When Roads Cannot Be Used
The Use of Trained Elephants for Emergency Logistics, Off-Road Conveyance, and Political Revolt in South and Southeast Asia

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Abstract
This article is about the use of trained Asian elephants (*Elephas maximus*) for transportation, in particular across muddy or flooded terrain, clandestine off-road transportation, and during guerrilla operations or political revolts. In a sense, these are all in fact the same transport task: the terrestrial conveyance of people and supplies when, due to weather or politics or both, roads cannot be used. While much recent work from fields such as anthropology, geography, history, and conservation biology discusses the unique relationship between humans and trained elephants, the unique human mobilities opened up by elephant-based transportation has been for the most part overlooked as a research topic. Looking at both historical and recent (post–World War II) examples of elephant-based transportation throughout South and Southeast Asia, I suggest here that this mode of transportation has been especially associated with epistemologically less visible processes occurring outside of state-recognized, formal institutions.

Keywords
2004 Indian Ocean tsunami, Asian elephants, Kachin conflict, mahouts, Sepoy Mutiny, smuggling, upland Southeast Asia

Introduction
Since World War II, transportation by way of trained Asian elephant (*Elephas maximus*) has been the only mode of transport with which the world’s wealthiest countries have had virtually no local experience.¹ My aim, in this article, is to approach this much overlooked, and imperiled, method of conveyance by focusing on those transport tasks for which—so recent human experience
suggests—the mode seems to be intrinsically and uniquely useful. As I will show, these tasks consist of transportation across muddy or flooded terrain; clandestine transportation; and transportation during guerrilla operations or political revolts. In a sense, these are all in fact the same transport task: the terrestrial conveyance of people and supplies when, due to weather or politics or both, roads cannot be used.

Much recent academic work, especially in the posthumanist or “multispecies” conceptual-theoretical mold, has identified human-elephant relations, and in particular the unique relationship between trained Asian elephants and their human drivers and trainers (referred to in Hindi and English as *mahouts* and in Burmese as *oozies*), as a uniquely useful and revealing area of inquiry. Bringing perspectives from disciplines like anthropology, history, geography, and conservation biology, researchers in this interdisciplinary research area—“ethno-elephantology,” as some have called it—have gravitated toward such research topics as the comparable cognitive abilities and emotional intelligences of humans and elephants; the historical geography of conflicts between elephants and farmers; the history and politics of the ivory trade; elephants and the tourism trade in South Asia and southern Africa; and the livelihoods and everyday social and economic experiences of mahouts.

The breadth of research emerging in this interdisciplinary area of inquiry has been impressive. But, it is striking that nobody has yet addressed the unique *spatial mobilities* associated with the elephant-mahout partnership, or yet attempted to delineate elephant-based human transport as a significant topic in its own right. I believe this gap in the recent research literature on the elephant-mahout relationship stems from the fact that, up until now, relevant researchers have approached the subject matter through the intermediary of specific formal institutions dedicated to elephant domestication and conservation: for instance, elephant camps geared toward tourists, forestry agencies dedicated to minimizing elephant-farmer conflicts (and in some cases to training elephants for logging), religious institutions that train elephants for festivals and ceremonies, and so on. Some researchers have recognized this epistemological limitation and called for more research on indigenous mahout practices in ethnic minority regions throughout South and Southeast Asia, where mahout-elephant relations are less likely to be formalized and institutionalized by state-run or state-recognized organizations. As I will illustrate in this article, research into the uses of elephants for human *transportation* presents another promising strategy for understanding those human-elephant practices that have tended to frustrate and rebuff efforts at formalization or institutionalization. Especially during the period from World War II onward, elephant-based transportation has tended to take place *outside* of the kinds of elephant management institutions that have mostly drawn academic researchers’ attention. Moreover, this is the case precisely because,
from a transportative standpoint, elephants are most useful as a means of mobility in circumstances of institutional and infrastructural breakdown: that is, when, due to weather conditions or political upheavals or both, the regular, “formal” road system cannot be used.

In the sections that follow, I will point to several important, illustrative examples of “off-road” or “off-grid” elephant-based transportation. In the first section, I discuss elephant-based transportation through landscapes where roads have become flooded or washed away, looking at both historical and more recent experiences in India, Burma (Myanmar), Thailand, and Indonesia. I then discuss clandestine elephant-based transportation in the context of Southeast Asian off-road smuggling networks in the late twentieth century, as well as illicit mobility within the Burmese teak logging industry in the early twenty-first century. Next, I shift my attention to elephants and politically subversive “guerrilla” mobilities, discussing rebel mahout mobilities in north-central India during the middle of the nineteenth century and comparable guerrilla transportation via elephant in the Southeast Asian uplands during the late twentieth century.

In all of these sections, most of my examples are drawn from written sources by authors whose main concern is not with elephant-based transportation per se, but who usefully mention and describe this type of mobility in sufficient detail to inform this study. Such sources range in type from wartime memoirs to colonial records to firsthand journalistic accounts to works of scholarly research. My argument here is rooted primarily in a synthesis of these written materials. Secondarily, personal observations at an elephant logging village in Burma in 2013 contribute to the argument as well.

Readers may note here that I have avoided organizing the overall discussion chronologically or geographically. Instead, I have organized the discussion around different off-road transport niches associated with Asian elephants, moving the discussion from less explicitly subversive niches (flood-time transport) to more explicitly subversive niches (guerrilla, or rebel, transport). This argumentative organization has the obvious drawback of forcing readers back and forth in space and time. But it also usefully prioritizes consideration of the subject matter in terms of the transportative use values of trained Asian elephants and presents these use values as politically implicated objects of struggle. For this reason, the final section of the article uses the 1950 memoir Elephant Bill, by James Howard Williams, to examine how such political struggles over elephants as a type of mobility resource can play out. Williams’s memoir highlights the struggle for control over elephant-based human mobilities in the forests of Upper Burma during World War II and portrays this struggle as occurring across two political divides: first, between British and Japanese occupying forces seeking to control mobility in the Burmese uplands; and second, between indigenous Burmese mahout labor and these mahouts’ military or logging industry employers.
Elephant-Based Transportation in Muddy and Flooded Landscapes

The use of elephants to move people and goods across muddy, riparian, and flood-soaked physical zones has a long history in South and Southeast Asia. Due to the monsoon season and pronounced spring thaw from the Himalayas, water levels can be extremely changeable within Indian and Southeast Asian river and estuary systems. Moreover, on plains and uplands alike, torrential monsoon rains can turn the landscape into a kind of “sea” of spongy, blackened soil. Waterways are often too rough or strewn with boulders, sand, and debris to be navigable by boat, and many roads lose the solidity required for wheeled vehicles. Trained work elephants are, within limits, capable of moving through such changeable elements, and so provide access to a wider variety of deluged landscapes than many other transport methods allow. English visitors to the Gulf of Cambay (Khambat) in the seventeenth century noted how sands deposited by monsoon rains and flooding could paralyze the activities of ferries across the bay. A bare road on the mud flats was of limited use as well, since the “ebb and flow of tide at Cambay was exceedingly swift.” Under such conditions, elephants were the only transport method capable of wading across the water—though even the elephant’s mahout had to be cautious not to attempt the great Cambay ford during the peak tidal currents, “when the water flows with greater strength and higher than ordinary” and “it carries and washes away both horse and man, and oftentimes with such force that an elephant cannot withstand the same.” In such flood-soaked or tidal physical zones, the transport elephant’s unique mobility supplies the human mahout with a transformed geographic perspective on the spatial distinction between land and water. Phuket (once known as Junk Ceylon), a landmass off the western coast of Thailand, appears an island to all but the elephant and mahout, for whom it instead appears, in the words of a 1901 geographic account, “really a peninsula as the narrow strait (Pa Prak) is only half a mile across and fordable by elephants at low tide.”

Elephants’ ability to haul passengers and baggage with them across floodable areas has made them instrumental as seasonal flood relief vehicles. One 1969 history of Assam notes how, in the late nineteenth and early twentieth centuries, monsoon rains could cut off tea plantations for months at a time, during which period planters were dependent upon elephant transportation to receive supplies. Similarly, elephants and mahouts were essential in the rescue of several hundred British, Indian, and Burmese evacuees from Mandalay and Rangoon fleeing the advance of the Japanese military in 1942. These evacuees were attempting to make their way from Burma into Assam by way of the Chaukan Pass, but, due to the torrential monsoon rains, they became stranded at a bend of the Dapha River. In June, several daring evacuees crossed the torrents by forming a human chain and then marched to Assam.
Jacob Shell

to inform the authorities there about the plight of the larger group back at the
swollen river. Previous surveys declared that the Dapha would be unnavigable
by watercraft throughout the monsoon, so a military riverboat rescue could
not be organized. An Anglo-Assamese tea planter by the name of Gyles Mack-
rell heard of the evacuees’ predicament and, being well connected among the
Abor (Adi) and Hkamti mahouts of the region, was able to organize an ele-
phant-mounted rescue expedition to the Dapha and bring back the evacuees
on elephant-back. Remarkably, Mackrell was able to take some film footage
of the rescue elephants slowly inching their way across the dangerous rap-
ids of the Dapha, the white-capped currents up to their tusks, their mahouts
mounted above gauging the elephants’ reactions to the elements and steering
the rescue convoy accordingly.

The Asian elephant’s transportative advantages in these sorts of elemental
conditions consist not only of the animal’s great size, which makes it capable
of fording deeper bodies of water than other pack animals (mule, horse, ox,
camel, etc.) can manage, but also the elephant’s complex sensory intelligence
in its feet and its trunk. Elephants can strategically expand and contract their
feet to adjust to the ground consistency on which they trod; this ability makes
them more mobile in muck and quicksand than many far lighter species (or
human-built wheeled vehicles). When crossing rocky or otherwise uneven
or unstable flooded grounds, elephants use their trunks to sense submerged
and treacherous crevices, logs, and slippery boulders. A tea planter of the
Rydak River region of Assam recalls in his 1935 memoirs how “the chang-
ing courses, which prohibited the building of permanent bridges, the deep-
ness of the water and its swiftness ... compelled us to use an elephant as the
only method of negotiating those parts of the district lying between the river
beds.” Crossing the rocky, fast-flowing river courses, the planter’s elephant
would walk with her head at an angle upstream, “moving inch by inch side-
ways ... the root of her trunk cutting across the water like the prow of a ship,”
while feeling “the bottom with her trunk for a secure place to plant her feet.”

The trunk of the Asian elephant, in addition to possessing this sensory
quality, is also extremely powerful and quite capable of hauling large sub-
merged logs out of the way. For this reason, in the nineteenth century ele-
phants were often employed in the construction of log dams. Equally so,
trained elephants are adept at clearing midriver logjams, whether to pre-
vent flooding or to hasten the flow of timber downstream to mills. Within
the Myanmar Timber Enterprise, which owns and harvests Burma’s supply
of teak, when an oozy (mahout) directs his elephant to clear such a jam, the
action is called **aung**. As recently as the 1990s, **aung** was an important compo-
nent of the transport logistics of the Burmese teak industry.

More recently, elephants were used in Banda Aceh, Sumatra, as well as
in Khao Lak, in western Thailand, to help clear debris and bodies from areas
where the Indian Ocean tsunami of December 2004 had left local road net-
works unusable. The main advantages of the Thai and Sumatran “tsunami relief” elephants consisted of their mobility on wet, debris-strewn grounds where wheeled vehicles could not easily go, as well as the intelligence and sensitivity with which the giant animals could use their trunks to hoist objects out of the way. That said, internationally, some elephant conservationists were upset by the practice of employing elephant labor to pick through the rusting and often quite toxic disaster wreckage.

Elephants and Clandestine Mobility

The very qualities that make Asian elephants useful for mobility across flooded and debris-strewn terrain also make them useful as means of off-road transport for smugglers. One journalist at Wang Kha, Burma, a backwoods market camp near the Thai border, observed in 1979 how Karen oozies entering the camp on elephant-back would undo their sarongs to reveal cotton belts containing silver bars. These were then smuggled into Thailand in exchange for manufactured goods in short supply in Burma. Using techniques of off-road mobility and taking advantage of Burma’s closed economy, the Karen smugglers controlled a significant amount of the cross-border trade in the area. Other Burmese materials they carried across the hills included poppies from the Golden Triangle, jade, rubies, and timber.

Teak logging was banned in Thailand in the late 1980s due to the ecological consequences of overlogging in the country’s upland north. In the roadless backcountry of northern Thailand, an illegal, clandestine, “shadow” logging industry persisted. Elephants were essential to these illicit logging activities. In the early 1990s, Tak and Mae Hong Son provinces in the northwest saw a large influx of captive elephants from other provinces and from neighboring countries, especially Burma. Since heavy equipment could not access the valuable teak forests in these regions, and since the illicit loggers could not build logging roads without attracting the attention of the Royal Forest Department and police authorities, the ability of elephants to access, uproot, and haul teak logs comprised the logistical centerpiece of the covert enterprise.

In Burma, elephant-based logging is still widely practiced. From the standpoint of Burmese forestry, the chief advantage of using elephants rather than heavy wheeled machinery is that the latter require a dense grid of trucking roads, perceived by the Burmese Forest Department and the Myanmar Timber Enterprise as damaging to the soil in which the country’s valuable teak is grown. Burma supplies some 80 percent of the world’s internationally traded teakwood—a commodity that is heavily prized for its naturally water-resistant qualities, useful for making boats, buildings, and furniture. Elephant-based logging was a common practice during the time of Burmese kings, but it was the British who, prevailing in each of the three Anglo-Burmese wars during...
the nineteenth century, institutionalized the practice into its modern, bureaucratically legible form. In addition to performing the task of aung (which in 2013 seems to have become rare), the elephants drag logs through the forest by chain, hoist logs into piles using their trunks and tusks, and carry loads of charcoal.

The “nodes” of the Burmese elephant logging system are the three dozen or so elephant logging villages that dot the Burmese teak forests. An exemplary village has five or six dozen elephants. Also inhabiting the typical elephant logging village are several hundred human residents—the logging elephants’ mahouts, the mahouts’ families, usually a few water bearers and shop owners, a teacher, a religious official, and a policeman. The villages change location every five or six years, following the teak harvest, and structures are mostly built of naturally degradable materials, most often bamboo and timber gathered from the surrounding forest.25

Clandestine transport via elephant is sometimes quite observable in such places. Late spring is a period during which the Burmese government prohibits logging mahouts from working their elephants. This is to rest the elephants before the high monsoon months of the summer, when the air is cool and wet, the ground is muddy and soft, and elephants are most in their natural element.26 Burmese Forest Department officials cite the elephants’ well-being as a rationale for the late spring seasonal work prohibition, but it seems likely that another institutional incentive is the maximization of the Myanmar Timber Enterprise’s profits during the major teak harvest of the summer. During the spring months, the logging mahouts have a very different set of needs. Since their homes are made primarily of lightweight materials, the structures need to be reinforced before the coming rainstorms of the summer, or even rebuilt from scratch. Thus, at one elephant logging village in the spring of 2013, logging mahouts could be observed marching with their elephants deep into the forest to cut and gather large stockpiles of bamboo, as well as the occasional teak log, all to be directed not to the depots and sawmills of the Myanmar Timber Enterprise, but rather to the basic social reproduction requirements of the logging village itself.27 Clearly, the Burmese Forest Department’s ban on utilizing elephant labor for hut reconstruction at this time of year places the logging mahouts and their families in a double bind. But the law is difficult for officials to enforce, as the elephants are able to haul bamboo and timber through sections of the forest that are more or less inaccessible to police patrols or any kind of viable surveillance system.

The logging mahouts gain superior knowledge of the surrounding forest and all its potential elephant trails through their daily practice of elephant “fetching,” another important component of Burma’s elephant-based logging industry. Elephants require hundreds of pounds of forage per day, and the logistics of having human workers gather and transport the forage to the elephants is deemed unacceptably costly. Thus, the logging village elephants
When Roads Cannot Be Used

are not kept tethered or corralled, but rather are free to roam the surrounding forest during the late afternoons, evenings, and at night, to seek out the food on their own. Every morning, the mahouts must locate their elephants in the forest. That they are consistently able to do so may seem extraordinary. But, as elephant conservationist Prajna Chowta has noted, “to the eye of a newcomer, the forest looks like an indecipherable mosaic. But the experienced mahouts read it like a book. They can interpret the slightest detail, decode the signs, and reconstitute the behavior and whereabouts of the elephant throughout the night.”

Two further points are worth keeping in mind. First, elephants and mahouts live roughly the same amount of time, fifty-five to sixty-five years (a time frame that also approximates the harvest cycle of high-quality teak wood). Each logging mahout is likely to be responsible for the same elephant his entire life; the pair may grow up together, work together, and retire together. A close bond, set of routines, and complex framework of interspecies tacit social and spatial knowledge develops between human and elephant.

Second, before they are released at the end of each workday, the elephants are made to drag a long chain, which leaves a light track in the forest floor. This track can wash away in a rainfall, so each elephant also wears a hand-carved wooden bell that produces an identifying note. Some mahouts—as well as, interestingly, their nonmahout family members—seem to cultivate extraordinary skills in hearing these notes a long way off in the forest. In the spring of 2013, an older mahout in an outpost camp for older, retired elephants could be observed marching for an hour into the jungle to find his elephant, following a bell note that was discernible only to himself and his daughter (who nonetheless remained behind at the camp). The old mahout eventually retrieved the elephant, an ancient-looking tusker spending life’s waning years eating bamboo leaves and squinting at the sunspots dotting the forest floor.

Rebel Mahouts in the Nineteenth Century:
The Case of India during the Sepoy Mutiny

The features of elephant transportation that are useful to smugglers or to loggers wishing to avoid detection can also prove advantageous to guerrillas aiming to elude entrenched authorities, occupiers, or invaders. The most illustrative and instructive instance of this sort of guerrilla mobility via elephant is to be found in the evasive marches of rebel leaders Tantia Topi and Nana Sahib during India’s Sepoy Mutiny, or Great Rebellion, of 1857–1859. Tantia’s marches are especially edifying because Tantia and his rebels’ most impressive marches occurred mostly during the wet season, in late summer and early fall of 1858. Two accounts of these marches are particularly noteworthy for shining light on the pronounced advantages of the elephant as a form of evasive, semiaquatic, subversive mobility during the season of quag-
mires and torrential rains. One is Frances Isabella Duberly’s *Campaigning Experiences in Rajpootana and Central India during the Suppression of the Mutiny*, which documents Duberly’s experiences accompanying her husband, a British soldier, during the great revolt. The other is George Malleson’s multivolume *History of the Indian Mutiny*. Malleson was a British officer stationed at Mysore during the mutiny; he subsequently wrote a history of the uprising constructed from numerous soldiers’ diaries and recollections.

Malleson speaks of the “black and spongy soil” of central India during the summer of 1858. In late June, Malleson tells us, the rebel leader Tantia kept “shifting course to frustrate his pursuers,” the British and Anglo-friendly Indian military forces desperate to stem the growth of what was looking increasingly like a subcontinent-wide rebellion against British political domination in India. Tantia’s forces approached the Chambal River, a Rajasthani upper tributary of the Ganges. “Flight and pursuit were alike retarded by the rains,” Malleson relates, “which fell during this month with remarkable force, so much so that the river Chambal, swollen to a torrent, barred Tantia’s passage from Indragarh to the eastward.”

Duberly’s account of this scene of action begins with a verse from James Thompson’s 1727 poem “The Seasons”: “Down comes the deluge of sonorous hail, / Or prone-descending rain.” Duberly writes that, though Tantia’s rebels were trapped at the Chambal, the British garrison from Gwalior could not intercept them there, because the garrison was “stuck fast in the mud.” Those on the British side who attempted the march found themselves merely “floundering along a road always up to our horses’ knees, and many times up to their girth in black mud.” The battalion traversed the mire anyway but found itself blocked by a flooded nullah (a riverbed that fills only during the monsoon) and forced to wait there without sufficient food supplies. For a day the rain subsided and the British soldiers were finally able to march on, “through about two miles of deep mud,” to a village to rest. However, they camped near a river, the Banas, “not more than a small brook when we first arrived,” which became, “when it rained, such a torrent, and ran with such violence, that it resembled a very heavy sea running,” spilling into the soldiers’ camp. Finally, in August, the rains started to weaken in force and the British troops, finding the roads more passable, began to converge on the rebels, who were camped on the western bank of the Chambal. However, the British commanders misjudged the fugitives’ ability to flee across the river. The commanders decided to direct their troops southward, with the expectation that Tantia would have to move in that direction overland. Instead, Tantia crossed the river, his baggage train on elephants. By luck or tactical prowess, Tantia had timed his action perfectly to keep the British trapped on the western bank.

Equally dramatic was Tantia’s escape across the Betwa River, further to the east, in October 1858. In this season the soil still resembled, according to Malleson, a “sea of black mud.” Similarly, Duberly describes the “odorous
and slushy mud” of the Betwa region (in Malwa) in early fall, the roads reduced to a mere “wreck of carts” due to the heavy and frequent rains. Tantia and some twelve thousand fighters were at a town called Chanderee (Chanderi), near the west bank of the Betwa, restocking supplies. In early October, the various British garrisons in the area attempted to coordinate an action and cordon off Tantia’s forces inside the town. “The only uncertainty ... was the falling of the Betwa,” which the British commanders, repeating their error from the Chambal theater in August, presumed to be “at that time so swollen as to be absolutely unfordable,” “an insuperable barrier to the escape of the rebels eastward.” Yet the British force was delayed due to inadequate food supplies, giving Tantia’s army time to watch the water level in the Betwa gradually go down. By the time the British finally arrived in the vicinity of Chandaree, Tantia and several thousand of his followers “had escaped over the Betwa—having built boats for the purpose,” while their supplies (which Duberly calls their “treasure and women”) “were conveyed across on elephants.” Tantia continued on in the direction of Teary (Tikamgarh) in the east. He was not captured until the spring (or dry season) of 1859, near the end of the revolt.

The West Rapti River was the site of another dramatic insurgent escape on elephant-back during the Sepoy Mutiny, that of rebel leader Nana Sahib, whose convoy fled into Nepal via a daring river crossing in 1858. William Howitt, in his 1864 account of this northern theater of the Indian rebellion, describes how Nana, upon hearing that British troops were nearing him and his insurgent force, dashed, “with elephants bearing himself and his treasure ... over the Raptee into the Terai”—that is, the forested foothills of Nepal. Charles Ball, in an account published shortly after the end of the conflict, describes how Nana’s British pursuers attempted to cross the Rapti but, unsure of where to ford, found themselves trapped and ambushed midstream. Unlike Tantia Topi, Nana was never caught.

Accounts like these provide a sense of how, during the season of mud and torrential rains, trained transport elephants became especially useful as vehicles of evasive rebel mobility. One theorist of the historical-geographic relationship between rebels and states in South and Southeast Asia has noted that, up through the twentieth century, the space of the state—which could be either a local kingdom or a European colonial occupying power—“shrank virtually to the ramparts of its palace walls once the monsoon rains began in earnest.” I would suggest that, for this very reason, states and rebels in this part of the world have necessarily been in a position of vying for control over the semiaquatic mobility associated with trained elephants. Yet if rebels like Tantia Topi and Nana Sahib, drawn to the “escape value” of the giant animals, were more interested in using this mobility, powerful states were generally more interested in removing elephants from the monsoon-soaked landscape altogether and instead placing the animals in more controlled
quarters. During the Sepoy Mutiny, the British had many elephants of their own, but, as Duberly notes at one point in her account, the colonial occupiers seem to have been relatively uninterested in employing the giant animals as means of pursuit.\textsuperscript{46} The colonists preferred instead to wait until the dry season to finally close in on Tantia Topi, or to give up on the chase altogether, as happened with the rebel leader Nana Sahib (it may be telling that Jules Verne’s 1880 novel \textit{The Steam House} gives us a fictional tale of British adventurers using a steam-powered, robotic elephant to continue the chase of Nana into the Nepalese foothills).\textsuperscript{47} Typically, established state power has preferred to direct trained elephants toward other kinds of labor: logging, surveying, hauling wagons for routine transport tasks, tourism, participation in ceremonial processions, and (prior to the colonial period) combat in battle.

\textbf{Rebel Mahouts in the Late Twentieth Century: Guerrilla Mobility and State Evasion in the Southeast Asian Uplands}

Examples of elephant-based rebel mobility are notable in the postcolonial late twentieth century as well, but such cases seem mostly to be found in Southeast Asia rather than in India. It seems very likely that this has to do with divergent experiences of deforestation in the two regions, India having lost much of its forest cover during the twentieth century, while the Southeast Asian upland massif remains, in large part, a heavily forested zone. During the Vietnam War, U.S. bomber planes and armed helicopters targeted elephants in the Vietnamese and Laotian highlands to stop Viet Cong guerrillas from using the giant animals for transport beneath the forest cover.\textsuperscript{48} One pilot later explained his method for distinguishing between nonthreatening and “enemy” elephants in Viet Cong territory: he would look for mud caked onto the animals’ legs and bellies; this residue supposedly signaled that the animals had recently been carrying cargo along a muddy forest trail.\textsuperscript{49} In the 1960s, the Kachin rebel army, an ethnic minority militia in Burma, formed in response to the 1962 military coup in Rangoon, sent a secret mission to northeast India by elephant, attempting to secure aid from sympathetic indigenous groups within India’s borders. When the people there proved unable to help, the resistance fighters turned eastward, to China. The Kachin area in the far north of Burma is a major source of jade, gold, and timber, and during the 1970s and 1980s, the roadless mountains dividing Kachin State from Yunnan Province were frequently crossed by elephants carrying Kachin contraband into China and weapons back into Kachin State.\textsuperscript{50}

Shelby Tucker’s 2000 \textit{Among Insurgents} and Bertil Lintner’s 1989 \textit{Land of Jade} provide two important firsthand journalistic accounts of the Kachin conflict during the 1980s. These works stress the logistical importance of the Kachin guerrillas’ clandestine elephant convoys for maintaining communica-
tions among villages in the northern uplands, fording difficult streams, cross-border smuggling, and avoiding the patrols of the regular Burmese military. Shelby Tucker accompanied the Kachin rebel mahouts in the winter of 1989 and notes that the elephant-riding rebels would refer to the secret elephant trails as *shat khat*s—a pidgin term originating from the English “shortcut” and dating from the days of British-Kachin soldiering during World War II (Figure 1). Bertil Lintner, along with his wife Hseng Noung and newborn child, rode alongside the Kachin fighters on elephant-back in the winter of 1987. Lintner mentions, albeit briefly, staying at one of the Kachin Independence Army’s secret elephant training villages, a collection of huts located somewhere in the Hukawng Valley, far from any road (Lintner is purposefully vague as to the precise location) and populated entirely by “Kachin armymen and mahouts busy training newly caught elephants.” As recently as 2012, the Kachin Independence Army’s transport elephants have been photodocumented by Western journalists in the area around Laiza, near the Kachin-Yunnan border. In the eastern highlands of Burma, a different upland ethnic minority group, the

Karen, also have a recent history of rebels using trained elephants for subversive mobility. During the 1980s, the Karen National Liberation Army used elephants to run supplies back and forth across the Thai border, as well as to sympathetic villages located in the Burmese interior in the region of the Bago Mountains.54

In his 2010 study The Art of Not Being Governed: An Anarchist History of Upland Southeast Asia, James C. Scott argues that the primary political division in Southeast Asia from ancient times through the twentieth century was not between kingdoms but rather between people in the lowlands and people in the uplands. The lowlands were rice-growing regions. Rice agriculture was labor intensive, and so these areas depended upon corvée human labor, which in turn required large armies and bureaucracies to capture and control the workforce. All of this gave rise to what Scott calls the “padi-state,” a political form organized around the coerced ingathering of manpower to cultivate wet rice at a massive scale. The uplands, by contrast, were a kind of “fugitive space,” absorbing those who managed to escape the padi-state, and sometimes those who plotted the state’s overthrow. Scott argues that many of the cultural traits and practices observable among the ethnic minorities of the Southeast Asian uplands, from Assam to Vietnam and from Malaysia to southwest China, are in fact strategies of state evasion: oral memory keeping, ethnic “shape-shifting,” the religious embrace of millenarianism, swidden (slash-and-burn) agriculture, and so on.55 Scott does not cite any system of upland mobility as also constituting a form of state evasion. But, given experiences of guerrilla mobility in the Vietnamese, Kachin, and Karen uplands in the late twentieth century, we might consider the notion that, at least at certain times and in certain areas, the Southeast Asian uplands’ forest-covered elephant trails, or shat khats, have presented just such a strategy for people wishing to escape, avoid, or subvert dominant political regimes.

Struggles over Elephants as a Mobility Resource: “Elephant Bill” Williams’s Account of the Burma Theater during World War II

In his account of the Sepoy Mutiny, George Malleson pays special attention to the British capture of the mutineers’ elephants, and vice versa.56 As Malleson presents the events, the British forces, quite unlike those of Tantia, mostly required the elephants in order to haul large carts along the regular roads through the theater of the revolt. Neither Malleson nor Duberly describe any scenes of these British-controlled elephant convoys attempting to replicate the rebels’ elephant-based mobility for fording monsoon-flooded watercourses, or for moving off-road across dense, muddy forests. The British, at this stage of their colonial occupation of southern Asia, do not yet
When Roads Cannot Be Used

The British understanding and use of elephant-based transport looks much different eight decades later, during a period when British state power in South and Southeast Asia was rapidly eroding—that is, during World War II. The political struggle over elephants as a uniquely useful off-road mobility resource is vividly recounted in the memoirs of Colonel James Howard Williams—nicknamed “Elephant Bill” by the wartime press—who was among the British officials in charge of the British-employed mahouts and elephants in the Burma theater of the war. Williams had worked as a logging official for the Bombay Burma Trading Corporation in the Chindwin River valley from 1920 until the Japanese invasion of Burma in 1942. At this point, Williams was made elephant advisor to the British military in Burma and Assam and placed in charge of elephant-dependent logistical operations and construction projects in the remote forest regions of the Patkai Range and the Chin Hills. In his memoirs, Williams recounts the multiple uses of the elephants during the war: laying logs for road causeways; the construction of bridges made out of teak; pulling trapped lorries out of the omnipresent mud; and moving people and supplies clandestinely through the forest. According to Williams, petty rivalries often emerged between bridge-building teams and forest transport teams over who had priority in utilizing the elephants.

Williams mentions in numerous places in his account that the Japanese employed elephant labor too, in “large numbers” and for the same tasks. The Japanese used elephants to haul mortars and ammunition through mountain passes from Thailand into Burma in 1942, as well as to help construct the Burma-Siam Railway. During the Japanese occupation of Lower Burma, Japanese officials formed the Nipponese Burmese Timber Union to haul timber to bridge-building projects in the jungle and to sawmills for riverboat construction. The Burmese mahouts frequently switched sides, voluntarily or under coercion. In one episode, Williams finds himself with more elephants than mahouts to work with, because many of the mahouts have gone “missing,” apparently absorbed into a Japanese work team beyond the front lines (Williams leaves open the question of whether this absorption was voluntary or not). With no one to drive the elephants, Williams considers releasing them into the forest, even though the animals will likely be captured and employed by the enemy’s forces. But, upon hearing of Williams’s predicament, and anticipating the eventual return of the missing mahouts to the British side, the mahouts’ “women” (by which Williams likely means wives, but the term could also be taken to mean sisters, daughters, etc.), who are residing in a British garrison town, volunteer to “ride the riderless elephants” back into a section of the forest under firmer British control. The episode is doubly noteworthy, for not only does it reveal the difficulty the British had in preventing the flow of mahout skills and elephant labor to the Japanese, it is a rare account of

seem to have been comfortable utilizing these “off-road” dimensions of elephant-based transportation.
women (who in Burmese custom normally do not ride the elephants) showing strong mahoutship skills and utilizing elephant labor during a crisis.

Perhaps unsurprisingly, Williams presents the Japanese treatment of elephants and mahouts in harsh light. The Japanese, according to Williams, fearing their Burmese mahouts would desert them if given a chance, did not permit the practice of daily elephant fetching. Instead, Williams tells us, the Japanese commanders insisted “on elephants being tied up after a day’s work, and being hand-fed by the oozies. This meant more work for the men, who had to cut fodder, and less food for the elephants, which always do best when they can pick their own food. After feeding their animals, the oozies were themselves kept penned in camp under guard.”61 Certainly, this portrayal seems plausible (though it is contradicted by the recollections of some Japanese soldiers62). The Japanese may not have felt sufficiently secure in their local loyalty networks to allow daily elephant fetching to take place, at least not to the same extent that the British overseers permitted. Nonetheless, Williams’s impressions of Japanese practices in managing Burmese elephant labor are secondhand—based mostly on conversations with mahouts returning or escaping from the Japanese side—and are also unavoidably biased. Thus, it would be valuable to gather a record of Japanese perspectives on the Imperial Army’s use of elephants in Burma.

The political struggle over elephants as a mobility resource is also evident in the tensions inherent in the relationship between the mahouts and their managers and employers. We have already looked at a recent manifestation of this tension: the Burmese logging mahouts’ use of trained elephants in the spring of 2013 to haul timber and bamboo to their families’ dwelling structures, ignoring the imperatives of the Myanmar Timber Enterprise, which imposes an official ban upon utilizing elephant labor during this time of year. Williams’s account of mahoutship in Burma provides another window into these sorts of tensions between labor and management. Williams describes having to deal with a “strike among eighty elephant-riders” in the early 1920s, “at a time when there had been political agitation in the neighborhood.”63 Williams also indicates that, at least during the war, mahouts’ feelings of attachment to their elephants could be strong enough that an aging mahout would sooner kill his own elephant than “leave him to a successor.”64 Williams points to the example of a master mahout under his charge, Po Toke, who, after having successfully led a convoy of elephants carrying refugees out of Japanese-occupied Burma and into British Assam in 1944, was the likely culprit in the illegal shooting of the convoy’s lead elephant, an imposing and intelligent tusker named Bandoola. Williams, as if sympathizing with the premise that the fate of the elephants should be in the hands of the mahouts rather than the hands of the British military commanders and colonial officials, did not press charges against the master elephant driver, Po Toke.
Conclusion

Given the important role played by trained transport elephants in several major human actions in modern history—the Sepoy Mutiny in India, the Burma theater of World War II, the Burmese civil wars of the postwar period, and the relief efforts following the 2004 Indian Ocean tsunami—it is somewhat remarkable that the topic of elephant-based transportation has been, on the whole, overlooked by Western academic researchers. This oversight has occurred despite a sizable corpus of relevant English-language primary source material pertaining to the subject, penned in numerous historical periods, including as recently as the 1990s. Some of this source material, such as Williams's memoirs, is even fairly well-known.

In another sense, the academic inattention to elephant-based transportation is somewhat unsurprising. For reasons having to do with methodological and epistemological expediency, academic researchers tend to gravitate toward those empirical phenomena that are easily institutionalizable, formalizable, and mappable. This preference is likely to overlook modes of mobility that most “come into their own” during times of institutional crisis or infrastructural breakdown—that is, times when roads cannot be used. I would urge that anyone interested in human mobility during such times should be interested in elephants and mahouts. If either becomes extinct, the human capacity to replicate the unique forms of flood-time mobility and evasive mobility delineated in this study will likely be irrecoverably lost. These seem like mobilities well worth holding on to.

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Notes

1. Roughly fifty-eight thousand Asian elephants are alive today, of whom roughly fourteen thousand are trained for work. Burma (Myanmar), Thailand, India, and Laos are the only countries with domesticated elephant populations exceeding one thousand (Burma’s population being the largest, at roughly six thousand). Indonesia, Vietnam, Cambodia, and Sri Lanka have notable, if smaller, populations of a few hundred domesticated elephants each. For elephant population
numbers, see Richard Lair, *Gone Astray: The Care and Management of the Asian Elephant in Domesticity* (Bangkok: FAO Office for Asia and the Pacific, 1997).


17. Ibid., 150.


27. Personal observational visit, 2013.


29. Personal observational visit, 2013.


31. Ibid., 319–320.


33. Ibid., 166.

34. Ibid., 16.


36. Ibid., 324–326.

37. Ibid., 329.


39. Ibid., 200.

40. Ibid., 201.


43. Similarly, military historian Michael Charney notes the frequency with which “Chronicle and European sources” pertaining to Southeast Asia “speak of kings escaping battles or court coups on elephant and not on horseback”—the advantage of the elephants being the animals’ superior mobility across “swampy terrain” and “slippery mountain slopes.” See Charney, *Southeast Asian Warfare, 1300–1900* (Leiden: Brill, 2004), 144.
45. Ibid., xi.
46. Duberly, *Campaigning Experiences in Rajpootana*, 186.
58. Ibid., 237.
59. Ibid., 314.
60. Ibid., 213.
61. Ibid., 315.
64. Ibid., 307.