

ened, without teeth, suffering uncontrollable trembling, coughing blood, becoming insane to soon die suffering from terrible pains. Lower levels of mercury poisoning affected the whole population. Paying attention to the contemporary knowledge about how mercury poisoning affects human beings, the author discusses several aspects of these cities as related to these levels of contamination. High levels of miscarriages and the prevalence of monstrous fetuses might have been related to mercury poisoning. Just as well, abrupt changes of temper, irritability, loss of memory, and insanity may have been some of the causes of the prevalence of constant quarreling, extreme cruelty and sudden bursts of violence that characterized the social landscape of Potosí.

When summed up, colonial mining in Huancavelica meant approximately 17,000 metric tons of mercury spilled over the soil and river courses. For Potosí, 39,000 metric tons of mercury were burned off and 6,000 were released into the soil and water courses. These amounts not only contaminated populations due to direct exposure but entered into these regions' food chains contaminating through them larger ecosystems of which some consequences may be suffered today in what the author considers to be "one of the largest and longest-lasting ecological disasters ever known."

While mercury is at the focus of the environmental impacts of silver mining discussed in the book, it also briefly analyses the process of deforestation and highland grass exhaustion in the areas surrounding Huancavelica and Potosí due to firewood demand. Robins also explains the social consequences of the Spanish reshaping of the *mita*, an Inka institution, in order to provide labor force for the mining industry. Silver mining deeply disrupted and decimated indigenous communities, forced to provide their labor under extremely cruel and horrific working conditions, that were only possible to carry out by negating indigenous people's shared humanity. Most of the colonial legislation seeking to protect *mitayos* from abusive exploitation in the mines were hardly implemented. While several priests and other colonial officials described the horror of the mining *mita*, there was not a real concern to address the humanitarian disaster within the colonial state and less among mining entrepreneurs.

Beyond the deadly mercury poisoning, the author reconstructs the harsh and dangerous working conditions faced by the *mitayos*. Deaths and injuries due to falls, falling rocks, sinkholes, and cave-ins were highly frequent. As the colonial times passed by, the quota of ore extracted only increased and the depth of the mines grew. The increase of silver production that took place in the 18th century was not due to a technological innovation or a richer ore, but only to worsening levels of exploitation of a continuously declining number of *mitayos*.

The author outlines the mechanisms working in the disruption of indigenous communities. The depopulation of communities forced to provide *mitayos* for Potosí or Huancavelica and obsolete censuses worked in such combination that the indigenous population was under an increasingly higher pressure. As time passed by the proportion of community members to be sent as *mitayos*

increased and the interval between the same individual's different *mita* turns decreased. The escape from the mining *mita* was fundamental for the emergence of *indios forasteros*, a new legal category for Indians who left their communities and established themselves elsewhere, thus losing their rights over lands.

This research also points out how these social and environmental disasters were inscribed in a broader context. The impressive amount of silver that was produced in Peru, and also in the then New Spain, came to be the economic backbone of the transoceanic Spanish Empire and, as the author emphasizes, played a crucial role in the development of global capitalism and the world system. The large quantities of silver arriving to Spain barely stayed in the peninsula as it quickly flowed – through commercial deals, debt payments, and the economic costs of wars – towards not only the rest of Europe but also the Middle East, North Africa, India, and China. The author points out the connections between the emergence of the global capitalist system and the genocidal practices deployed by the Spanish colonial regime through which silver mining was made possible and soon became necessary for its reproduction.

This book is a outstanding contribution not only to the better understanding of the colonial silver mining in the Andes but also as a innovative way to combine different methodologies and multiple disciplinary engagement for illuminating a complex historical process. This research is not only of interest of those concerned with the history of the Andes but also of a broader readership interested in environmental scholarship and the impacts of extractive industries.

Guillermo Salas Carreño

Salomon, Frank, and Mercedes Niño-Murcia: *The Lettered Mountain. A Peruvian Village's Way with Writing.* Durham: Duke University Press, 2011. 369 pp. ISBN 978-0-8223-5044-6. Price: £ 16.99

"The Lettered Mountain" is an exceptionally rich ethnography of Peru's "lettered and knotted countryside" – of rural graphic traditions and interactions over a long historical time span. The countryside in question is the Andean region of Huarochirí in the central department of Lima, and more specifically the peasant community of San Andrés de Tupicocha, and its 10 kinship corporations – *ayllus*. This study takes texts and not people as its main research subjects, and combines analytical strategies from New Literacy Studies and ethno-historical approaches. The two authors, one anthropologist (Salomon) and the other sociolinguist (Niño-Murcia) connect an understanding of contemporary society with deep historical insights. The Huarochirí area is in a special position concerning research on Andean literacy, hosting the unique Huarochirí manuscript written in Quechua in the beginning of the 17th century by an unknown indigenous person.

Salomon and Niño-Murcia's study discusses critically the idea that the Spanish conquest and the social and political dynamics generated over the centuries could be described as an exchange between an oral culture (the native Andean) and a culture of literacy (the Spanish, and

later the Creole and the mestizo). “The effects of literacy” analyzed in this case are observed in the interface between coexisting “graphic cultures” and highly dissimilar logical structures of representation – of the *kipu* and the paper. *Khipu* is a cord medium with a complex knot structure described in the literature as the core element of an Andean and precolonial graphic communication system. Historical documents indicate that *kipu* practice extended into the colonial period as a mode of translation of the legal and administrative writing of scribes and notaries and as vehicles for catechism and confession. Interestingly, the authors observe that the *kipu* symbolic structure seems to have resonated stronger with the colonial writing style of “columnar or (later) grid or tabular reckoning,” than the “prose exposition of numerical data.” A surprising and convincing conclusion of this research is that the tabular formats facilitated communication between alphabetic writing and knot graphic recording. The relative similarity of graphic structures could partly explain why the relevance of cord mediums survived Spanish rule, and in the early colonial period (up to the 1600s) played an important transmediating role between rural population and colonial administration. During the 17th century script replaced the *kipu*, which use from then on was restricted to local, internal, and symbolic functions.

Andean people were quick to acquire the literacy competence of their colonizers. Long before literacy became a national political concern and schools the institution for diffusing it, rural people made use of legal writing. Interestingly, the authors note that under the governing order of the two republics of the Spaniards and the Indians, proper rural writing practice could develop in a relative distance to the “lettered elites.” In contrast, in the social and ethnic divided Peruvian Republic of the 19th and 20th centuries, the Creole elite’s new ideals of the universal role of letters fed into structures and mechanisms of exclusion. While colonial writing styles (and especially tabular formats) became the basis for the development of rural literacy traditions and conventions, the literacy of schooling was and to a great extent still is integral to imageries of incompetence and human inferiority, and a basis for social discrimination.

One of the crucial sources to this study is the work of Angel Rama on the “lettered city,” which details how authority was constructed around a certain class of literary experts and expert uses of the written. Salomon and Niño-Murcia’s study, however, moves away from the lettered city and focuses on the practices of letters in rural people’s “recording of intra-ayllu business below the threshold of state administration.” The main orientation of this study is also its main strength, namely substantial analytical space dedicated to the unofficial record keeping within organizational units not linked to institutions of state governance and public authority. A crucial question that the authors go to length to explain is why certain types of writing of colonial origin still are of great importance to the internal life of Andean communities. As the earlier *kipus*, rural writing served and still serves to record the reciprocal cycles of community life. Recordings

formulated as *actas* kept in local archives make constant detailed descriptions of communal work, reciprocal obligations, and individual contributions. And these *constancias* do not only keep people accountable, they also make the *ayllus* and their existence real and durable. It is the confluence of communal work, ritual and script that renew and hence guarantee the further existence of the *ayllus* constituting Tupicocha.

Central to the communal work is the *champeria*, the canal-cleaning water festival – ritually played out and recorded at the catchment area of the irrigation canals. People conceive of this area as the intersection of the spiritual and human society. At this sacred place the members of the *ayllus* gather in order to confirm and document their communal obligations, and, at the same time, place themselves within a greater order of existence. As Salomon and Niño-Murcia point out, the canal-cleaning water festivals are “almost universally central to Andean ritualism.” This ritual practice, considered by Andean ethnographers to exemplify indigenous tradition *par excellence* is, as this study convincingly documents, fixed in texts structured by the structure of colonial writing. Considering this hybrid character of a profoundly Andean practice, it is indeed surprising that people in Tupicocha and the Huarichirí area embrace these rituals and at the same time deny any connection to indigenous identity, tradition, or the Quechua language. The communal work, rite, and script contribute to the making of a deeply Andean otherness which is not viewed as culturally distinct but rather as regionally particular. This is not just a puzzle to people not accustomed to Andean research (as the authors make a point of), but also to researchers with experiences from other parts of the Andes (such as the Ecuadorian highlands) where otherness is built on a deep sense of belonging to indigenous lifeways and language.

As a highly interesting book problematizing change, “The Lettered Mountain” also and maybe inevitably touches analytical substance, that basically remain unchallenged. In my reading, the less convincing part of the book has to do with the current changing landscapes of literacy. I am less concerned about the role of new media such as internet which is commented in a chapter, or the use of cell phones which is not commented by the authors. In addition to being audiovisual, the cell phone is also a text medium that I presume is in extensive use by people also in this part of the Peruvian highlands, linking the community and the Tupicochan diaspora in Lima and elsewhere. More problematic, however, is the change affecting what is established in this study as the core of Andean lifeways and worlds coming together in the complex of work, rite, and script: When plastic pipes replace stone channels the work with the irrigation system disappears and with them the water festivals. When the introduction of new technology makes communal work obsolete, what happens, then, with the central writing practice of the *constancias*? Salomon and Niño-Murcia’s study does not present any answer to this issue, but the authors certainly equip us with the necessary detail, time span, and complexity to address it. Based on “The Lettered Mountain” we can hope for new research on change and continuity

in Andean uses of graphic mediums and the ways they are embedded in social practice as well as structured by local-global dimensions of power, knowledge, and communication. Esben Leifsen

Santasombat, Yos: *The River of Life. Changing Ecosystems of the Mekong Region.* Chiang Mai: Mekong Press, 2011. 224 pp. ISBN 978-616-90053-2-2. Price: \$ 28.50

In 2005, the Mekong Press was initiated by Silk Worm Books with the financial support of the Rockefeller Foundation, and in 2007 the Mekong Press Foundation was registered as a non-profit organization in Thailand to support local scholars from Laos, Cambodia, Vietnam, and other countries in the "Greater Mekong Subregion." Thus, it is appropriate that a well-known Thai anthropologist from Chiang Mai University, Yos Santasombat, has written a book for the Mekong Press about development and environment issues in the upper and middle Mekong Basin in northern Thailand, northern Laos, and the southern Chinese province of Yunnan.

The explicit aim of "The River of Life" is to develop "a better understanding of transnational megaprojects, especially the construction of hydropower dams on the Mekong, and their impact on changing ecosystems and the lives and livelihoods of marginal communities in the Lower Mekong Basin" (2). The book is also oriented towards better understanding "the impact of subregional growth and development on resource use, class differentiation, lifestyles, and cultures, and to identify serious health, economic, and environmental threats caused by unbalanced development within and across countries" (4). Crucially, the author argues "for a need to incorporate a new bottom-up planning process in the development of the Mekong Basin which must be adopted in future approaches to regional resource management. Stakeholder approaches to development, based on recognition of the value of local knowledge, provide an underlying framework for inclusiveness and participation, taking into consideration the unequal political, social, and economic power structures in and between countries involved" (13).

"The River of Life" is divided into seven chapters. The first frames the book, and provides background regarding the Mekong River Basin and some of the major emerging natural resource conflicts in the region. Focusing on Thailand and China, chapter two introduces more details regarding "transnational enclosure," a concept heavily influenced by Marxist ideas and particularly primitive accumulation, or what David Harvey has more recently called "accumulation by dispossession." The author adopts what he calls an "ethnoecological approach" to his research.

Chapter three provides ethnographic information about ethnic Lue people in one community near the Lancang (Mekong) River in Sipsong Panna, Yunnan Province, southern China. Chapter four then looks at natural resource management and livelihoods in three communities adjacent to the Mekong River in Luang Phrabang Province, northern Laos. Chapter five completes the ethnographic part of the book by examining northern Thai-

land, and particularly Chiang Khong, in Chiang Rai Province, and issues related to the fishery and conservation of the endangered giant catfish (*Pangasianodon gigas*).

Chapter six builds on the previous ethnographic chapters by explaining how large-scale development projects are negatively impacting on local cultures, lifestyles, and subsistence practices. The author also argues that "local riparian communities must find new ways and means to adapt their knowledge and cultural practices to cope with changing environmental and socioeconomic contexts" (16). Chapter seven, the conclusion, elaborates on the relationship between transboundary environmental problems and the increasing role of what Yos calls "transnational civil society", arguing that transnational civil society could "serve as a forum in which the voices of all stakeholders are heard and a negotiated space of good governance and participation in the true sense of co-management of natural resources between local, national, and international agencies is realized" (16). He uses "globalization from below" to frame his vision.

I am certainly sympathetic with Yos's research methodology, which involved reviewing a considerable amount of literature from the Mekong region, and on-the-ground ethnographic research. I also applaud his explicit call for government decision-makers to take the intimate ecology knowledge that rural villagers have in the Mekong region more seriously, and to provide rural resource-users with more opportunities to meaningfully participate in development processes. Certainly, many of the socio-environmental problems that are evident in the region have been due to transnational capital investments, coupled with efforts by nation-states to take control of natural resources historically under the local management. Yos is definitely correct in arguing that rural people should have much more of a say in defining the development trajectories that affect them. In particular, Yos is rightfully concerned about the development of large hydropower dams. He usefully provides village-level insights about how the Mekong River is changing, including due to Chinese dams upriver.

While many of the challenges and changes affecting the rural inhabitants of the people are acknowledged in the book, the author sometimes comes across as a bit overly positive about the abilities of communities to make decisions that are beneficial for both local livelihoods and the environment. Certainly, this is sometimes the case, but there are also times when villagers have decided themselves to replace forests with mono-culture plantations, and diverse wetlands with wet rice paddy fields, albeit for good reasons. Economic and power structures are part of the root causes, but there is more. Explicitly making it clear, that there are times when the best interests of villagers do not coincide with the maintenance of high biodiversity values which would have been appropriate. Rural villages are typically socially complex places, and their inhabitants have a wide variety of views regarding natural resource management challenges. For example, while Yos mentions those who protested against the Pak Mun Dam, he does not point out that some villagers have supported the project, albeit for specific reasons.