

POLITICAL ECONOMIES OF MINING IN THE EARLY MODERN WORLD

25-26 Sept, 2025, University of Vienna

Location: Alois Wagner-Saal, Centrum für Internationale Entwicklung, Sensengasse 3



Felipe Guaman Poma de Ayala, *Plus Ultra, el ynga*: 'I am the support for your columns', c.1590. In Martín de Murúa, *Historia del origen y genealogía real de los reyes Incas del Perú*, Galvin manuscript, Reproduced courtesy of Rare Books & Special Collections, Hesburgh Libraries, University of Notre Dame.

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Day 1: Thursday, 25 Sept

10:00-11:00 Welcome and introductions (**Claire Sabel and Gabriele Marcon**)

11:00-11:30 Coffee

11:30-13:00 Session 1: Mining and Sovereignty

Chair – Christian De Vito (Professor of Economic and Social History, University of Vienna)

Monica Cerda Campero (PhD candidate, Department of Latin American studies, Columbia University, USA)

Chichimecas as Teules: Biopolitics and Sacred Sovereignty in New Spain's Mining Borderlands, 1523–1542

This paper examines how early colonial mining in northern Mexico produced new territorial, spiritual, and legal orders by analyzing the emergence of the term “Chichimeca”—a Nahuatl word meaning “those who suckle.” Used both as a tool of colonial governance and a form of cultural reinvention, “Chichimeca” did not denote a unified group but served as a flexible label applied by Spanish authorities to nomadic peoples inhabiting mineral-rich regions, portraying them as lawless and ungovernable. This classification rendered their territories terra nullius, facilitating mining expansion and the expropriation of labor through slavery and forced relocation. Drawing on Foucault’s biopolitics and Agamben’s homo sacer, I explore how sovereignty operated through exclusion, based both on Spanish biases and preconceptions as well as the ontological, theological, and political understandings of their Nahua allies—particularly by rendering the Chichimeca as teules: lords or gods with a dangerous divinity. This dual framing justified their violent marginalization while acknowledging their powerful spiritual significance. Simultaneously, this paper highlights how mining communities labeled as Chichimeca reclaimed this imposed identity through profound cultural reinvention. Engaging deeply with sacred landscapes, they reoccupied cliff dwellings and highland refuges as sites of resistance and renewal. Drawing on millenarian visions shaped by Franciscan eschatology, these communities responded to the violent disruptions of mining colonialism by reasserting territorial and spiritual autonomy. In this dual process of imposed exclusion and creative adaptation, “Chichimeca” both as a symbol of colonial ungovernability and as a powerful framework for imagining forms inhabiting amid the collapse of old worlds at the empire’s margins.

Joshua Batts (Postdoctoral researcher, Department of Translation, Interpreting and East Asian Studies, Universitat Autònoma de Barcelona)

Circling the Mountains: Mineral Resources and the Politics of Movement in Early Modern Japan

The ability to control or make claims on movement was central to the exercise of authority in early modern Japan. Battles and alliances shifted territory, disappointment and betrayal

displaced those who fell out of favor, and hostages served as guarantors of loyalty. Although many prominent daimyo are associated with particular places, Japan's military elite in the sixteenth and seventeenth centuries formed the most mobile generation of leadership in the archipelago's history. In contrast, mines may boom or bust, sometimes repeatedly, but they remained immobile. This paper centers mines as sites around which political actors orbited, rather than assets moving metaphorically between daimyo coffers. I trace the political biographies of a few prominent mines to conceptualize the understudied relationship between mineral extraction and the exercise of political power in Japan. History surveys often state that the Tokugawa shogunate (1603–1868) captured the country's mines, but circumstances were more complicated in practice. This paper explores that nuance by analyzing the trajectories of 1) precious metals mines such as Iwami and Ikuno that drew the Tokugawa into their orbit; 2) a silver mine (Innai) discovered and maintained by a Tokugawa rival; and 3) a mine (Hosokura) that passed through multiple cycles of exploitation before stabilizing as a lead production site under a Tokugawa ally. I hypothesize that the movement—of actors, authority, and expertise—required to exploit immobile mines featured as another important arena of “motion control” central to political leadership in the decades before and after the establishment of Tokugawa hegemony.

13:00-14:00 Lunch

14:00-15:30 Session 2: Mining and State Management

Chair: Sarah Seinitzer (PhD Candidate, History Department, University of Vienna)

Yijun Wang (Assistant Professor of History, NYU, USA – joining virtually)

Moving Towards the Frontier: Migrating Miners and Shifting Mining Centers in 17th Century China

Following the transition from Ming (1368-1644) to Qing (1644-1911) dynasties, tin mining centers relocated dramatically from China's eastern provinces to Southwest China and Southeast Asia. This article investigates the causes of this geographical shift, the evolution of mining policies and taxation systems, and the subsequent transformation of administrative knowledge. The Qing government implemented regionally differentiated mining policies in response to Ming dynasty failures, imposing restrictions in China proper while actively promoting mining in frontier regions. This study examines how the Qing established institutionalized mining management frameworks that replaced the irregular system previously controlled by Ming court eunuchs. These new administrative structures carefully balanced the state's mineral resource requirements against Confucian prohibitions on government involvement in profit-seeking enterprises, while addressing practical security concerns about managing potentially volatile mining populations. This research reveals how these policy transformations reshaped both miner migration patterns and knowledge production among state officials. As administrative authority transferred from court eunuchs to local magistrates, novel relationships developed between technical expertise and governmental power, signalling an early technocratic shift in governance with enduring consequences for resource management throughout imperial China.

Caroline Lindroth (PhD Candidate, Department of History, Uppsala, Sweden)

State, Industry and Labour Relations: The interplay between state management and industrial mine work in early modern Sweden

Mining is one of the earliest cases of large-scale industrial wage work. As such, it holds a central role in labour history and is often addressed from the perspectives of proletarianization, masculinization and the labour movement. Central to these perspectives is the commodification of labour in an expanding market economy. While holding relevance, such approaches carry a risk of early mining industries being studied teleologically as prototypes of industrial labour as we know it from modernity. However, large-scale mining did not emerge in modern market economies. Rather, it was an outcome of expanding early modern state apparatuses striving to control territorial resources. This paper addresses labour relations in early modern mining with this in mind. The specific industry under study is the state-owned silver mine in Sala, Sweden, which employed hundreds of wageworkers. Through a close reading of court protocols and company records, a fine-grained analysis of the individuals involved in the production and the conditions under which they toiled is done. The findings show that wage work took a variety of forms and intersected with other types of labour. They also show that women were involved in the production in spite of being excluded from the wage work. Importantly, the study explains how these results can be understood in light of early modern state management rather than an expanding market economy.

15:30-16:00 Coffee

16:00-17:30 Archives Roundtable

Chair: Sebastain Felten (History Department, University of Vienna)

Dr. Krisztina Arany (Austrian State Archives), Dr. Stefan Birkle (Fugger Archive) & Dr. Peter Konečný (Slovakian Mining Archive)

This roundtable discussion will feature presentations from three archivists working with significant collections related to mining history in early modern Central Europe. This conversation will also be a chance for all participants to share insights into the collections they have worked with in their own research.

Krisztina Arany, the current Archival Delegate of Hungary in Vienna, will discuss the historical records of the Upper Hungarian Mining Towns preserved in Hungary and Austria, and the online platform Hungarica.. Her presentation will provide an overview of available archival records preserved in Hungary, and records inventoried and digitised over decades by the Hungarian archival delegation working at the Austrian State Archives in Vienna. It will also offer practical information on both the access and methods of research of these sources on various online archival sites.

Stefan Birkle will discuss the Fugger Archive, now housed in a private foundation in Dillingen. During the 15th and 16th century the Fugger family became one of the richest and most influential families in Augsburg. In addition to financing Habsburg mining operations, the Fuggers started to trade with metal and metal ore and later even became mining entrepreneurs themselves. Their activities ranged from Upper Hungary (today: Slovakia) to Spain, where they also gained access to the mines of Almadén and the cinnabar and mercury deposits from 1525 onwards. This presentation will highlight records about the trading and mining activities of the Fuggers. Even though there already are various studies about this tradition, there is still a lot to discover in the documents, correspondence and account books.

Peter Konečný from the Slovakian Mining Archive in Banská Štiavnica will provide an overview of what historians of early modern mining can find in Banská Štiavnica and in the Austrian State Archives. Banská Štiavnica is one of Europe's oldest, continually operating, and most productive mining regions, and also one of its best documented. This presentation will also discuss current projects related to archiving and digitizing the collections at Banská Štiavnica, and consider how sources for mining history in Slovakia and Austria can be contextualized with other relevant European collections.

19:00 Dinner, Lebenbauer, Teinfaltstraße 3, 1010 Wien

Day 2: Friday, 26 September

9:15-9:45 Coffee

9:45-12:00 Session 3: Making Mineral Commodities

Chair: Anka Steffen (Postdoctoral Researcher, Department of Economic and Social History, University of Vienna)

Kris Lane (Professor of History, Tulane University)

Scratching the Surface: Managing the Mineral Kingdom in Habsburg Potosí

The Cerro Rico of Potosí, located in what is now highland Bolivia, burst onto the world mining scene in 1545, and it has retained a prominent place in the global imagination. For some, it was a synonym of unfathomable wealth. But in "scratching the surface" of documentation surrounding Potosí and its considerable hinterland, broader visions and arguments over mineral management appear - beyond maximization of silver output for private and royal parties, notably the Spanish Habsburgs. This paper examines mining records and treatises from c.1545-1645 in search of patterns peculiar to this region.

Göran Rydén (Professor in Economic History, Institute of Housing and Urban Research, Uppsala University, Sweden)

The Oeconomia of Early Modern Metal Making: Sweden in the 18th Century

Early-modern metal making was deeply embedded in the organic world, but it was also intrinsically tied to what is understood with the Braudelian concept of *la longue durée*. Metal production implied a combination of ore extracted from deep below the ground, charcoal made in vast woodlands and the power from running water together with long hours of human toil in mines, forests and forges. This labour was mentally constrained within a discourse of a motionless, or at least a slowly but gradually moving, world. Nature and an omnipresent Creator set strict rules and high fences on the movements and activities of most people during the period, something also influencing the making of metals. Yet a gradual, but almost invisible, development took place, which brought early-modern metal making into the modern era with large iron-, copper- and steelworks based on mechanical devices and powered by steam-power and of mineral coal. In my presentation/paper I will concentrate on *la longue durée*, and focus on ironmaking within the *bruk*, the ironmaking estates dominating Swedish production and export. The period of change towards the end of the eighteenth century will be left outside of my treatment, as will copper making be. *Bruk* were large sites

encompassing mines, large landed estates and small industrial communities, where the iron was made in blast furnaces and forges. They were populated with a fairly sizable population, with skilled iron workers, day workers, miners, leaseholding peasants, etc., and it was the combination and compilation of their work that produced the iron from a multitude of natural resources available with the bruk. My paper will begin within the bruk itself, dealing with the complex organisation and division of labour in the making of iron, but proceed outside its boundaries to deal with the marketing and exportation of bar iron to foreign markets. In doing so I attempt to cross the dividing line between these ironmaking estates, organised in a feudal or semi-feudal way, and the global market structured along capitalist principles.

Thomas Max Safley (Professor Emeritus of History, University of Pennsylvania, USA)

The Age of Mercury? The Brothers Herwart and the mine at Idrija as a Case-Study in Capitalism at Play in the Political Economy of the 16th Century

Until the early modern period, the uses of mercury remained in one fundamental respect limited: They did not require a great quantity of metal and, so, could not generate the level of demand that would render it a valuable commercial commodity. The sixteenth century constitutes a clear turning point in this respect. The medicinal application of mercury in the treatment of syphilis became commonplace at this time. As syphilis and related venereal diseases reached epidemic proportion, the demand for mercury grew. More importantly, in terms of market conditions, the mid-sixteenth century witnessed the development of several industrial processes that required mercury. Demand increased in the late sixteenth century, when the Venetian plate-glass mirror industry began to coat the backs of its product with a mercury-based amalgam. Demand increased far more dramatically in the mid-1550s, when the patio process for refining silver ore, which relied on mercury amalgamation, came into industrial use in the Americas. Without mercury, which Hamilton described as “of the utmost importance”, the Spanish silver fleets would not have sailed from Veracruz or Cartagena (1915). This provides the point of departure for this paper. In the mid-1550s, only one commercially important source of mercury supplied the needs of the West, the mine at Idrija, then part of the Archduchy of Austria, now part of the nation of Slovenia. Furthermore, at the critical juncture from 1548 until 1564, its trade was in the hands of a single company of merchant-capitalists, the brothers Hans Georg and Hans Paul Herwart of Augsburg. Examining their contracts and correspondence with the state and the producers, this paper will highlight not only the ideas and practices associated with mercury extraction but also how capitalism worked in the real world of metal production and consumption. By so doing, it will offer insights into the relations among the state, capital and labor in a premodern political economy.

12:00-13:00 Lunch

13:00-14:30 Session 4: Mining and Money

Chair: Miguel Llanos de la Guardia (PhD Candidate, Department of Comparative Literature, University of Chicago, USA)

Amanda Carolina Ortiz Molina (PhD Candidate in History, Binghamton University, USA)

Mining Gold, Seeking Freedom: The Financial World of Slave and Gold Mining Societies in New Granada, 1760-1800

The paper studies the financial world of New Granada's Pacific Lowlands in the eighteenth century, a region where slavery, the quest for freedom, a tropical and riverine environment, and alluvial gold mining structured colonial life. The Spanish crown forbade financial intermediation institutions in the American colonies where credit markets worked through interpersonal connections. The paper interrogates how the particularities of these landscapes of gold, slavery, riverine, and humid tropical forests shaped how credit worked and how non-elites participated in these exchanges. While the historiography focuses predominantly on the role of elites in connecting the gold mining regions with New Granada's main urban centers of power, this work focuses on the participation of non-elites in trade and credit exchanges. Non-elites such as indigenous people, enslaved and free Africans and their descendants comprised most of the population in the gold mining frontiers. The article reconstructs the everyday economic life of formerly enslaved people in the northern province of Chocó, such as Melchor Pontón and Juana de Bonilla, between 1760 and 1770, and the community of La Cruz, the administrative center of the Province of Raposo in the 1790s. The paper studies a diverse collection of sources, such as wills of non-elites, notarial records, gold mining operation diaries, ecclesiastic records, legal disputes over debts, and an accounting book from a store in La Cruz. Non-elites' participation as creditors, debtors, sellers, and consumers reflects how they used financial practices to negotiate, resist, and adapt to colonial systems of oppression such as slavery.

Renate Pieper (Professor Emeritus of History, University of Graz, Austria)

From Silver to Lard: Means of Payment in a Central European Mining Region at the Beginning of the 17th Century.

At first glance, the extraction of ores seems to have been a very beneficial enterprise, and even predatory. However, despite mines providing the raw materials, such as copper and silver, for coins, these regular means of payment were scarce in mining regions. While historiography for Central Europe has studied the use of commodities instead of minted money as a means of payment in rural areas, the situation in mining centres is less clear. This paper examines the means and habits of payment used in the seventeenth-century iron mining centre of Innerberg in the Alps. On the eve of the Thirty Years' War, the miners of Innerberg had formed a guild in close contact with the crown. The account books of the head of the miners' association from 1611 to 1615 provide insight into the relationship between payments and gratuities, coins and commodities, and the opportunities for obtaining and repaying credit. Practices in Zacatecas, located in New Spain (Mexico), will be addressed as a point of reference. The similarities and differences between the two mining centres will provide insight into the degree of monetisation and the role of the crown.

14:30-16:30 Concluding discussion

7:00 Dinner at Glacis Beisl, located in Museumsquartier, entrance at Breite Gasse 4

Optional Day 3, Saturday, 26 September

9:30 Breakfast at Cafe Landtmann (Universitätsring 4) followed by visit to the Gem and Mineral collection, Naturhistorisches Museum (self-funded)

This workshop has been supported by

