

Tehuantepec on Display:

Tlalocs, Theodolites, Fishing Traps and the Cultures of Collecting in the Mid-Nineteenth Century

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In March of 1842, president Antonio López de Santa Anna granted Mexican empresario José de Garay y Garay rights to build a canal through the Tehuantepec isthmus and by late May, a group of engineers and marine officers, led by engineer Cayetano Moro, set off for Tehuantepec, to evaluate the feasibility of the project and capitalize on its immense financial promise.¹ The survey commission produced maps, geological studies, information on geographical positions and altitudes, and descriptions of the climate, natural productions, and inhabitants of the region. Besides data, the commission collected objects -- most notably, minerals, as well as a number of antiquities from the island of Manopostiac,² off the southern shores of the isthmus, which were deposited in the museum in 1843. Two hollow ceramic figures attracted some degree of attention in the periodical press.

The earliest illustrations and descriptions of these ceramics appeared in 1844, in the *Museo mexicano*. The anonymous author finds the objects to be mostly incomprehensible and strives to guess their meanings and uses from what he knows of other cultures (Figure 1):

What can we say of this masked figure [on the left], lacking hands and feet? We have seen large collections of these figures, commonly called idols [...], but never anything that resembles [this] figure, so horribly adorned with animal teeth, which makes it look so strange. It is festooned with ornament and wears a kind of undefinable hat or helmet, a mask, and apparently, eyeglasses or eye mask. The accessory which pierces its nose looks like something used by the inhabitants of Australasia. Even stranger is the other figure, which resembles the other one, [except] for a kind of crest, which makes it look so deformed. The most remarkable thing about it is the adornment on its head, which, truly, looks like some kind of mitre. Is it possible that this is the bust of a masked priest?³

¹ This was one of many projects that explored possibilities for connecting the Atlantic and the Pacific across the isthmus, the first of which dates back to Hernán Cortés, who sought a “natural” passage in the Tehuantepec region. For a brief overview of these different projects both before and after independence, see Cayetano Moro, *Survey of the Isthmus of Tehuantepec* (London: Ackermann and Co., 1844), 5-14. The isthmus was eventually connected by rail.

² This toponymic is spelled also as “Monopostiac” or as “Monapostiac”; I have chosen the spelling above because this is the one used in the nineteenth-century literature that forms the basis of this essay.

³ Anonymous, “Antigüedades zapotecas,” *Museo Mexicano*, 3 (1844): 135. All translations in this essay are mine.

[insert figure 1 near here]

As the above description suggests, before they became the objects of an archaeological science and, later, of a nationalist narrative, many preconquest antiquities appeared horrible, deformed, monstrous, strange, and mostly incomprehensible to their viewers. It was precisely by putting them into circulation, by means of descriptions and images such as these published in the *Museo mexicano*, that the objects of Mexico's past achieved visibility -- drawing the attention of scholars, collectors, and speculators and promoting the production and exchange of information about them—and became increasingly familiar.⁴

By the early twentieth century, Nicolás León, then in charge of the ethnology section at the National Museum included the two Manopostiac antiquities in his catalogue of 91 Huave antiquities in the museum. The catalogue is prefaced by a history of the Huaves since their settlement in the southern isthmus in preconquest times to the twentieth century and comes with an anthropometric study of the Huave “race” by United States anthropologist Frederick Starr. The entries corresponding to the Manopostiac antiquities, catalogued as n. 90 and n. 91, give their height (one *vara*, that is, one yard), and describe them as “beautiful ceramic statues, hollow on the inside and of meticulous manufacture.” Though he includes them in a collection of Huave antiquities, León suggests the statues were upper parts of urns in the Mixteco-Zapotec tradition; it is unclear if by this he implies they were made by Mixtecs or Zapotecs -- the ethnic groups present in the isthmus at the arrival of the Huaves --, or by Huaves working in that tradition. León also includes studies of the objects by leading historians Alfredo Chavero and Francisco del Paso y Troncoso, who identify the two figures as Tlaloc, on the basis of lightning motifs and of the “goggles,” associated with rain deities.⁵ Two decades later, Enrique Juan Palacios, archaeologist at the MNA, reinforces the association of the statues with Tlaloc and identifies their material as “very special whitish-yellowish clay, with big fragments of quartz, typical of the sands in the region.” He also further throws their origins into doubt, as he writes: “one refuses to

⁴ For different perspectives on the importance of images and descriptions as technologies for knowledge making, see Serge Lewillon, “Archaeological illustrations: a new development in 19th century science,” *Antiquity* 76: 291 (2002): 223-234; and Stephanie Moser, “Making expert knowledge through the image: antiquarian images in early modern scientific illustration,” *Isis*, 105:1 (2014): 58-99.

⁵ Nicolás León, *Catálogo de la colección de antigüedades huavis del estado de Oaxaca existente en el Museo N. de México* (Mexico City: Imprenta del Museo Nacional, 1903): 52-54.

believe they are of Huave manufacture, unless the members of this indigenous family, of lamentable aspect, have degenerated more than any other aboriginal group.”⁶

[Insert Figure 2 near here]

Today, the ceramics stand in two glass cases in the Sala de las Culturas de Oaxaca of the Museo Nacional de Antropología (MNA), surrounded by other objects from the region, but still, too isolated from any of these other objects to allow one to imagine any kind of relation to them – other than geographic (Figure 2). They appear lonely, uneasy with their own size, where the surrounding showcases hold much smaller things, somehow petrified into the eternal present of their display, giving the impression of either being far withdrawn into themselves or, alternately, to be gawking down at the perplexed visitor. A technical label – one for both objects -- does little to put the viewer or the statues at ease: it refers to them as representations of Ñuhu Savy, the Mixtec god of rain and thunder, on the basis of iconographic attributes, principally their goggles and the serpent and wave motifs that decorate one of them. The identification, as Martha Carmona, the curator of gallery, explains, is supported by the striking similarities between these objects and representations of the Mixtec thunder god in the Mixtec codices, such as the *Codex Vindobonensis* (Figure 3).⁷ The label in the museum makes no mention of their provenance, only a general reference to the isthmus; just as vague is their dating: “Postclásico 900-1521 d.c.” There is no mention of their possible relation to the Huaves. The museum’s website features only one of the figures, with its photograph and catalogue number: 16.0-00060. The culture to which it belongs is left blank.

[Insert Figure 3 near here]

This condensed account of how the two hollow ceramics from Manopostiac became objects under glass at the MNA offers a glimpse into the processes by which idols were made into antiquities. As they were transformed, in the course of a century and a half, from undefinable and grotesque things into the beautiful objects of national patrimony, preconquest

⁶ Enrique Juan Palacios, *En los confines de la selva lacandona* (Mexico City, Talleres Gráficos de la Nación, 1928), 11. Although the twentieth century has seen various ethnographic works on the Huaves, I have been unable to find new substantial studies on the antiquities themselves. For a brief reference to the Manopostiac antiquities in a larger study of nineteenth-century archaeology, see Adam Sellen, “Giving shape to the past: Pre-columbia in nineteenth-century Mexican journals,” *Boletim do Museu Paraense Emilio Goeldi. Ciências Humanas*, 12:2 (2017): 359-375.

⁷ Personal communication, February 2019. For further scholarship on the codex, with particular emphasis on the iconographic and mythological elements, see Ferdinand Anders, Maarten Jansen, and Gabina Aurora Pérez Jiménez, *Origen e historia de los reyes mixtecos. Libro explicativo del llamado Códice Vindobonensis* (Mexico: Fondo de Cultura Económica, 1992).

things acquired a place in the museum, an inventory number, a provenance associated not so much with the place where they were found, but with a major preconquest culture, and iconographic identification, in line with the pantheon of deities -- Tlaloc, Ñuhu Savy -- that articulate a common Mesoamerican identity. In this account, archaeological sciences recover antiquities' supposedly intrinsic meanings and claim them as matters of fact and as increasingly objective proofs of Mexico's ancient past. In turn, the history of Mexican archaeology has told the history of the collection at the MNA mostly as one of the smooth unfolding and unveiling of a national essence. But the process by which preconquest antiquities become stabilized as metonyms of the nation's past is also a process of loss, entailing the erasure of all kinds of "superfluous" knowledge about the practices, gestures, obstacles, contradictions, and premises which made it possible to ferry things across geographic, conceptual, and linguistic spaces and regimes of use, in order to put them on display in their permanent state-of-the-art at the museum.

This essay opens a breach in the more teleological narratives that have told the museum's history and that of its objects. First, by pausing a fast-paced narrative at a specific moment, to reconstruct the collection of the two ceramic figurines from Manopostiac in 1843, as a case study illustrative of nineteenth-century collecting. Second, by introducing into this study things and people usually left out of archaeological histories and displays: boats, horses, scientific instruments, wood samples, plants, books, *tepalcates* (ceramic fragments), fishing traps, shrimp, waves, wind, engineers, indigenous guides, investors, and bureaucrats, among others. I envision this essay as a proposal of sorts for a series of display cases, each of them bringing together things whose uses and meanings were entangled at different moments and in different places with those of the two Manopostiac antiquities. Specifically, I try to imagine two such kinds of sites, with their sets of practices and their material, social, and discursive densities: the southern isthmus, where the "idols" were used by local peoples and collected by surveyors from the capital; and the centers of calculation -- on the move across the isthmus, in Mexico City, and in London --, where scientists and investors resignified the idols and other objects collected in Tehuantepec as elements in new narratives of progress and modernity.

My objective is not to construct a seamless narrative; I bring together objects and fragments of objects and stories as a way of exploring the premises, dissonances, and contradictions that shaped collecting in mid-nineteenth century Mexico, to make visible the regimens of exclusion and inclusion that determined what kinds of things were worth gathering

in the museum, and inquire into the contested uses with which these things were invested by different actors. How some uses came to prevail over others is key to understanding what kind of museum was being built and how it came to be. Ultimately, what drives this essay is not exclusively antiquarian curiosity: indeed, exposing the conceptual and ideological buttresses that fix and sustain things as objects of collections is a way of reminding ourselves that things can be made public again, that is, available to a multiplicity of uses and viewpoints.⁸

The night of the broken idols

After an arduous journey from Mexico City, the Tehuantepec survey commissioners arrived at the southern tip of the isthmus on May 28, 1842.⁹ For some months, they took up residence in San Mateo del Mar, one of the four Huave villages that articulate a complex landscape of river beds, lagoons, and sand bars, on the Pacific coast (Figure 4). These were treacherous waters, as Hernán Cortés had found out when he launched an expedition to the Californias from here, only to witness one of his two brigs smashed against the rocks.¹⁰ The wreck was likely on the surveyors' minds as they sought to establish safe passage through the lagoons to the entrance of the projected canal. They spent some months in these regions, carrying out careful measurements of all kinds.

[Insert Figure 4 near here]

To determine elevations, they took as reference point the top of the island of Manopostiac, which rises 200m in the middle of the Divenamar lagoon, and sought the help of the villagers of San Mateo to cross the lagoon and set up signals on the island. The villagers refused to help and gave in only after receiving unspecified threats. Once they delivered the surveyors across the lagoon in their precarious boats – which, Moro is surprised to notice, lacked oars -- , the villagers could not be persuaded to venture onto the island to help set up the signals. The engineers hiked uphill alone, and after completing their work, returned with two clay “idols” and an incense burner, which they found in a cave. The Huave boatmen seemed surprised by the removal of the “idols,” but, Moro insists, their surprise was feigned and they astutely refused to answer questions about the objects. When the boats finally returned to San Mateo, news of the

⁸ Bruno Latour, “From Realpolitik to Dingpolitik: an Introduction to Making Things Public,” in *Making Things Public: Atmosphere of Democracy*, edited by Bruno Latour and Peter Weibel (Cambridge, MA: MIT Press), 2005, 6.

⁹ Moro, *Survey*, 15.

¹⁰ León, 8.

displaced objects was met with despondency among the villagers, who went as far as to “steal ... one of the idols.” The item was recovered soon after, Moro writes reassuringly, and one might add, without even as much as a touch of irony.

Some days later, after “one of the strong winds that reign on the coast of Tehuantepec” blew down one of the signals, the surveyors returned to Manopostiac. This time they carried out a more detailed inspection of the place, expecting to find more antiquities. They were rewarded with the two hollow ceramic figurines now in the MNA, two cross-legged clay figures, and two small ceramic recipients – the latter, judged to be of modern manufacture. Candle wax and a withered plant were found near the cache of objects, meaning they were being used ritually at the time of the survey. When the boats made their way back to the village that night, the wind picked up; as a result, some of the antiquities were smashed to pieces, so small that the objects could not be fitted back together. The two hollow ceramic figurines survived the boat trip.

Moro ends his account of the episode with a brief description of the island of Manopostiac, as he tries to explain why it could have served as a depository for idols, even before the Huaves settled in the southern isthmus, preceding the arrival of the Spaniards.¹¹ Alluding to a manuscript the surveyors collected during their stay in the isthmus, Moro recounts that Cosijopi, the king of the Zapotecs, offered a “solemn sacrifice to the their greatest idol, called the Heart of the Kingdom, which was placed on the island.”¹² Is Moro suggesting that the “idols” were of Zapotec manufacture and that the Huaves repurposed them for their own uses? Did this hint of a suggestion, which, by the next century, was taken to be solid truth, make it easier to justify the removal of the idols because the Huaves had in turn taken the objects away from the rightful owners? In any case, the island seems to have held an important place in the cultural, mythical and religious geography of various peoples that crossed paths with each other in the southern isthmus. For the Zapotecs, it was the “Enchanted Hill”— the meaning of “Manopostiac”. For Moro, the reason for the island’s religious and mythological relevance was geological. Of volcanic origin, it is composed of slabs of green syenite rocks that clash against

¹¹ Moro ventured the hypothesis that the Huaves were descendants of the Incas and had arrived in Tehuantepec in the course of their northern migration. The common consensus among archaeologists and ethnographers today is that the Huaves branched off from the choles in Chiapas. See Alejandro Castaneira Yee Ben *El paso mareño: la interacción huave en el istmo Sur de Tehuantepec*, 2008, <http://www.famsi.org/reports/06061es/06061esCastaneira.pdf>, accessed June 20, 2019; and Saúl Millán, *Huaves* (Mexico City: Comisión Nacional para el Desarrollo de los Pueblos Indígenas, 2003).

¹² Moro, *Ateneo Mexicano*, 1 (1844), pp.; Moro, *Survey*, 113. Moro gives no further details about the identity or provenance of the manuscript.

each other, to produce metallic sounds, which the Huaves compare with the tolling of church bells.¹³ The Huaves held Manopostiac to have special powers and they ventured there, crossing the turbulent lagoon in their “imperfect canoes,” to pray to their ancient gods and ask for rain for their “miserable harvests.” They did so with the tacit permission and indolence of the local Catholic priest, who encouraged these practices instead of extirpating them. In Moro’s account, then, the displacement of the “idols” from the cave on the island of Manopostiac to the museum in Mexico City would come to mean a passage of sorts from darkness to light, from secrecy to openness, from superstition to reason, from abandon to care and conservation.

Not all the objects collected on the island made it into the museum, however; some, as we saw, were smashed beyond recognition during the stormy night crossing. This episode is not exceptional; stories of collecting in the nineteenth century often include references to objects shattered in the process, sometimes intentionally. Especially stirring is the account of the removal of antiquities from the ruins of Metlaltoyuca, in Puebla, in the context of another survey commission, some twenty years later, when their Totonac carriers threatened to whip and hurt the objects because they allowed themselves to be carried away. As one Totonac man supposedly berated an idol: “You are a bad god because you let yourself be taken away; I will ask the other gods to come with the entire village to whip you. In the meantime, take this coin, so you will not harm us.”¹⁴ It is difficult to know whether reports such as this, by scientists from the capital, can be taken at face value, but, to the extent that they can, they reveal the types of affective economies at stake in the translation of an object from one place to the other.

Other times, things shatter “accidentally,” as was the case with some of the objects collected on Manopostiac island. One of the most glaringly unapologetic blind spots at the center of Moro’s story is the fact that removing antiquities, which had resisted the passage of time for centuries, in the name of safekeeping them, undoes them. It is not common to exhibit bits and smithereens of objects beyond recognition in museums, so the surveyors left those behind, to be washed away by the next tide. For the sake of our imaginary display, though, let us include the broken idols together with the more complete hollow ceramic statues from Manopostiac, as a

¹³ The bell sounds produced by the island’s geology resonate with the importance of bells in Huave cultural traditions, see Elisa Ramírez Castañeda, *El fin de los montiocs* (Mexico City: INAH, 1987), and Alessandro Lupo, “El vientre que nutre y devora. Representaciones de la tierra en la cosmología de los Huaves del istmo de Tehuantepec,” *Anuario. Centro de Estudios Superiores de México y Centroamérica* (2002): 357-379.

¹⁴ Ramón Almaraz, *Memoria acerca de los terrenos de Metlaltoyuca* (México, Imprenta Imperial), 1866, 19.

reminder that destruction awaits all the objects in a museum. Not just complete or partial material destruction that is the fate of all things, but a more profound form of ontological shattering: bringing a thing into a collection smashes it beyond recognition by imposing on it exclusive meanings and a new logic of use. Whatever powers or affects they might have held for the Huaves, once removed from the isthmus and brought into the museum, objects of cult, ritual, or everyday life are transfigured into the objects of an archaeological science: cleaned of wax remains and of the withered plants that had stuck to them, they are drawn, described, interpreted, circulated, displayed, and compared with other objects. The “idols” of Manopostiac become antiquities in the National Museum.

Wastelands and resources

After returning to Mexico City, Cayetano Moro produced the *Survey of the Isthmus of Tehuantepec*, which was published in London in 1844, by Ackermann & Co., one of the most prestigious and prolific editors of books on Latin America. The *Survey* is an unveiled attempt at publicizing the advantages of building a canal through the isthmus; 188-pages long, it is a hybrid text, seeking to provide prospective investors with information of all kinds. It comes with an annex with transcriptions of official documents -- government decrees which granted Garay sole proprietorship of wastelands up to thirty miles on both sides of the canal, placed 300 convicts to work on the canal under his direction, and granted him exclusive privileges to execute the project, collect tolls for the following fifty years, and settle colonies on both sides of the canal.¹⁵ The most extensive section of the *Survey* presents geological and topographical studies of the region, designed to underscore the feasibility of an eighty- km passageway, which would connect the lagoons on the Pacific shores of the isthmus to the Coatzacoalcos river, via a system of rivers (specifically the Ostuta and the Chicapa) and trenches, and from there, taking advantage of the course of the Coatzacoalcos, into the Gulf of Mexico. The proposal for the canal includes financial projections, which look to the Caledonian canal in Scotland, built at the beginning of the nineteenth century, as reference. The final estimate, in French francs, comes to 85 million and takes into account such variables as the number of locks and the cost to open trenches through different kinds of soil, while keeping in mind “what is actually paid in Mexico and the

¹⁵ Moro, *Survey*, 155-188.

United States for similar work in soils analogous to that of the isthmus.”¹⁶ The canal through the isthmus would be cheaper than the Caledonian canal, estimates Moro, partly because the land on both sides of the Mexican canal was mostly “wastelands,” partly because where property claims did exist, land could be bought cheaply, at least a lot more cheaply than in Scotland. Drawing on units of measurement used in different places – such as French francs, kilometers, cost of labor in the United States, and cost of land in Scotland --, Moro translates the construction of the canal in a language commensurable with that of international speculators and investors.

The canal is not just cheap and easy to execute. A passageway between one ocean and another, it cuts through fabulously rich lands, and Moro dedicates a substantial part of the *Survey* to unveiling the isthmus’s hidden treasures – its climate, natural productions, and inhabitants -- before the would-be prospectors’ eager eyes. He praises the fertility of its soil, the mildness and health of its climate – “precisely in those localities where the assistance of European workmen would be required” (the implication being that most Europeans wilted in the hot and humid climate of the tropics) --, and the density and fitness of its local population, especially in the southern regions, where people were most needed “for the purpose of cutting a canal.”¹⁷ The canal would improve on that fitness, Moro hints throughout: besides a marvel of engineering, it would be a work of social engineering, which would transform an unskilled population into an effective labor force. Moro has high praise for the Zapotecs, whom he considers to be “superior to any other republic [of *indios*]: intelligent, industrious, docile, and joyous [...] as a result of mixing Zapotecs with the European race.”¹⁸ Zapotec soldiers had lent the commissioners help with some of the measurements and Moro experienced directly their “wonderful degree of intelligence [...] in a very short time, [they] became as proficient as could be wished.”¹⁹

The other ethnic groups in the southern isthmus gave Moro less ground for optimism. He found the Mixes, towards the sierras, to be “degraded and ignorant” and “notorious idolaters.” Still, they were “given to agriculture” and cultivated plantains, maize, beans, and sugar cane, so, Moro hoped, they would become field hands in the foreign colonies established once the canal was underway.²⁰ As for the Huaves, Moro describes them as “well-formed and robust, but so

¹⁶ Moro, *Survey*, 81.

¹⁷ Moro, *Survey*, 99.

¹⁸ Moro, *Survey*, 94.

¹⁹ Moro, *Survey*, 19.

²⁰ Moro, *Survey*, 94.

grossly ignorant as to differ little from a savage tribe,” who went about “habitually in a state of almost complete nudity.” Unlike the Mixes, the Huaves did not practice agriculture, which, according to nineteenth-century social science, meant they had not yet mastered the most basic steps in the civilizing process. “Their industry,” writes Moro, “consisted of little else than fishing and even this they can only do by means of sweepnets; with the produce of their fisheries, they carry on extensive trade, although not possessing proper vessels to venture into deep water, and being ignorant of the use of the oar, they can only frequent those spots which from their shallowness offer little dangers, such as marshes, and the margins of lakes and the sea.”²¹ One only wonders what role the Huaves would play in the human economy of the future canal, but there is a sense that better technology might improve their lot, making it possible for them to carry on fishing on a larger scale.

Moro’s inventory of Tehuantepec’s natural wealth has a lot in common with the wonder-eyed natural histories of the sixteenth and seventeenth centuries that bore testimony to the fabled riches of the New World. Like those earlier writers, Moro finds himself bedazzled, at odds with language, as he tries to collect in words that which he sees: “it is impossible to describe with effect the luxuriance of the vegetation,”²² “the luxuriance and majestic appearance of the forests [...] are beyond description,”²³ “[the forests] exhibit a truly monstrous vegetation, of which ocular inspection alone can give an adequate idea,”²⁴ he exclaims again and again. He resorts to hyperbole when nothing else would do, so references to natural “luxuriance,” “exuberance,” “monstrousness,” and “astonishing beauty” punctuate the text, line after line, page after page. Among Tehuantepec’s “treasures of incalculable value,” Moro lists “iron of excellent quality” in the southern subsoil, and gypsum, petroleum, and coal in the north.²⁵ Fauna includes a “truly astonishing variety and quantity of fish, as well as a considerable number of tortoises of various kinds.”²⁶ The southern coasts boast “valuable tortoise shell, pearl, and coral in abundance.”²⁷

Moro’s highest praise is for the region’s plants, especially its precious woods and medicinal plants: “On approaching the sierra, the vegetation is more vigorous and the brazil-

²¹ Moro, *Survey*, 92.

²² Moro, *Survey*, 102.

²³ Moro, *Survey*, 121.

²⁴ Moro, *Survey*, 121.

²⁵ Moro, *Survey*, 121.

²⁶ Moro, *Survey*, 106.

²⁷ Moro, *Survey*, 106.

wood becomes very common. The *granadillo*, the mahogany tree, the *colpachi*, the bark of which is a well-known febrifuge, and the dragon-tree begin to make their appearance as well as many other shrubs unknown to me that yield resins and balsams, to which the natives ascribe the most marvellous virtues.”²⁸ He concludes that the forests “abound with the finest and most precious woods, which without hyperbole, might supply the whole of Europe.”²⁹ Fruit species, like vine, plantain and *Theobroma cacao* also “luxuriate here,” as do more ordinary species of trees, like pines, suitable for construction; during colonial times, Moro reminds the reader, the Spanish government made extensive use of pine from this region to build masts.³⁰ Besides supporting an abundance of endemic plants, the soil and climate of the isthmus prove favourable to imported species, such as indigo and sugar-cane, while “those tracks of land which are protected from the winds produce cotton of superior quality.”³¹

The isthmus is ripe with the promise of wealth. But natural or demographic abundance is nothing if not put to “proper use.” As Moro insists throughout, “the first impression produced in the minds of those who visit [these lands] is the immense advantages which a prudent speculator might derive from the proper use of their rich produce.”³² The way he sees it in 1842, however, the riches of the isthmus—its people, plants animals, and subsoil—lie unrealized, “in a waste and unproductive inertness.”³³ It is relevant to remember here that the lands granted to Garay y Garay on both sides of the projected canal are referred to as “wastelands,” *terrenos baldíos* in Spanish. The possibility that these lands were neither “wasted” nor “barren” but were probably being worked collectively by local peoples made little or no sense to the government and to the survey commissioners, just as it seemed preposterous that cacao or mahogany trees were not being exploited massively or that antiquities would remain hidden in a cave. To become meaningful under the logic of use of the nineteenth-century state, lands, trees, minerals, people, and antiquities would have to be reconfigured and reclaimed economically, socially, politically, and scientifically as resources.³⁴ The survey of the isthmus is a first moment in this process of reconfiguration and, ultimately, an instrument of state-making, allowing for the state to exercise

²⁸ Moro, *Survey*, 101.

²⁹ Moro, *Survey*, 122.

³⁰ Moro, *Survey*, 103.

³¹ Moro, *Survey*, 101.

³² Moro, *Survey*, 122.

³³ Moro, *Survey*, 107.

³⁴ Emma Elizabeth Ferry and Mandana Limbert, “Introduction,” in *Timely Assets: The Politics of Resources and Their Temporalities*, edited by Ferry and Limbert (Santa Fe: School for Advanced Research Press, 2008), 5.

action at a distance, by reaching – through infrastructure, experts, bureaucrats, and colonists -- into an otherwise remote region, in order to explore, inventory, organize, manage, exploit, and speculate with Tehuantepec's riches.

Theodolites³⁵

To survey is to look a certain way, to examine, to record, with the purposes of constructing a plan, a map, or a description. A survey is both a *modus operandi* and the result of that *modus operandi*. The *Survey of the Isthmus of Tehuantepec*, Moro would have us persuaded, is achieved by looking through precision instruments and is the sum of the measurements carried out with those instruments. It is not arbitrary, therefore, that Moro begins his *Survey* with a list of the instruments, complete with the names of their makers, whose international reputation for reliability stands as a guarantee of the reliability of the survey itself:

We arrived at Tehuantepec on the 28th of May and proceeded immediately to examine the state of the instruments which were to be used:

1. A theodolite beautifully constructed by Mr. W Cary of London, but with only one telescope, and of small size, its diameter being only 0,127 meters.
2. A sextant of Gambey of 0,20 in radius.
3. Two ditto of Chevalier, of 0,15 in ditto.
4. Another of Cary's, of 0,13 in ditto.
5. A good level with telescope, of unknown make.
6. Two barometers by Cary.
7. Two pocket chronometers, one by Roskel (no. 171) and the other by French.³⁶

Many of the instruments had suffered some damage during the journey from Mexico City -- the vertical axis of the theodolite had been bent; the barometers had filled up with air -- and the commission had to spend some time fixing them.³⁷ To make matters worse, the rainy seasons had started and cloudy skies made it difficult to perform the astronomical observations necessary to determine latitudes and longitudes; even more troublesome was the "dense flickering vapour

³⁵ A theodolite is an instrument used for surveying; it is fitted with a moveable telescope which measures the horizontal and vertical angles between objects in order to position them in a plane.

³⁶ Moro, *Survey*, 15.

³⁷ Moro, *Survey*, 15.

[which] hid from view the objects which served as guides, whilst the refractions, especially the lateral ones, produced the most strange illusions.”³⁸

As readers, we delve into the *Survey* and forget about the mirages and distortions on which it is built; the survey operates on the conceit that “fugitive landscapes” – overspilling nature and watery illusions -- can be fixed as abstract numbers and as standardized annotations.³⁹ Geography is stabilized into homogeneous astronomical tables of longitudes and latitudes for specific sites; the rugged topography of the isthmus is rendered as a list of altitudes, obtained through triangulations and barometric measurements; villages appear as population statistics, that count both people and domestic animals (mules, horses, ox, and cattle); the diversity of soils and subsoils is organized as inventories of minerals and as differentiated costs of excavation. Like the hidden “idols” of Manopostiac, the dormant assets of the isthmus are transformed by the survey: translated into the standardized language of universal rationality, they are made visible and intelligible and are made available for new forms of use.

There is nothing exceptional about the fact that the Tehuantepec survey commission collected antiquities side-by-side with charts, maps, inventories, rock and wood samples, and plants. After all, in the course of the nineteenth century, antiquities arrived at the museum in Mexico City in the wake of larger enterprises, whose explicit mission was not archaeological or antiquarian. Nor were such practices of collecting specific to Mexico, but were the case for museum objects collected worldwide. Still, the fact that someone like Moro took the time to collect, care for, and transport fragile ceramics, and then to write about them, when there were much more pressing issues to worry about – such as the welfare of his delicate instruments, for instance --, should not be taken for granted. It speaks to a growing interest in Mexican antiquities in the mid-nineteenth century. At the same time, collecting antiquities and producing knowledge about the natural riches are embedded in the same logic of resource-making that is at the heart of the survey of Tehuantepec.

Moro’s anecdote about the removal of the Manopostiac “idols” makes a strong case for the advantages of building a canal through the isthmus, which would turn waste into profit. For Moro, taking away “idols” is a prelude to usurping “wastelands;” both forms of seizure are

³⁸ Moro, *Survey*, 19.

³⁹ For cartography as a project of fixing “fugitive landscapes” on a space defined by the universal laws of science, see Raymond Craib, *Cartographic Mexico. A History of State Fixations and Fugitive Landscapes* (Durham, NC: Duke University Press, 2004).

justified by the fact that the Huaves do not know how to make right use of lands or antiquities and, in fact, might not even be their rightful owners. Untilled lands, unexploited natural riches, and the worship of hidden “idols” are incriminating proofs: measuring the distance between the Huaves and the modern nation that was being forged, they function as an index of superstition, ignorance, irrationality, and savagery. Seizing their “idols” would be a way to improve on the Huaves’ uncivilized condition, to make them a little bit more modern. By an inverse logic, once placed in the museum in Mexico City, the Manopostiac “idols” become antiquities, meaning, they are relegated to a remote past – even though, it was obvious they were still in use when the commissioners trekked up the island.

The National Museum of Mexico functions, like the canal, as a technology for imagining and shaping the nation. The canal promises it a profitable future; the museum endows it with a past. The logic of resource making – that is, the logic of colonial appropriation of lands, trees, and harvests, under the guise of moral and material improvement – also operates in the transformation of “idols” into antiquities. For the purposes of our imaginary exhibit, let us assemble together, in the same display case, the hollow ceramic statues from Manopostiac, wood samples, fruit, rocks, and photographs of the isthmus’s local population, as well as the instruments and technologies – theodolites, maps, inventories, and charts, for instance -- that operated their transformation of untapped riches into national resources. Together, they make manifest the ways in which collecting in the mid-nineteenth century was intimately implicated in the construction of new forms of expertise, predicated, as Timothy Mitchell has suggested, on the elaboration and exploitation of difference and exclusion, and on the delineation of boundaries between nature and technology, between past and present, between objects and their value.⁴⁰ At stake is a binary rhetoric, of the kind used by the Tehuantepec commissioners and evoked again and again in the literature of modernization, which hinges on the distinction between the cultivated and the uncultivated, broadly defined: unexplored riches vs. natural resources; inert “wastelands” vs. agricultural fields; superstition vs. reason; backward, isolated Indians vs. scientific experts who speak the language of numbers and profits and socialize around common interests in antiquarianism and ethnology. Ultimately, these distinctions are held in place by an

⁴⁰ For my description of expertise, I draw on Timothy Mitchell, *Rule of Experts. Egypt, Techno-politics, Modernity* (Los Angeles: University of California Press, 2002), 9.

incontestable faith in Western science – as defined by its relation with material progress and by its use of scientific instruments –, which justifies the rejection of all alternate forms of use and knowledge about things and becomes a precondition for possession.

Fishing traps

So far, to imagine new possibilities for displaying the two Manopostiac antiquities, I have chosen objects that were associated, directly or indirectly, with their removal and with their arrival in the Museum in 1843. All of these objects are present, in some context or other, in the reports of the survey commission, and they uphold but also unwittingly question the premises and methods of nineteenth-century science. There are, however, other objects which belonged to the Huaves, but did not make it into the museum or into the texts of the commission. It is possible they might not have been seen by the surveyors, maybe because they were nowhere in sight at the time the commission visited the isthmus or maybe because the surveyors did not know what to make of them. These objects might have contradicted the survey narrative or might have been of little use to it. Such is the case with the Huaves' fishing devices, about which Francisco de Burgoa, a seventeenth-century Dominican chronicler, wrote with great wonder and admiration:

The Huaves have one thing worthy of extreme admiration for the ingenuity of its design: shrimp fishing, which takes place year after year in the village of San Francisco [...]. When with the rigor of autumn, with the northern winds, the cold season starts and waters begin to rise, and [...]the currents of this lagoon also swell, until they reach the village houses, here, in the sand, [the Huaves] assemble the structures for trapping these crawling water creatures. Using many straight reeds, each about a vara long, they build extensive fences, fixing them into the ground and leaving a large enough entrance, through which the shrimp come in, riding in with the water. After passing through the “door,” the shrimp separate into many “streets”, each of them with a variety of turns, like those of a snail, [built] with so much genius and art, that I confess, it took me a long time to understand how they work. Once inside, the shrimp, driven by the current, enter those canals, swimming while the current lasts; but when the water ebbs, draining out among the reeds, it leaves behind these little fishes, stuck in the sand, and they cannot return because of the loops and windings through which they came in. This happens at night and

when the sun goes up, it warms them up and kills them. This fishing lasts during the month of November.⁴¹

Burgoa's detailed description of the traps highlights the technical expertise of the Huaves. Where, by the mid-nineteenth century, the survey commissioners see lack and absence – precarious boats that lacked oars and inefficient fishing and product distribution --, the seventeenth-century chronicler sees design, dexterity, genius, art. Burgoa goes on to explain that the Huaves had little choice but to perfect their fishing skills: as latecomers to a contested geography of conflicting imperial claims which pitted the Mexicas against the Zapotecs, the Huaves carved out a place to live in the southernmost tip of the isthmus, where the salt waters of the Pacific meet the sweet waters of the lagoons. This did not mean, as one would imagine, that the Huaves were relegated to a backwater in any sense; they occupied a strategic site on the densely transited Mexica salt route.⁴² It did mean, however, that they “lacked that principal form of sustenance, maize,” writes Burgoa, so “necessity forced them to find it in the lagoons, which abound in fish.”⁴³ Fish, then, became the Huaves' main food source, and they exchanged it for corn and other agricultural products; the *Relaciones geográficas* of the sixteenth century show them exporting fish and shrimp,⁴⁴ and they continued to do so at the time of the 1842 isthmus survey, as documented by Moro. Still, despite witnessing first-hand the Huaves' extensive trade in maritime products, it is their “miserable harvests,” that is, the absence of agriculture that the surveyors take as an index for placing the Huaves on the scale of civilization: on the basis of this evidence, the commission decides they are a savage and backward tribe. This criteria for classification persisted into the twentieth century, when maize-based agriculture was used to define the confines of Mesoamerica. Only recently have scholars proposed less rigid definitions, to suggest the existence of “complimentary economies,” making room for a group such as the Huaves, who “developed a littoral culture, specialized in the use and appropriation of water resources” and carried on exchanges with surrounding agriculturalist cultures.⁴⁵

For the Huaves, then, history meant a very particular watery landscape and a specialized way of inhabiting it. The very name “Huave,” of Zapotec origin, derogatory in meaning and

⁴¹ Burgoa, cited by León, *Catálogo*, 8-9.

⁴² Millán, *Huaves*, 17.

⁴³ Burgoa, cited by León, *Catálogo*, 8. Castaneiro Yee Ben (43), reinforces Burgoa's observation by pointing out the fact that the Huaves have a an ample vocabulary to refer to maritime species, but few words to classify corn.

⁴⁴ Millán, *Huaves*, 17.

⁴⁵ Castaneiro Yee Ben, *El paso mareño*, 43.

translating as “putrefied by humidity,” making reference to a way of living with water.⁴⁶ Nowadays, the Huaves call themselves *montioc*, which means “thunder” in their own language, in reference to another important natural and mythological presence in their culture.⁴⁷ It is not just the presence of water that shaped the Huaves, but also the need to adapt to and use advantageously a continuously changing landscape, where the confines between land and water, brackish and sweet, fluctuate wildly with the tide. Writing in the middle of the nineteenth century, the French traveller and antiquarian Charles Etienne Brasseur de Bourbourg described the confluence of elements in the following terms:

In various places, to the north of the superior lagoon, as around the salt flats of Juchitan Yavizendi, to the east of the lagoon of Waxlan-Diac, there is no shore properly speaking; the tide, pent up by storms, frequently floods the surrounding planes, where the wetlands are impregnated with salt and covered with aquatic plants, which grow between shrubs; the plain itself advances into the sea, at a slight inclination... and one cannot know for sure where the land begins or where the sea ends.⁴⁸

Brasseur’s description of the southern isthmus is a far cry from the cartographic certainties captured on the maps and in the reports of the survey commission. For, even after we account for broken instruments and for the optical illusions that frustrated the surveyors, what do the contours on the map refer to? They seem arbitrary if not referenced in real time: the time of the morning or afternoon tides, as well as the time of seasonal cycles, which produce further fluctuation in the relation between land and water. As recent ethnographic work has shown, the Huaves divide the year into three seasons: a rainy season between May and September, a cool and dry season, dominated by the Northern winds, from October to February, and a hot and dry season, dominated by the southern winds, between February and May. The beginning of each season is marked by special days on the liturgical calendar: the day of the virgin of Candelaria in February, Corpus Christi in May; in the case of the village of San Mateo, the dry and cool season is preceded by the celebrations of the patron saint, Mateo, on September 16. These festivities

⁴⁶ León, *Catálogo*, 3.

⁴⁷ Ramírez Castañeda, *El fin de los montioc*, 8.

⁴⁸ Charles Etienne Brasseur de Bourbourg, “Coup d’oeil sur la nation et la langue des wabi,” *Revue Orientale et Américaine* 5 (1861): 277.

often combine elements from Catholic rites with beliefs, traditions, and practices built around natural elements -- such as thunder, lightning, specific sites, and local fauna.⁴⁹

During their stay in San Mateo, the commissioners sought to explain the presence of “idols” on the Manopostiac island as a failure or indifference on the part of the Catholic church to curtail the superstitious beliefs of the Huaves. Painting the image of a passive, downtrodden, and savage people, who contented themselves with very little, Moro went as far as to conjecture that the Huaves returned to the island each time they needed to pray for rain for their “miserable harvests.” Harvesting, however, did not seem to have concerned the Huaves much. The arrival of the rains, on the other hand, did matter, for their fishing. Is it possible that the Manopostiac antiquities, broadly identified with rain and lightning, could have been at the center of rituals associated with the Huaves’ most important produce, fish? Could we then imagine placing antiquities next to fishing implements, such as boats, or the traps described by Burgoa, or the elaborate nets described by anthropologists in the twentieth century? This juxtaposition contests nineteenth-century oppositions between superstition and science, man and nature, past and present, which have been reified in a museum that stakes itself on the separation between archaeology (the past), on the bottom floor, and ethnology (the present), on the top floor. Far from a signal of Huave passivity or isolation from the dynamism of modernity, as the surveyors saw the “idols” on the island, these objects were powerful tools in a people’s struggle for adaptation to a very special landscape; like their fishing traps and nets, they activated a specialized economy, which still depends on skilled knowledge of when the waters should come in and when they should recede and of the specific combinations of salt, sand, and rain that will ensure survival and prosperity.

Conclusions

This essay is a proposal for bringing together a diversity of objects – antiquities, minerals, plants, scientific instruments, maps, and fishing implements, among others, in the same exhibit spaces. If at the beginning of the nineteenth century it would not have been farfetched to imagine these objects together in the space of the same cabinet or museum, by the end of the nineteenth

⁴⁹ See Castaneiro, Millán, Ramírez Castañeda, Alessandro Lupo, “La etnoastronomía de los huaves de San Mateo del Mar,” in *Arqueoastronomía y etnoastronomía en Mesoamérica*, 219-234, edited by Johanna Broda, Stanislaw Iwaniszewski and Lucrecia Maupomé (Mexico City: UNAM, 1991).

century, this became harder and harder to imagine. Nowadays, such an assemblage is not very probable, although some museums have explored the advantages of exhibiting objects by relating them to wider practices and discourses.⁵⁰ For the most part, though, antiquities, minerals, plants, theodolites, maps, and fishing traps are the objects of separate disciplines, stabilized by separate sets of norms, their meanings fixed by specific practices and methods. Hence, the question: what do we gain from imagining an exhibit that insists on placing these objects next to each other?

Ideally, this experiment would show that, while archaeology, anthropology, botany, astronomy, mineralogy, and geography have kept, for the larger part of the twentieth century, their objects apart from each other, the collection, study, and display of these objects are built on premises shared by all these different disciplines: the opposition between expert and lay knowledge, subject and object, man and nature, resource and waste, conservation and destruction, art and artefact. Many of these premises are still operational today in most museums, even as they are slowly beginning to erode.⁵¹ Yet, exposing the fact that all museum objects have been constructed by contingent logics of use and meaning should not lead us to take a relativist stance and assume they have all been created or constructed equally. They have not. Some objects matter more than others and it is by exploring how they came to be – by what combination of political, cultural or ideological factors they were shaped -- that we understand why and how they matter. Why were the Huave “idols” placed in the museum in 1843 while their fishing traps were not? What use does a nineteenth-century museum have for either? What political, racial, and cultural asymmetries are exposed when maps and charts are presented side-by-side with oral testimony about the features and local uses of land? What separates the measuring and observation rituals of nineteenth-century surveyors, as represented by sextants and telescopes, on the one hand, from the detailed knowledge of tides and seasons by the Huaves, as incarnated in seasonal rituals and religious celebrations? How do theodolites and fishing traps question and reinforce each other’s ontological stability as tools for knowing and

⁵⁰ Such was the case with the recent exhibit “Chimalli” at the National Museum of History in Chapultepec Park. For more on relational museums, see Chris Gosden, Frances Larson, and Alison Petch, *Knowing Things: Exploring the Collections at the Pitt Rivers Museum* (Oxford: Oxford University Press, 2008).

⁵¹ A recent temporary exhibit on the Golfo, in the National Museum of Anthropology, brings together objects from the permanent collection with archeological objects in the custody of local populations, among them the famous “Cascajal Block,” displaying the oldest writing in Mesoamerica. The exhibit closed in May 2019, and the objects were returned to their custodians.

using the world? As they interact, objects are made and unmade and the history of the museum is the history of successive moments of creation and destruction of particular objects.

Finally, it might be relevant to ask ourselves if experiments in putting together disparate objects such as the one I attempted here have any bearing, not just on how we understand the past, but also on how we intervene in the present. As I write, the lands of the *monti* are again the object of intrusion by engineers and economists from the “outside” world. Tehuantepec, famed for its strong winds, is now being harnessed to produce renewable eolic energy. Some of the arguments in favour of installing wind turbines hearken back to the logic used to promote a canal there in the nineteenth century: resources are free for the taking and it would be a waste not to do so; isolated communities will be more closely connected to the market economy. The project has been met with scepticism and distrust, and has provoked serious rifts between villages that chose to install turbines (in Santa María del Mar) and those that did not (in San Mateo del Mar). Some have argued that eolic energy interferes with currents and energy flows in the ocean and that, as a result, fishing has been affected. What assemblage of objects could make visible the tensions underlying this new project of modernity? What assemblage would make it possible to hear contending arguments on the project? Would such an assemblage find a place in the museum?