist and founding member of ArTree, an arts collective based in Kathmandu. After receiving a BFA from Tribhuvan University's Lalit Kala Fine Art College, his work was exhibited at various venues and galleries in Nepal and Bangladesh. He uses techniques such as painting, printmaking and carving, and engages in multi-media art practices to create meaningful dialogues about critical subject matters. Belonging to the Tamang community, whose historical knowledge provides a tangible encounter with suffering from displacement and dispossession, Subas' artwork examines past patterns of social exclusion in Nepal that are still pervasive in the current political moment. Based on Volkmar Wentzel's photograph, the series *Study of History I–V* offers the possibility to explore the political, material and social vulnerabilities of Tamang life.

Stories from a Jaffna Auto Stand

daniel dillon

“Tell me” the anthropologist asked, notebook in hand, “how did you come to this work?” Stories can start from any point. This one, he hoped, would allow his friend to tell a story without centering the war. He had questions about that too, but some questions are best unasked. “What can I do?” Prittan retorted. “I only completed to 8th standard. Then the army came, schools closed. I worked for five years in the Gulf, but I am too old now. I did construction work. The pay was good, but now my back is no good. What else can I do?” Prittan said all this dispassionately, a mere reporting of the facts. Thirty-two and he was at the end of the line.

“What would you do if you could?” the anthropologist tried. “If you could be the hero of your own story, what would that look like?” An odd question he admitted, but just humor him. “What can I do?” the answer came again. “I am no one. I am a loser even in my own life. I have no power, no respect. How can someone like me be a hero?” But this time there was a note of sadness in Prittan’s voice. Some bygone aspiration that it was now too late to speak perhaps. So much for the anthropologist’s theories about mobility and Jaffna’s development economy. This would not be that story. Months of ethnographic labor, and still he knew nothing.

"Can I take your photo, at least?"



"I am a loser in my own life," Prittan admitted. "Can I take your picture?" the anthropologist asked.
 Photo: daniel dillon, 2018.

....

Most of the drivers called Pahir *māmā*, "uncle." He was not much older, but he carried himself with the air of a nurturing old soul. Pahir washed his auto almost every day, and he was similarly well groomed. The anthropologist often sat and spoke with Pahir as he cleaned, drawn to his quiet demeanor and keen eyes. They spoke of their mutual respect. The anthropologist impressed with the driver's calm confidence; the driver touched by the anthropologist's unexpected interest in men like him.

"What do you mean?" the anthropologist asked, falsely thinking himself inscrutable.

"My life is nothing special," Pahir deadpanned.

"That's not true," the anthropologist countered. "No one here is as stylish or cool as you." It sounded too flirtatious to his own ear, but Pahir was gentlemanly enough to pretend he did not notice, or the way the anthropologist's eyes sometimes followed the curves of his body.

Pahir was a master of self-abnegation. He used to have desires, before the wars, but no more. He wanted to be a painter of murals, a respected artist. His own self-denial made it easy to silently ignore the desires others imposed. He felt them, of course, but remained so impassive they were unable to penetrate him, like oil on water. The anthropologist silently admired Pahir's refusal of futile longing; he could benefit from such unfeeling himself, the queer fool.

"I have no desires. I only want my family to fulfill theirs. My son will soon take his O levels. I want only for him to do well in his studies so that he can become what he desires. He is my life, my future. I want nothing else."



"I have no desires. My son is my life, my future. I want nothing else."

Photo: daniel dillon, 2018.

⋮

Thusi takes a hire from the 6:10 intercity train, earning 150 rupees (about a dollar) for transporting his customer to the bus stand, from where they will travel farther and cheaper than he can offer.

Ten minutes later, he repeats the trip. He's made enough for a tea and a few rolls, a small luxury. It costs him 170 of his 300 rupees.

The morning calm is short-lived as the 8:30 train spews forth a crowd of locals returning home for the upcoming temple festival. 250 rupees.

About an hour later he manages another bus-stand hire from the flagship train as she heads south.

For two hours there is no work to be had. Thusi goes home for lunch and to get out of the sun.

He returns around noon, hoping to get lucky with passersby headed to lunch. He is, and he returns with 200 rupees.

Several hours pass. The stand fills up. Conversation, laughter, and the sounds of carrom board fill the air. Gossip is exchanged, games are played, some men smoke

while others chew betel, their crimson spittle arcing out around them. Life is lived in these empty hours.

As the afternoon matures, the flagship returns to station, now northbound. The station is all flurry and movement. The drivers line the exit gate and down the street, trying to solicit the biggest hires of the day. Thusi gets a pair of tourists headed to the luxury hotel in town, but they haggle him down to 100 rupees. It is better than nothing, he admits.

As everyone returns, they share stories. Despite being underpaid, Thusi buys tea for several friends. The crowd slowly thins as work tapers off. Thusi catches a couple of tourists looking to have an early dinner at a famous local haunt. At the drop off, they do not take his number; they will get another driver back.

The evening passes slowly, with much conversation. Thusi secures another bus-stand ferry. After so many hours, the conversation also dwindles. Drivers disappear into the backs of their autos. Phones emerge. The sounds of message notifications, mobile games, and video-chatting replace the collective discourse.

In	Out
06.10 AM	
① 150 /=-	08.20 AM
06.20 AM	① 170
② 150 /=-	
08.25 AM	04.45 PM
③ 280 /=-	② 60
09.45 AM	08.30
④ 150 /=-	③ 500 PM
12.05 PM	
⑤ 200 /=-	
12.50 PM	
⑥ 100 /=-	
03.30 PM	
⑦ 300 /=-	
⑧ 05.10 PM	
⑨ 150 /=-	
07.30 PM	
⑩ 500 /=-	

A page from Thusi's log, provided by the author, tracking all his income and expenses on 2 August 2018.
Photo: daniel dillon, 2018.

When the final train arrives around 7:30, an older driver is too aggressive with his solicitations. Thusi secures one last hire for the unusually high fare of 500 rupees. He immediately uses it to buy petrol. Prices are about to be raised again at midnight. He ends the day with 1220 rupees in his pocket, about eight dollars. Not bad, it is been a good day.

⋮

Suyana parks her unassuming rickshaw at the designated 'ladies auto stand' only to be surrounded by idling buses pushing their way through traffic. "This is our place, we must defend ourselves," she says to the anthropologist, exhaust visibly swirling around her head. But she is forced to move when she receives a call from a regular client, the only kind she has most days. She cannot afford to refuse the work.

Luckily, Kamaleswary arrives before she can depart, and quickly moves to occupy their place, a wry smile her only answer to the angry bus drivers. "Hey, sister," one gets down and shouts, "move out of the way!"

"I am not your sister!" she snaps. "And we will stay here," she adds, drawing the anthropologist into her defiance. Kamaleswary does not stop until the driver storms off, shamed. She apologizes for involving him. "I told him you are media." They snicker.



"This is our place, we must defend ourselves," Suyana says defiantly, glaring at the bus drivers encroaching from both sides.

Photo: daniel dillon, 2018.

⋮

They chat for some time, until low blood sugar demands the anthropologist has lunch. "Let me be your first hire today," he offers. Kamaleswary is an attentive driver,

so much more careful than most of the men he knows.

“Why are your mirrors like that?” the anthropologist asks. “You can only see the passenger that way, no?”

“I can see behind too,” she starts. “But I must see inside, for safety.”

The anthropologist suddenly recalls reports about rampant sexual harassment in Sri Lankan public transport, his smile fading. Of course she needs to see who is sitting behind her.

“Don’t worry,” she adds, sensing his concern. “As a driver, I am in charge of my life. This is only to take caution.” Better safe than sorry.



“As a driver, I am in charge of my life,” Ka-maleswary says, wearing the drab ‘lady drivers’ uniform with pride.

Photo: daniel dillon, 2018.

⋮

Sajeep was arguing with his wife. She had asked him to come home after the last train. He did not. He was wary of going anywhere with so many police out preparing for a visit by a cabinet minister, an empty political gesture. The police were always watching auto drivers, suspicious when they moved around, equally suspicious when they did not. Drivers were always almost terrorists. Rumors held that Tamil Tiger cadres had used autos for cover to move covertly within government-controlled areas. The anthropologist could find no proof, but it was made real, if not true, through repetition.

He heard so many rumors about drivers, about drugs, weapons, smuggling. If there was a social ill, he had heard it said about drivers, even by other drivers. It made

the work more precarious, for him and them. SajEEP needed to make more money before his son was born but driving anywhere with so many police about was risky. Instead, he sat with the anthropologist and chatted about which routes were likely blocked by checkpoints. The police in Jaffna do not know Tamil and he does not speak Sinhala, he reminded the anthropologist. What good would an auto drivers' union registration do him then?

If he was stopped, there was no way of knowing what might happen. He could lose his license and his livelihood, he could be detained on flimsy pretenses, he could be disappeared. It still happened sometimes. The war was over, but tension and conflict remained. "What to do?" SajEEP asked half-rhetorically. But the anthropologist could not say either, pondering how one could tell a story with what might be left behind. "Hmmm," he replied, "what to do?"



Three of the many required forms of identification for all drivers in Jaffna.

Photo: daniel dillon, 2018.

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Cite as: dillon, daniel. 2019. "Stories from a Jaffna Auto Stand." *Roadsides* 2: 34–43. DOI: <https://doi.org/10.26034/roadsides-20190025>.

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Sudanese Industrial Sound: Sonic Labour in a Truck Workshop

Valerie Hänsch

Take a second, turn on your speakers and tune in to the sonic experience of beats, steel and manual work to explore the audible expression of embodied practice.



[Watch video here](#)

Going back: I shot the scenes of this short video during a team research project (2006–2008) on the work and history of truck modification in urban industrial areas of the Sudan. In the 1960s, the flourishing automobile industry made for growing truck exports overseas. The imported Bedford TJ truck increasingly populated roads and truck workshops sprang up along roads, especially in former British dominions. Perhaps the best known and most visible truck modifications are the ornately decorated Bedford trucks of Pakistan (Elias 2011).

While their painted decorations and the meanings of their symbols certainly attract and deserve attention, the aim of this anthropological research project was different. We asked about the knowledge, technological appropriation, creativity and skilled practice of Sudanese craftsmen who deconstruct the Bedford trucks and rebuild

them completely. To be able to grasp complex work processes and the interaction between humans, tools and materials, we employed collaborative audiovisual research methods. In the workshops, I filmed the various technologies and practices of the craftsmen. I edited short segments of the footage, which we watched and discussed together with the respective craftsmen. This method of video elicitation offered an outstanding opportunity for shared knowledge production of both the performative workflow and technical expertise. The footage provided material for a rough cut, which we used for discussion with the craftsmen and which later resulted in a feature-length documentary (Hänsch 2009).

Truck modification at roadsides: After the English 6-ton Bedford lorry had arrived in the Sudan in the 1960s, local craftsmen – seeing that it would not meet the country's requirements – started to modify the vehicle to make it fit for off-road driving. Among other adjustments, the craftsmen increased the payload from six tons up to nine tons. The largely roadless deserts of Sudan are still these trucks' natural habitat. Commuting between urban and rural areas, the lorry reliably supplies the hinterland with goods and connects people with each other. From the reinforcement of the chassis to the construction of a new body, the Sudanese “art of truck modding” has developed through time into a unique craft tradition (Beck 2009). Blacksmiths, carpenters and mechanics across the Sudan are involved in the trade and they regularly succeed in reanimating completely run-down lorries, making them into Sudanese “Iron brides” (Hänsch 2009). The trade is organised through kinship ties and social relations

*Still from the film Sifinja-
The Iron Bride*
Photo: Valerie Hänsch,
2009.



A lorry under construction, workshop in Port Sudan
Photo: Kurt Beck, 2008.



Last works on the lorry, workshop in Shendi
Photo: Kurt Beck, 2007.

between masters and apprentices. We followed the craft's traditions through the social networks of workshops in the north, west and east of Sudan.

Sonic labour: Manual labour and rhythm are fundamentally connected. The experience of work rhythms, German scholar Karl Bücher argued in his classical study *Arbeit und Rhythmus* (1899), facilitates coordination between workers and imbues arduous work with meaning.¹ For example, engaging with the material, the rhythm and the sound of forging direct the workflow, the bodies' performance and the coordination between blacksmiths. While forging, the sound of the metal also guides the strength of the punch. As part of their situated knowledge, experienced blacksmiths feel the shaping of the iron with the hammer and they also evaluate the sound of the metal. The sound of forging also provides the opportunity for playful rhythmisation of work. When we met the master craftsman Abd al-Ghani in his lorry blacksmith workshop in 2008, he demonstrated how he and his crew sometimes create rhythms by hammering specific patterns of beats to animate and cheer them in their forging.

We spent several days in Abd al-Ghani's workshop in the industrial area of El-Obeid in Western Sudan. At the end of the 1950s, Abd al-Ghani started to work as an apprentice in a blacksmith workshop. He then worked for various blacksmiths until he opened his own workshop which specialised in the repair and maintenance of trucks. Together with his two sons, several apprentices and employed blacksmiths, he reinforces the chassis and constructs new iron bodies for Bedford lorries.

When we discussed a different version of the short video with Abd al-Ghani, he commented on the patterns of beats: "The rhythm we create with the hammer is like music for us. Every blacksmith's workshop has it. You hear it like music in your heart and it gives you enthusiasm for the work. If you forge with the big hammer, it gives you zeal." Such playful sonic rhythmisation conjures up the mood to perform strenuous work; it creates the courage to work hard for hours in the heat of the day.

Abd al-Ghani called the various types of rhythms *naqrasha*. For instance, two craftsmen forging one piece together transform the usual even two-beat rhythm into a 2/4 tempo. Another type of rhythm is created when one smith sets the pace with his beats and guides the direction and steady movement of the other's hammer. Thereby, the one with the small hammer does not forge the piece itself but strikes the anvil and holds the piece. He is leading with his small hammer the action of the other craftsman, who forges the piece with the big hammer. While forging together, the metric cycle spans from three to six beats, which corresponds to the staff notation of 6/8 and 12/8 respectively. According to Rainer Polak, this metric pattern is characteristic for Sub-Saharan music (Polak 2010, see also Locke 2010). Together the craftsmen master a high degree of rhythmicity both in regularity and in the patterned contrasts. The different types of hammers and works contribute to the metallic timbres. Abd al-Ghani or his sons usually beat the leading hammer and the employed smiths or apprentices forge the piece with the big hammer. It is the created rhythm that supports control of and immersion into work and keeps up the workflow. In this way, sonic labour is playful rhythmisation that provides both enthusiasm for arduous work and steady bodily movement and concerted coordination.

This kind of ‘musicking’ can be found in many other instances of manual labour in Africa and elsewhere. For example, Ghanaian postal workers turned the tedious task of cancelling stamps into a meaningful and enjoyable practice by creating musical patterns: they drummed sounds and whistled melodies (Koetting 1992, cited in Titon 1996: 8-9). Blacksmiths in Mali created rhythms that resemble standard drumbeats played by musicians in the region; to become a competent smith, Patrick McNaughton argues, means to be able to “play” the rhythms with the hammer and the bellow (McNaughton 1988: 25). Abd al-Ghani is not a musician; he is a blacksmith who masters his work and its rhythms. These are “the rhythms we learned from the old craftsmen of the old days”, Abd al-Ghani told us. “It is their tradition. We also call it *tantana* [jingling].”

In the short video, I have mixed and remixed different types and episodes of ‘musical’ forging in Abd al-Ghani’s workshop into a web of Sudanese industrial sound.

With the boom in new infrastructural projects since the early 2000s, tarmac roads have been built through the deserts of the Sudan and new MAN and Mercedes trucks are being imported. The craftsmen have started to modify these trucks as well. But the old Bedford lorry continues to be the mainstay in the circulation of goods and people on off-road desert tracks. As Ammar, a lorry craftsman in Northern Sudan said about the lorry: “It will never die!” The craftsmen’s work keeps it running.

Notes:

¹ *Arbeit und Rhythmus* (Work and Rhythm) has not been translated into English. For a discussion of Bücher’s study and approach see Gregor Dobler (2016) and Gerd Spittler (2008).

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Credits:

Sudanese Industrial Sound: Sonic Labour in a Truck Workshop, DV, 3 minutes, 2019
 Director, camera, sound: Valerie Hänsch
 Editing and sound mix: Valerie Hänsch and Georg Höngdobler
 Research project director: Kurt Beck
 Lorry craftsmen: Master craftsman Abd al-Ghani and his crew, Western Sudan
 Funded by the German Research Foundation (DFG) as part of the research project:
 "The appropriation of Bedford. The social organisation of artisanal creativity in Sudan" (BE 2310/4-1), Chair of Anthropology, University of Bayreuth.

Acknowledgments:

I would like to thank the editors of *Roadsides* for the opportunity to present this short video as part of this special issue. I appreciate the innovative multimedia approach of the journal. I particularly thank Agnieszka Joniak-Lüthi, Mason Brown, Galen Murton, Kurt Beck and Rainer Polak for their valuable comments on the essay.

Cite as: Hänsch, Valerie. 2019. "Sudanese Industrial Sound: Sonic Labour in a Truck Workshop." *Roadsides* 2: 44-50. DOI: <https://doi.org/10.26034/roadsides-20190026>.

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Picturing Diversions: The Work/Play of Walking on London Pavements

Jan van Duppen



All photographs:
Jan van Duppen.

Walking in London often involves an involuntary encounter with the message “improving the image of construction” attached to a building-site hoarding. Yet, these hoardings do not only confine the building works and ‘protect’ the public from potential hazards, they also divert the pedestrian’s path. One encounters a work-in-progress site, but work for whom? And who, in turn, has to process this work? This photo essay documents my journeys to work, and comments on the work of navigating the pavement as my walking rhythm was interrupted by roadworks, building works and waste products. It also introduces another sort of diversion, that of the notion of playfulness as one encounters the rich material world of the pavement. What follows is an auto-ethnographic account that presents a critical reading and re-reading of the pavement – an infrastructure that was introduced in London in the eighteenth century, and that signifies urban modernity and with it the constitution of “new versions of the public sphere” (Ogborn 2000: 176).



Throughout this paper, the text is interrupted by images, providing avenues of visual diversion for the reader; this interplay between text and image aims to reflect the contingencies and syncopation in the rhythms of my walks. I consider each individual image here as a ‘fragment’ of the city, and as a collection they help me to understand the city as a whole. This series is the product of looking down and around whilst I was walking in Camden, as I played the character of the police investigator who is “taking pictures of a crime scene from every angle” (Pile 2005: 9). It dissects the everyday infrastructures that were collapsing under my feet and depicts scenes so visible that they are rendered invisible by urban dwellers – as they try to cope with the affective intensities of urban life. The fragments of the city that I have been collecting are bound up with my everyday routine of commuting by foot to the British Library in London. This is a walk of about thirty to forty minutes, which cuts through the neighbourhood of Camden, along the canal and past large building sites.

Contradictory to the idea of ‘derive’, my walking practices were thus purposeful. I had to walk this route, and my perceptions and feelings of this trajectory are inflected by the writing-up period of my PhD thesis. Rather than an aimless wander, this was an instrumental endeavour. Yet, by making photos, I made the trip more enjoyable. It became a diversion from the mundane commute, forming a temporary escape from the ordeal of writing, as photography felt to me a more immediate, perhaps



initially less complicated, creative and productive process. Whilst I was walking, I was moving through a contradictory time-space in between labour and leisure, the slow rhythm of walking allowing for the “mental digestion” (van Duppen & Spierings 2013: 242) of an unproductive writing day, whereas I also found myself formulating new ideas and arguments for chapters to be written, thereby turning the commute into a productive time-space. By taking one or two photos along the way, I played with this contradictory space – as the act of taking a photograph enacted a pause in the commute, I was temporarily stepping out of the logic of heading straight home or



rushing into work, and instead engaged playfully with my immediate surroundings. The paradox is not lost on me, that by publishing this photo essay, I am turning these moments of diversion of the working day into products for my academic work.

These images are shot on disposable cameras. My use of this particular technology foregrounds the 'speed and flow' of walking and it helps me to comment on London's urban conditions. The disposable camera is a cheap, mobile, single-use machine with a 35mm film. In an era of smartphones and digital photography, I suggest that the disposable camera encourages a slowing down of the attention of the walker, as the limited nature of the film role disciplines the user not to endlessly take pictures.



Furthermore, this technology alludes to the figure of the amateur – the only affordance of this machine is choosing a frame by positioning one's body in relation to the subject, and then to push the release button. Point. And ... shoot. Thus, instead of fiddling with aperture and shutter speed to achieve the perfect image, the disposable camera produces a less mediated, more instant imagery. I suggest then that this technology is both fast in its operation and slow as it disciplines the photographer's attention, and requires a longer process of film development and print. Moreover, this photographic process allows for a temporary break from the digital work performed on online social media platforms, in which the free provision of user-made images is a key condition.



What is more, the disposable camera as a cultural object is most commonly associated with tourists documenting their trips, a technology used to divert from the everyday. In the *Situationist International* tradition of *detournement*, I have deployed this commodity towards another end. Instead of taking photos of beach holidays, I put the pavement, the everyday, into the frame. Thus, whilst maintaining the idea of being on a journey, the disposable camera records mundane scenes encountered on a daily commute, and thereby reconfigures our view of the street. In terms of circulation, movement and waste, the disposable camera seems also especially apt for capturing disposed objects on the pavement. My choice of technology could thus be read as a poetic gesture towards the temporalities of objects in a capitalist society – an object soon to be disposed records already disposed objects.

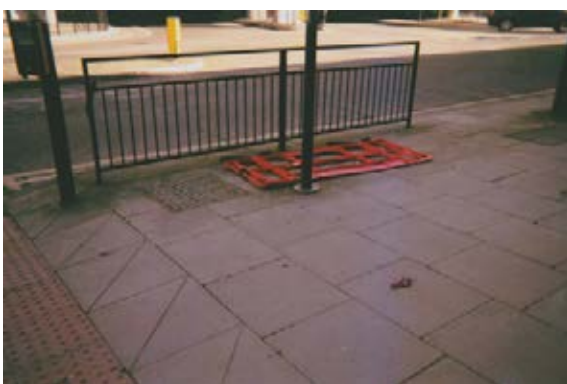
This set of images records multiple moments of diversion on my commute in the sense of being involuntary diverted from one's path due to building works, road works, broken pavement slabs and curbs or disposed trash. My walking rhythm was continuously interrupted by hoardings and fences, traffic signs and disposed mattresses. It sometimes felt as if I had landed involuntarily in a videogame in which one has to avoid all kinds of traps, jump through hoops and try not to trip over the banana peel. Notwithstanding London's infrastructures' privileging of car traffic, I found that it requires skill and considerable effort to navigate one's way around these hurdles.



Yet, I found that these encounters with the materialities of the pavement can also be captivating and ludic, a temporary distraction from the everyday. Whilst doing the work of navigating, there is also joy to be had in the reading of these fantastical scenes along the way. I want to recall here Walter Benjamin's observation that children

feel irresistibly drawn to the detritus created by building, gardening, house-work, tailoring, or carpentry. In waste products they recognize the face that the material world turns to them and them alone. In putting such products to use they do not so much replicate the works of grown-ups as take materials of very different kinds and, through what they make with them in play, place them in new and very surprising relations to one another.

Benjamin (2009: 55)



This sense of being drawn to the waste products of the worlds of work is, I think, reflected in this photo essay. Furthermore, through photography I have isolated material constellations from the pavement and placed them into new and surprising relations to each other. Following this immersion in the material world, these images highlight the proliferation of traffic cones and signs, 'chapter 8 barriers' and Heras fencing on the pavement. Often, these modular objects warn and protect pedestrians from road and building works, but sometimes they actually seem to be 'lost' in space as it is no longer clear what their purpose is – signifiers set lose. At some point in the past, these modular objects were instrumental to the regulation and discipline of the flows of traffic; however, they frequently appear to have temporarily departed from their function. They do not signify anything in particular. It is as if the traffic cone is on a lunch break and the 'chapter 8 barrier' is having a little lie down, these modular objects spending their leisure time on the pavement. This alludes to the idea that "the accidental and continual juxtaposition of apparently unconnected things" on the pavement "produces a density of potential interpretation" (Rendell 1999: 107).

By picturing the multiple forms of diversions – from the laborious to the playful – I try to engage with ongoing debates on the social life of infrastructure in three ways. First, I attempt to partake in the project of developing "infrastructural literacies" to generate new urban imaginations (Mattern 2013) by interweaving a critical subjectivity as part of an everyday routine. Second, I suggest that by foregrounding the pavement's messiness these images appear to interrupt the glamorous and smooth urban futures depicted in computer-generated images on building site hoardings (Rose et al. 2016) and form a contrast to urban photography that strives to capture the "technical sublime" of large-scale infrastructural landscapes (Gandy 2011). Third, I attempt with this auto-ethnographic account to evoke the lived experience of inhabiting the splintered urban and highlight how infrastructures can deepen social inequalities by producing different affective intensities and speeds of travel for different people (Graham and Marvin 2001). These photos were made within a UK urban context which is shaped by the ongoing privatisation of public spaces (Minton 2009) and severely reduced local authority budgets for pavement maintenance and waste collection due to a decade of austerity politics (Crewe 2016). Through picturing diversions, I try to recall the sense of "the pavement as a space of public participation in the life of the city" and stress the importance of public ownership and maintenance of this mundane infrastructure, before we fall through the cracks that "are appearing beneath our feet" (Ogborn 2000: 177).



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Acknowledgement:

This paper is informed by multiple walks and conversations with Tijana Stevanović, and it has been presented in earlier drafts at the workshop "Work Processing – A Forum for the Sharing of Live Practice" hosted at the Chisenhale Dance Space and supported by TECHNE, London, 2017, and at the "RC21 Conference 2017: Rethinking Global Urban Justice", University of Leeds, Leeds, 2017.

Cite as: van Duppen, Jan. 2019. "Picturing Diversions: The Work/Play of Walking on London Pavements." *Roadsides* 2: 51-60. DOI: <https://doi.org/10.26034/roadsides-20190027>.

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Ora et Labora: Buddhist Nuns as Road Builders in Zanskar

Marta Normington

Building roads can metaphorically and practically mean constructing new ways for oneself, opening new possibilities and proactively inviting change. It is laying the ground for future access, potential new connectivities, joining up remote settlements on the trail forgotten by administration. It is also a symbol of human resilience, of creating a passage through inhospitable natural terrain. The difficult environment also symbolically reflects karmic hardships in Buddhist soteriological context, and the building of a road - one's resourcefulness and skilfulness of means in carving a spiritual path amidst difficulties and drawbacks. In this sense the high mountain road and the difficult life path of a female Buddhist renunciant reflect each other, highlighting outer and inner labour of transforming obstacles into support for one's spiritual practice.

One spring day, after finishing a class teaching younger nuns some basic English vocabulary, I noticed one of my older students, eighteen-year-old Dorje Palmo, herding donkeys with bags full of sand towards the rarely used path on the other side of the nunnery. As we chatted, I followed her and, to my surprise, I discovered that stones and sand were being carried to that rocky and desolate patch of land, and

the rough ground was being compacted – the nuns were building a road. Immediately compelled to witness and document this activity, I accompanied my nun friends with an old and battered analogue camera, a roll of locally bought black-and-white film and a shovel. The images presented here were thus taken over the course of one spring week in 2008 (during my longer stay at the Khachot Drubling nunnery in Karsha), when quite unexpectedly I found myself involved in building the road to the nunnery, together with the nuns.

Nuns from Karsha nunnery working at the road construction site.

Photo: Marta Normington



Self-reliance in highland desert

Zaskar is a remote, high-altitude, moon surface-like desert nestled between the Greater Himalayan range and the Karakoram, in the north-western Indian state of Jammu and Kashmir. It comprises sparsely populated villages and impressive monasteries with a thriving Tibetan Buddhist culture. Due to its challenging geographical location, the valley remains landlocked for a major part of the year, as heavy snowfall on the high mountain passes blocks the overland road access into the region. Over the centuries, inhabitants of the area learned that in this severe natural environment one needs to rely on one's own hard work, unwavering faith and harmonious relations with neighbours in order to survive and be self-sufficient.



*A view from Karsha
nunnery onto Zaskar
and the Himalayan range,
with a nun's handmade
cell in the foreground.*
Photo: Marta Normington

The road, its symbolic location and the connectivities of renunciation and labour

The road, which was partly built by the nuns, is the northern mountain approach to Karsha nunnery from the villages of Skyagam and Tungri. It is a loose scree trail leading to the nunnery, as well as to an ancient Avalokitesvara temple (known locally as 'Chuchikjall') and to the traditional doctor's (*amchi*) house. It was also the only route connecting the nunnery directly to motorable transport. The alternative trail is a narrow and steep mountain path, accessible only by foot, down the hill on which the nunnery is perched. This takes about twenty minutes and a fair bit of physical effort to climb, especially when carrying heavy supplies. However, this narrow path, at the dizzying height of 3,670m above sea level, was (in 2008) the main access route to the nunnery from Karsha village below, and further on to Padum, the largest village and the administrative centre of the Zaskar region.

The location of the nunnery and the roads leading to it seem at the same time physical and symbolic. If one reads architecture and spatial positioning in the built environment as a manifesto of the forces guiding the social lives and aspirations of their constructors and inhabitants, we may note a clear separation between the three distinct worlds of the valley: nunnery, monastery and village. By looking at the interstitial spaces between them – the “non-places” (Augé 1992) of roads and paths – we can learn about connectivities and distances, simultaneously joining and dividing them. Roads and paths serve as connectors of places and as joiners of the gravity centres of different activities. They are spaces of movement and multidirectional flows. Just like frontiers in Michel de Certeau's analysis, they can serve as “a narrative symbol of exchanges and encounters” (de Certeau 1988: 127).



Location of the nunnery above the village of Karsha; the small settlement higher up on the left.

Photo: Marta Normington

The separation between the earthly, mundane goings on of the village and the sacrum of religious life at the nunnery is reflected in the latter's location high above the village and its worldly affairs. And yet, nuns travel continuously on the path between these separated yet intertwined realities, sometimes even a few times a day, running errands and accomplishing tasks for the benefit of both: the monastery-based monks and the village-dwelling families. Instead of being detached, the nuns are ultra-connected and torn between these worlds, serving as links, free labourers and 'dutiful daughters' in all the spatially divided and yet interrelated realities. Their ever-shuttling position reveals highly connected social worlds, with distinct roles and responsibilities attributed to them.

Nun travelling the zigzagging main path between the village and the nunnery.

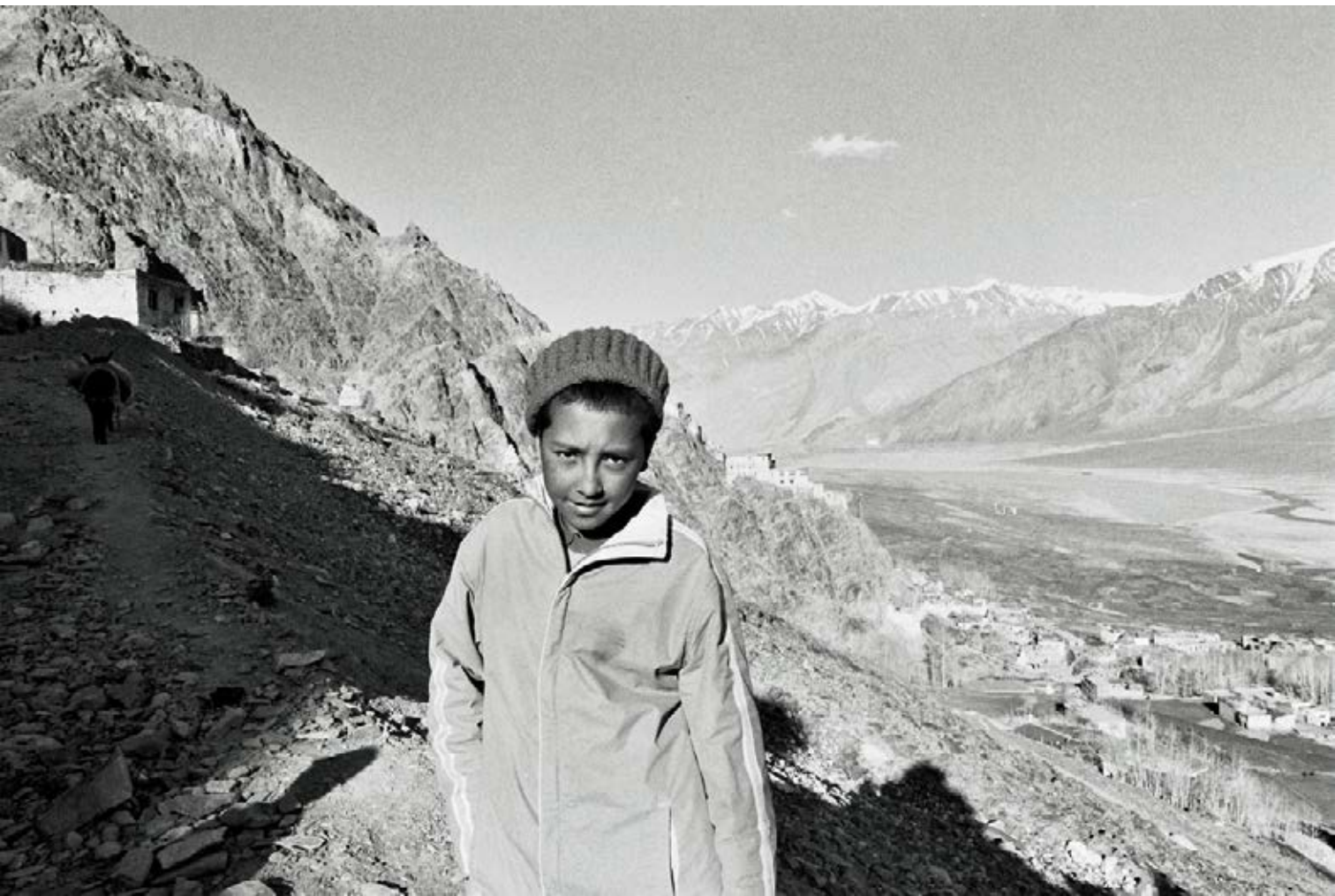
Photo: Marta Normington



The road in this context is a link between renunciation and societal duty, between one's spiritual life and the daily demands of subsistence and earning a living. It connects a place of spiritual, religious and intellectual retreat from the demands of village life, with the realm of mundane, labour intensive activity.

The bumpy road to enlightenment: female Buddhist monastics as labourers

Buddhist nuns of Zanskar are labourers who sustain their position in a difficult natural and social environment through various acts of labour and self-sacrifice. In exchange for the work of their body, they gain a livelihood, freedom to practice Dharma and limited autonomy.

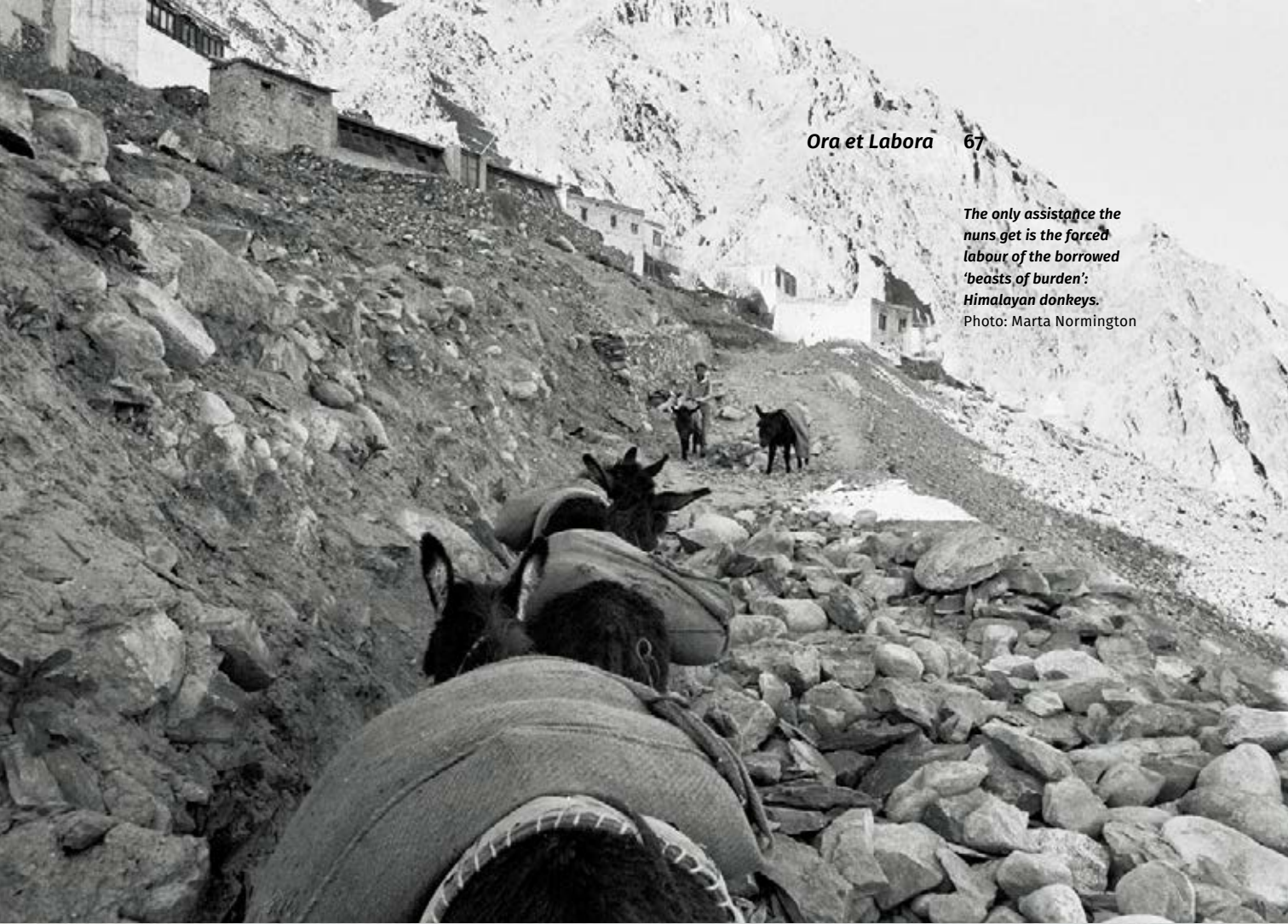


In the climatically and geographically challenging high-altitude world of Zanskar, one still needs to burn dried yak dung for fuel in order to stay warm in winter, and bring water from a partially frozen high mountain stream half an hour's walk away to make a cup of tea. And it is physical stamina, not spiritual-cerebral detachment, that accomplishes these tasks. The nuns' toned, sturdy bodies practice Buddhism in the most down-to-earth and physical way, also while building local infrastructure.

Fifteen-year-old Namdrol poses for the photo while waiting for donkeys to be loaded at the road construction site.

Photo: Marta Normington

The only assistance the nuns get is the forced labour of the borrowed 'beasts of burden': Himalayan donkeys.
Photo: Marta Normington



The work involves lifting heavy bags full of sand. It requires collective effort: harmonious and dedicated teamwork.
Photo: Marta Normington



Namdrol on yet another donkey-herding trip between the nunnery and the road.

Photo: Marta Normington

Improving the infrastructure for future rebirths

According to Buddhist soteriological discourse and the resulting concept of an 'economy of merit' (a hidden spiritual economy system) (Gutschow 2004), material and immaterial worlds, deeds and karma mix, intermingle and are exchanged. In this context, the road being built as a project beneficial to the whole community becomes a metaphorical road to enlightenment, where labour for the common good and any suffering endured in the process are an act of merit-making, symbolically used to purify oneself of negative karma accumulated in past lives. Thus, by laying



In the evening, after another day of work: the road in the process of being built.

Photo: Marta Normington

the rocky foundations for the new access road, the nuns are also symbolically laying the foundations of merit for their future wellbeing in the next life, not only in terms of resources available through access to a motorable road, but also that of a well-founded spiritual path. This path is harsh yet rewarding, providing a speedy way to karmic cleansing and merit. Eventually it leads to the highest Buddhist goal: liberation from the suffering of the samsaric cycle of rebirths, in the form of enlightenment.

Sweet tea by the roadside: personal reflections and notes



The work was backbreaking but, in such good company, it was also fun. We had numerous tea breaks, chatting and playing practical jokes on each other.

There was also no clear goal in near sight: the road had been under construction for the past few years and it was said that it would be ready in the next few years (or so

Thirteen-year-old Chotsok and eighteen-year-old Dorje posing for a photograph with their work donkey.

Photo: Marta Normington

I heard from the nuns). The time of its completion, though, did not seem to matter that much. What counted was the act of building itself – slow but steady contribution.



Ani Lobzang, Ani Angmo and Ani Kundzes take a break to sit down and rest on the road building site.
Photo: Marta Normington



Nuns and the author helping in the process of working on the road.
Photo: one of the nuns of Khachot Drubling nunnery, Karsha, Zanskar

Coming from Europe, with its social bureaucratic system where most work is delegated to 'specialised others', it still puzzles me that there I was - an unskilled labourer and a DIY builder, contributing with the work of my body to the collective effort of creating a path through the challenging natural environment, while learning some difficult lessons. In the process I acquired knowledge about the landscape – its limitations and demands – and about myself and the body I inhabit, as well as about my own society, with its mixed blessings and restrictions.



As I sat down to have a cup of tea in the evening after the day's work, I felt somewhat like how I imagine the builders of the great European cathedrals of the past might have done: a sense of pride in undertaking a task that is greater than oneself. These past engineers, builders and dreamers would rarely live to see their work's completion. But that was no big concern. The task was left to be finished by future generations: the labour and the ideas connected to it were from the outset involved in a grander scheme of things. Just like life itself, it was all a necessary work in progress.

Tea break at the rock collecting area. In the foreground on the left Ani Lobzang Dolma sipping her sweet milky tea.

Photo: Marta Normington

Cite as: Normington, Marta. 2019. "Ora et Labora: Buddhist Nuns as Road Builders in Zanskar." *Roadsides* 2: 61-72. DOI: <https://doi.org/10.26034/roadsides-20190029>.

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Marta travels extensively and slowly, both in Europe and Asia. She is interested in artistic re-interpretation of anthropological methods and practices, as well as experimental documentary forms, the relationship between image and reality, and collaborations between arts and science. She is fascinated by fluidity, transitory states, rhizomatic journeys, and crossing borders - both physical and disciplinary. She creates installations comprising photography, objects, text and video.

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Affective Labor: Afghanistan's Road to China

Tobias Marschall and Till Mostowlansky

We arrive at the road construction camp by foot on a cold afternoon in April 2019. It is snowing and a chill wind blows through the narrow gorge carved by the Wakhan river. Coming from Sarhad-e Broghil, at the eastern end of Afghanistan's road network, it takes us a few hours to make our way up the roughly ten kilometers of gravel road. Here, a dozen men spend months on end blasting and digging a narrow road into the rock along old shepherd tracks. This road – which barely fits two cars at once – is part of a grander narrative and vision of connectivity with China to the east.



© Tobias Marschall



© Tobias Marschall

Paving the Way

As in many countries in the region, the promise of connectivity to China has become a political fetish. In Afghanistan, links to China have flourished at several points in history: from the transmission of Buddhism from India, to the provisioning of Chinese weapons to the mujahedin in the 1980s, to the current influx of Chinese goods. Against this backdrop, Afghan and Chinese politicians have passionately reproduced the trope of the Silk Road to frame economic projects from copper mining to road construction. Paradoxically, the stretch of road covering the sixty-eight kilometers from Sarhad-e Broghil to Baza'i Gonbad, and then possibly across the border with China, has received comparatively little publicity. This arduous and slow ten-year project does not lend itself very well to political marketing and in Afghan politics a decade is an eternity. Thus, while many economic endeavors across the region have become sites of intense emotional investment due to their official inclusion in the Belt and Road Initiative, this particular road has not. Instead, the affective dimensions of Afghanistan's road to China manifest on a much more personal, local and tangible scale. As we approach the end of the road and the makeshift camp of a government subcontractor on this cold spring afternoon, the workers pause to extend warm greetings. Asfand, an excavator driver from Kunduz, comes for a cigarette and a chat, and Farid invites Tobias to join him at the jackhammer.





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Tent sociality

For people in Sarhad-e Broghil and other places in the Wakhan, the road to China does not invoke ideas of progress and wealth. Rather, this is about getting a viable route up to mountain pastures where people seek short-term employment as shepherds. Similarly, for the road construction workers with whom we stay in the camp – whose location moves with the shifting end of the road – the goal is not China. The aim is to finish a day's labor, to be able to sit in the warmth of the tent around a gas heater and share stories about travel and family, to smoke, to pray, to look at images on offline phones, to see eight-month shifts in rarefied, cold air come to an end and to safely return to their homes across north Afghanistan.

As night draws in we join the workers for dinner and later follow Asfand to his tent, which he shares with Afzaar, a mechanic from Kunduz, and Amooz, a young engineer from Faizabad. While a snowstorm blows outside we get lost in conversation, laughter and music. Jansen (2016) sees affect as linked to moments of intensity and a shared sense of history. He thereby builds on Massumi (1996: 91), who locates the source of such intensity in a process in which the body does not simply absorb stimulations, but infolds “contexts,” “volitions” and “cognitions.” Sitting around the gas heater, listening to Dari pop songs, we are all haunted by such intensity. While cigarette smoke fills the tent, Afzaar, Asfand and Amooz tell us about loneliness and their distant families, about Facebook timelines frozen in time and about how they are constructing this road because they wish to live “peacefully” (*ārām*) in their country and home, and because this road might achieve both.

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Expeditions Along the Precipice: Circulations that construct India's Border Roads

Anu Sabhlok and Noor Sharma

"Infrastructures comprise the architecture of circulations." (Larkin 2013: 328)

And circulations comprise the architecture of infrastructures. Roads as infrastructural assemblages are constituted by geological, technological and human circulations. These circulations blur the perceived boundaries between that which is geological, atmospheric and/or social. Sedimented mountains are blasted open using explosives, resulting in a landscape strewn with boulders, rivers dumped with debris and an ambient dust that creates haze. Human hands are called upon to break up boulders into smaller rocks that will form the base of the roads. Road construction labourers inhale these geological remnants suspended in the air and return home to the plains carrying with them a bit of the mountain and a bit of the road.

Tracing the travels of migrant road construction labourers stretches the infrastructural assemblage to distant villages and opens up the horizon of circulations in a much broader way. Anu has been following these roads for the past six years and accompanying road construction labourers in their circuitous journeys. A brief entry from the field diary below illustrates the embodied labour of road construction.



"Do you know how to split this rock with the hammer and chisel?" asked Mohammad, handing me a small wooden-handled hammer with an indecipherable smile on his face.

"Yes, I think. It looks easy" I answered, looking around and seeing everyone else bashing away with their hammers, breaking larger pieces of stone into smaller chunks as they conversed with each other. They seemed to be doing it with such ease – arms rising up, a short glance at the rock and the hammer coming down on the chisel. Again, the arms rise up...

I held the hammer in my hand and had a go at this task, applying all the force I could muster... and the stone broke in one try. I almost looked up at Mohammad for him to acknowledge my handiwork, when a splinter came rushing up and barely missed my eye. It took me about a minute to recover from the sharp blow on my cheek and then I looked up with watery eyes. Mohammad smiled that same smile again, took the hammer from me and showed me how to hold the chisel with a slant, hitting at an angle so as to avoid the splinters coming into my eye. I continued to practice, sometimes missing my fingers (and the chisel) by a few millimetres and at other times managing to break the rock. We were all squatting on the rocks that we were breaking. It was certainly not the most comfortable position to sit in. If I tried to lower myself down onto the ground below, I would have to squat back again almost immediately. The stones were too sharp. All around me, the sounds of hammers hitting the rocks created a kind of rhythm and, after a time, my strikes too became part of that beat (Fieldwork diary, 2015).



The mate asked me to come along with him this year for work on the road in Himachal. It would be good if I go as I need to earn money to buy time on the water pump so I can irrigate my farm. I have everything here – fresh air, small farm, rice but no cash. If I save enough, I can also buy a mobile phone (Rajinder Kuma ,19 years old).

Each year snow destroys the roads in the upper Himalayas and more than 100,000 labourers, including men from central and eastern India and families from Nepal, travel to construct and repair these mountain roads and bridges. The seasonal journeys undertaken by those employed as road labour make all other circulations on these Himalayan roads possible.

Dumka district in Jharkhand has a long history of migration for road work. In the 1960s, when the Border Road Organization (BRO) was formed with the mandate to secure India's borders, Indian military officials scouted the poorer regions of the country for labour. The story goes that these uniformed officials would beat the

drums at town crossings in Dumka, calling out to young, able-bodied men to join in this endeavour of securing the border. In the beginning the Imported Casual Paid Labour, as the BRO called them, were given climate-appropriate clothing and the travel passes. At that time, Dumka was a district in the state of Bihar. However, as soon as Dumka became part of the newly carved out tribal state of Jharkhand there was political resistance to 'allowing' labour to be recruited for work outside the state and the army stopped entering the state to recruit.



The train journey was difficult. We did not eat anything even though I had carried food from home. The smell in the train repulsed me and I did not feel like opening my potli and eating. It was a relief to stop at Jammu and see a vast open landscape with mountains. My first time here (Bhola, 21 years old).

Yet, even in the absence of direct recruitment and the perks associated with it, the circulations of labour continued in their well-established routines. A system of labour gangs led by a mate is in place, where the mate receives a letter from the BRO around April each year asking him to report to a particular road construction company with a specified number of men (usually forty per gang) by mid-May. The mate then starts his rounds of neighbouring villages, convincing young men to come along. Stories of snow-clad mountains, geological wonders and apple trees along the way lure many. Tales of the border, of the momentum of Chinese road-building activity and of India's need to secure its territory circulate in Dumka's rice fields. As men and women harvest rice in paddy fields, these stories frame the narratives that set in motion the circular passages to the upper Himalayas.

Notions of masculinity and brotherhood in the gangs associated with this trip to the borderlands make it very difficult for women to be part of the journey. While women stay back home and take care of the children, elderly, farms and the cattle, men set off in crowded trains with their labour gangs, a small bundle of clothes and food, along with their imaginations, aspirations and fears. The men's contracts end in November and they will be home for the rice harvest in their fields. Trains are often so crowded in May that many have to stand for most of the three-day journey to Jammu or Ambala in the north. Making your way to the bathroom in these crowded trains becomes a process of embodied negotiations – another reason often cited for why this trip is not meant for women. Narratives of labourers' travels to the upper Himalayas are replete with highly corporeal descriptions of bodily stench, anxiety and nausea.

On reaching BRO recruitment camps, where thousands have gathered to be enlisted as labour for the next six months, men are checked for identity documentation, able-bodiedness and endurance. Those that are recruited climb onto military trucks to be transported to the various road construction sites along the Himalayan highways. There is a labour tent located every two miles or so along the highway under construction. Their abodes for the next few months consist of tarpaulin tents or shelters constructed using tin sheets flattened from tar barrels using road rollers.

Each labour gang adapts according to the landscape around them – those at slightly lower altitudes are able to source firewood and build a fire outside to cook. Those in the high-altitude terrains above the treeline cook using kerosene stoves, usually inside the tents. Their pressure cookers, carried from home, become prized possessions and here in the upper Himalayas they often rely on canned foods. In the evening they can be seen reminiscing about fresh produce from fields in Jharkhand. The mate facilitates conversations with those back home by letting the men call from his cell phone for a charge. Financial transactions in general are often routed through the mate, who makes cash available to family members in Jharkhand in case of need.

Of course, he will ask for repayment at an exorbitant interest rate. Saturday night drinking sessions are accompanied by tales of heroism, masculinity and an occasional opportunity to watch a Bollywood movie. Once the road is ready, it appears as an inert and lifeless object making its way through the mountains – all these stories are buried deep inside its many layers. They do, however, surface in Jharkhand far away from the Indo-Tibetan border roads, where on their return the labouring men tell tales of dangerous lands, heroic journeys and the urgency of securing the nation against China. Geopolitical stories and geological materials mix here in unpredictable ways.



At high altitudes, cooking takes double the amount of time it does in Jharkhand. One of us is deputed to cook while the rest (about thirty-five people) work on the road. We are all together in this tent. It is crowded but fun. All of us men happy to be away from nagging in the household. I feel like a hero living here in these dangerous mountains (Vilayati, 27 years old).



After the blasting, larger rocks need to be carried and eventually broken up into smaller pieces. We live on the road, work on the road and breathe on the road. The road comes back home with us in our memories but also inside our bodies (Sushil, 23 years old).

Roads appear as smooth and shiny ribbons making their way among the high mountains. But appearances are deceptive and infrastructures are never simply the “frictionless surfaces of modernity” (Tsing 2005) that they aspire to become. Roads as infrastructures accumulate histories and sedimented stories of geological pasts, labouring journeys and technopolitical ideologies. Many of the labourers who have worked with the BRO will plan on returning the next year, bringing with them a whole new set of recruits. These circulations, it appears, endure the test of time and politics.

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Cite as: Sabhlok, Anu and Noor Sharma. 2019. "Expeditions Along the Precipice: Circulations that construct India's Border Roads." *Roadsides* 2: 88-95. DOI: <https://doi.org-10.26034/roadsides-20190024>.

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Labouring for Connectivity in Arunachal Pradesh

Edward Boyle and Mirza Zulfiqur Rahman

"The sun kisses India first in Arunachal Pradesh. It is our land of the rising sun ... It is my sincere hope that like the sun, Arunachal Pradesh will also rise from the east as a new star and become one of the best regions of our country."

Manmohan Singh, Itanagar, 31 January 2008

On a 2008 visit to Itanagar, provincial capital of Arunachal Pradesh in Northeast India, then Prime Minister Manmohan Singh announced a series of development projects for the region, including a 1,840km Trans-Arunachal Highway (TAH) running continuously between the north-western and eastern ends of the Himalayan state. The TAH was an integrative measure that would connect twelve of the state's then sixteen district headquarters, "provide improved connectivity to the state capital and important locations of population concentration and economic activities," and connect the majority of the province to the national highway network.¹ Yet although 'connectivity' has since become the slogan for development in Northeast India,

construction of TAH, originally anticipated to conclude in 2013–14, has continued to slip, to 2015–16, 2018, 2020, 2021 and on. Hooking infrastructure up to the national grid has been a laborious process in Northeast India.



A trip along a stretch of the TAH, designated National Highway 13 in 2011, between Tezu and Roing in eastern Arunachal Pradesh in March 2016 offered us seeming proof of former Prime Minister Singh's aspirations, as our car rolled smoothly along possibly the best-tarmacked stretch of road in the northeast, if not the entire country. Questions regarding the quality of the road, or evidence for its use, were pushed to one side by the sheer relief of driving along a smooth surface, which remains a rare pleasure in the region.

*Unconnected
infrastructure abounds in
India's Land of the Rising
Sun.*

Photo: Mirza Zulfiqur
Rahman.



*A pickled road, preserved
for future connectivity.*
Photo: Edward Boyle.

Yet this smoothness, and the slow reclamation of the road by the jungle, stemmed from a failure to connect. A bridge linking the two completed sections of highway across a river remained unfinished, rendering these perfect strips of tarmac roads to nowhere. While road construction had been concluded four years earlier, five years of labour had not sufficed to bridge the 430m-odd gap between two completed stretches of national highway, resulting in this infrastructure being ‘pickled’ for future use (Rahman 2019).



*Please Mind the
(connectivity) Gap.*
Photo: Mirza Zulfiqur
Rahman.

Construction of both bridge and highway were the responsibility of the Border Roads Organization (BRO), the military body charged with maintenance of India's operational road infrastructure in the nation's border areas. BRO's involvement shows that the private enterprise of a liberalized and globalized Indian economy still is unable to see the benefits of investing in such remote regions, and dreams of developmental take-off remain dependent upon central-state largesse.

'This is highway, not runway' – BRO labour hard at their signage.
Photo: Mirza Zulfiqur Rahman.



The ongoing construction project provided an opportunity to examine the concrete skeleton that would support this tarmacked highway to future prosperity. From the riverbed at the base of the pillars, the disconnect between the new rising star of Arunachal Pradesh and the mundane realities underpinning it became apparent through observing the circulation of bodies labouring to build connectivity.

*Casual manual labour
on top of the bridge,
underused machinery at
its base.*

Photo: Edward Boyle.



At odds with BRO's self-presentation as a modern, military organization, its most visible manifestation at the site was not in any ordered, rational masculinity, but rather the gloriously coloured clothing of its female labourers as they swirled around the upper reaches of this incomplete bridge.



In contrast to BRO's engineers and deputed military personnel, this workforce is 'casual'. Paragraph 503 of the Border Road Regulations notes that they are not "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." Precarious employment, frequently associated with the neoliberal capitalist economy, is here mandated by a statist military organization of almost sixty years' standing.

*Bodies in circulation:
female labourers atop the
bridge.*

Photo: Edward Boyle.

This reliance on 'casual' labour is clearly a factor in delays to the bridge. With employment available until the bridge's completion, there is an obvious incentive for workers to regulate their labour accordingly. This is clear from experiences recounted to us elsewhere along this highway, where groups of female workers build roads high in the mountains, labouring their days away crushing endless stones by hand – all to provide a gravel base for these asphalt ribbons of connectivity. They then spend their nights rolling the resultant gravel off cliffs, in order to drag out construction for as long as possible.

The colloquial term to describe such ‘casual’ work across Northeast India is *faltu* labour. *Faltu* in Hindi literally means ‘useless’, and reflects the ability of such workers to deploy “weapons of the weak,” a full gamut of tactics that include “foot-dragging, evasion, false compliance, pilfering, feigned ignorance, slander and sabotage” (Scott 1985: 30). BRO, or at least its local agents, frequently chooses to ignore such infractions in order to retain labour willing to work in inhospitable and adverse climatic conditions.

This adverse climate is also significant. The incessant rains of the monsoon months put the brakes on work, during which the labour force has to look for alternative employment, doing chores in nearby villages, serving as farmhands or collecting firewood from the forests. At another construction site near our bridge, we found labourers engrossed in a game of cards by the roadside. With road access washed away, there was no materials delivered for weeks on end, and the workers had little to do except while away their time in drinking, smoking and gambling.

Gaming the system.
Photo: Mirza Zulfiqur
Rahman.



Paradoxically, workers building infrastructure that aims to facilitate the continuous, unimpeded flows associated with a modern neoliberal economy clearly experience the “characteristic irregularity of labour patterns before the coming of large-scale machine-powered industry” (Thompson 1967: 71). When you add to such tactical or enforced stoppages contractor negligence, the absence of oversight, and corruption, the result is a perennial construction mode that builds nothing very fast.



While such labour policies would appear to hinder efforts at developing connectivity, the labour force's composition suggests its triumph. Although in other parts of Arunachal Pradesh there is greater resort to local workers, through MGNREGA, other state bodies or private companies, here no locals work on the bridge, as they have both farmland and government jobs to tend to. The "casual labour" is largely Nepalis, Biharis and other economically marginalized groups from North India, in contravention to BRO's regulations, which mandates they be recruited locally. Groups of labourers live on site, in a series of poorly constructed huts in the riverbed, or in nearby villages. For instance, one Nepali family from Sikkim, the Newars, had been at the bridge since construction began. Three of the family were employed by BRO, while three generations of the family resided as part of a larger community of Nepali migrant workers occupying a dilapidated Public Works Department colony quarter at the edge of Koronu village.

*Working from home
– stones moving up
the human chain,
residential quarters in the
background.*

Photo: Edward Boyle.



Living on the job.
Photo: Mirza Zulfiqur Rahman.

Migrant labour constructing roads has spread across Arunachal Pradesh since 2008, when India finally moved away from its earlier scorched-earth strategy predicated upon the fear of Chinese troops rolling down the Eastern Himalayas again (Verghese 2012). Connectivity is considered crucial to facilitate both the development and defence of the region (Gohain 2019), and thus tie Arunachal Pradesh to the national body of India. The construction of such connectivity is made possible by the state's ability to draw upon a migrant worker pool to labour on projects that the province's indigenous population disdains. Their presence represents the Indian state's development of a political and social infrastructure through which capital can be diverted to new frontiers and ultimately "fixed" in place (Harvey 2006: 398–431). The concrete outcomes of such investment that will materialize the Government of India's aspirations for Arunachal Pradesh to become one of the 'best' regions in the country.



Commemorating competence?
Photo: Mirza Zulfiqur Rahman.

The Dikko Bridge ultimately took seven years and nine months to build, as recorded by an obtrusive and aesthetically discordant signboard marking the structure's completion. The Newars confessed that they had been content with the slow pace of work, as it had allowed them to stay on longer in the village, where their children were able to go to school. They were unsure of their future, but expected that BRO would assign them to other projects nearby. The relation of casual labour with its contractors is not reducible solely to exploitation and resistance, but with construction concluded, the social and material infrastructure of the labour force is rapidly dismantled.



Ruins at the bridge's base, temple left standing for now.
Photo: Mirza Zulfiqur Rahman.

Infrastructure undoubtedly provides a developmental rationale for the extension of the Indian state's institutional power and control (Ferguson 1994), but the resultant bridges and tarmac reflect not only state design but an ongoing process of negotiation that works, haltingly and unevenly, to construct Arunachal Pradesh's connections with the rest of the country. The bridge's completion suggests the state is able to overcome both the "contested terrain" of labour (Thompson 2016: 107) and the natural terrain over which the bridge passes – and certainly those gliding over the bridge in the future will be able to ignore such treacherous topography entirely.

The smoothness of connectivity.

Photo: Mirza Zulfiqur Rahman.



Yet the smooth asphalt surface of the bridge is also suggestive of another connectivity gap, as residents of the region were and are bypassed by these monuments to national development (Rahman 2014). The inherent limits to a connectivity developed through large-scale infrastructure projects is reflected in BRO's commemoration of its own efforts at the head of the bridge. In addition to excising local circumstances, the signboard erases those individuals who actually laboured to build this connectivity. Our last image is hardly sufficient to redress the balance, but is all we can offer here.



Some of BRO's bridge builders.

Photo: Edward Boyle.

Notes:

¹ India is technically a federal republic made up of twenty-eight states. However, to avoid confusion with the federal state of India, we refer to Arunachal Pradesh as a province in this piece.

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Acknowledgements:

The authors wish to express their gratitude to Kyushu University's Short-term International Research Exchange Program, which funded the 2016 trip to Northeast India that began our collaboration. The piece has been immeasurably strengthened by the generous comments of Swargajyoti Gohain and Galen Murton, which highlighted plenty of productive labour that could be done to improve its arguments, both here and in the future. Any flaws remain the responsibility of the authors, of course. More concretely, we would like to express our sincere thanks to those constructing the bridge, for sharing their stories and acceding to our photography with such grace and good humour.

Cite as: Boyle, Edward and Mirza Zulfiqur Rahman. 2019. "Labouring for Connectivity in Arunachal Pradesh." *Roadsides* 2: 96-109. DOI: <https://doi.org/10.26034/roadsides-201900211>.

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