

NEW GEOGRAPHIES

GROUNDING METABOLISM
NEW GEOGRAPHIES 06

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Hassi Messaoud Oil Urbanism

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Metabolism, or the Limits of an Organicist Analogy

The modern transformation of the city, highly dependent on the mastery of territorial resources, was linked with the representation of cities as consisting of and functioning through complex networks of circulatory systems, the veins and arteries of which extended across the land and were to be freed from all possible sources of blockage.⁰¹ Metabolic analogies have long been operative in conceptualizing the geographic footprint of urbanism. Prompted by discoveries on the vascular system, the “ideology of circulation” drew on physiological analogies, but also mirrored the accelerating mobility conditions of capital, people, resources, and information.⁰² By the mid-nineteenth century, architects and planners began to speak of the city and of the territory using the scientific analogies of metabolism and circulation as key to spatial organization. Terms such as “hybrid natures” and “cyborg cities” have contributed to probing the legacies of modernist divisions between human and nonhuman, the social and the material, the city and nature. They convey the imperative for a simultaneous consideration of the production and reproduction of nature and power for “once we begin to speak of people mixing their labor with the earth, we are in a whole world of new relations between people and nature.”⁰³

Although significant, such concepts remain insufficient to theorize the political relations that underpin the harvesting of the earth’s materials and the formation of urban settlements.⁰⁴ Donna Haraway reminds us that discourses of biology and organisms have “a plot with a structure and function...fashioned into factual truth, with intentionality in narration.”⁰⁵ Biological metaphors instrumentalize the image of objectivity of science to ideologically explicit ends, in particular as they naturalize the politics of accumulation and circulation. They favor homeostasis, or a condition of balance of flows, to dismiss blockage, friction, and violence as the necessary corollaries of circulation. The image of objectivity that such scientific analogies perpetuate blurs the boundary between scientific

rationalization and social control,⁰⁶ between the political economy of circulation and the emergent forms of territorialities. Rather than the annihilation of territory by circulatory networks, territorial organization is necessary to ensure the metabolism of resources.⁰⁷

Resource Territories, Territorial Sovereignities

The exploitation of natural resources is grounded in forms of territories; it is enabled by a large infrastructural system to extract what is deemed “valuable matter” from the earth and by the sovereign’s authority to legitimize rights and demarcate zones of operation. Often operating in peripheral areas—regions that until the deployment of the industry were isolated from central power and unconnected to national and regional networks—the extractive logistics of resources “develop” the frontier by deploying roads, ancillary services, and security posts. Resources are not only spatially produced but also produce new spatial configurations. Resource outposts attract people with their opportunities for labor and other economic mobility; their associated structures of work, housing, and health and social services give a specific material shape to people’s lives. The resource system fixates itself in space and, in the process, materializes a territory—simultaneously epistemological and geographical—that harnesses its own geography of places and relations. In this framework, the resource system is a “technical zone,” a set of coordinated but widely dispersed regulations, calculative arrangements, infrastructures, and technical procedures that render certain objects or flows governable.⁰⁸

Historically, the management of natural resources has been mediated and enabled through the consolidation of power over nature in the form of the concession, a right granted by a central political authority to extract value. In rentier economies, which derive all or a substantial portion of their national revenues from the rent of resources, the management of resource metabolism is entrusted to the sovereign. The notion of national sovereignty is thus intertwined with the state’s control

of economic resources embedded in its land, operationalized to govern population and settle and secure the national territory. This is particularly significant for a socialist rentier state where the government relies completely on its oil revenues to cover public expenditures, not least its investment in housing, education, and the military. Far from leading to consensus and cooperation, commodified nature becomes at times an item of contestation inserted into often deeply unequal and unsettled sets of social relations, in which the state holds the monopoly of both violence and resources. Rather than abolishing or transcending the violence necessary for extracting resources, the character of rentier economies thus bestows the role of landlord upon the state. Hence the contradiction between the territory of the resource and that of the sovereign is not abolished but is taken to a higher level as “capital now faces the territory of the nation-state as the external obstacle to be conquered and internalized.”⁰⁹ The co-production of resources and the social order highlights resource geographies as sites where actors negotiate their political rationalities. From this perspective, territory is understood as a constitutive dimension of production, a tool for government, and a stake of contestation in itself, one that is being reordered by resource economies rather than eroded by metabolic flows. How does the state negotiate the circulators’ imperatives of the “least possible friction in space” with the territorial imperatives or promises of resource systems to fix population and settlement in place?

Hassi Messaoud

The history of Hassi Messaoud could be read as a mediation of the relations of resources, population, and security in the sovereign’s organization of territory, the contradictions of which are formalized on the extraction site. Hassi Messaoud refers to both Algeria’s largest oil field and the township that developed in relation to the hydrocarbon industry in the Sahara desert. Since oil was first discovered in 1956, central authorities have changed the administrative status of Hassi Messaoud, with every generation of urbanism responding to a persisting territorial question: What is the appropriate form of settlement of an industrial site that plays a strategic importance to oil flows and ensures a large part of the national economy?¹⁰ From its establishment by the French colonial administration through the two decades following independence in 1962, Hassi Messaoud was an industrial center managed by oil companies. Following the Algerian government’s desire to settle a permanent population in the Sahara, the 1984 administrative zoning

changed the status of Hassi Messaoud from an industrial center to an incorporated town with an elected assembly. Over the following decades, it became the archetype of a dual-town with a series of corporate “*bases vie*” (worker compounds) walled off from other town sections, often literally with bricks and razor wire. In 2004, the town had grown into the perimeter of oil fields and infrastructures representing what the government perceived as a “zone of major risks.” The town expansion as well as the desire of multinational corporations to secure their operations in the Sahara constituted the context for a 2004 government decree to relocate Hassi Messaoud away from the existing oil field-town grounds. The action plan froze the issuance of any building permit, public or private, for activities that were not necessary for oil operations. It launched as well the planning and relocation of the population to the New Town of Hassi Messaoud some 70 kilometers away from the existing town.

Although portrayed as a technological or engineering problem, the urban question of Hassi Messaoud is enmeshed in the state’s territorial politics. Hassi Messaoud is a space in which resource metabolism and population settlement have come into play, and in doing so they become “contradictions of space.”¹¹ On one hand, the space of resources favors metabolic analogies of circulation and energy flows. In this world-view, the territory is modeled as a network of industrial infrastructures—the oil field, pipeline, refinery—that extracts resources from the Earth, transforming them into commodities that support the national economy. On the other hand, population settlement requires fixity in space. It deploys buildings and land programs by which people attach themselves to the Earth’s surface, come to occupy firmly or permanently one place, and establish themselves as residents with political representation. Both projects of state territory aim at reproducing social relations through space; as they project their contradictory interests in a place, however, they become contradictions of space. At moments when population growth is perceived to put the economy at risk of friction or clogs, their moment of density—the town in this case—is diagnosed as a pathological territorial organism that requires excision.

The case study of Hassi Messaoud’s oil urbanism asserts territory as the inevitable couple of metabolism. Territory is the form of power over geography that interweaves political processes, material metabolism, and spatial form. The Oxford English Dictionary shows

that in the late sixteenth and early seventeenth centuries, “population” referred to “a peopled or inhabited place.”¹² The subsequent construction of population as an object of government dissociated population from place in favor of territory as a geographic appellation that ties the governor to the economy and security. It is “a rendering of space as a political category: owned, distributed, mapped, calculated, bordered, and controlled,”¹³ and as such is re-formed with every claim over space. “The relation to the earth as property,” as Marx claims in *Grundrisse*, is hence “always mediated through occupation of the land and soil, peacefully or violently.”¹⁴ In [Terror and Territory](#), Stuart Elden draws on two etymologies of territory: *terra* “piece of earth,” a terrain that sustains and nourishes the people, and *terrere*, “to frighten,” a place from which people are warned off, closely associated with the maintenance and survival of the state. The linkage between “terror” and “territory,” William Connolly insinuates, “is more than merely coincidental... To occupy territory is to receive sustenance and to exercise violence.”¹⁵ Territory becomes the object and site for the negotiation of the state’s extractive capital and public expenditures.

I. Saharan Industrial Center, 1958–1984

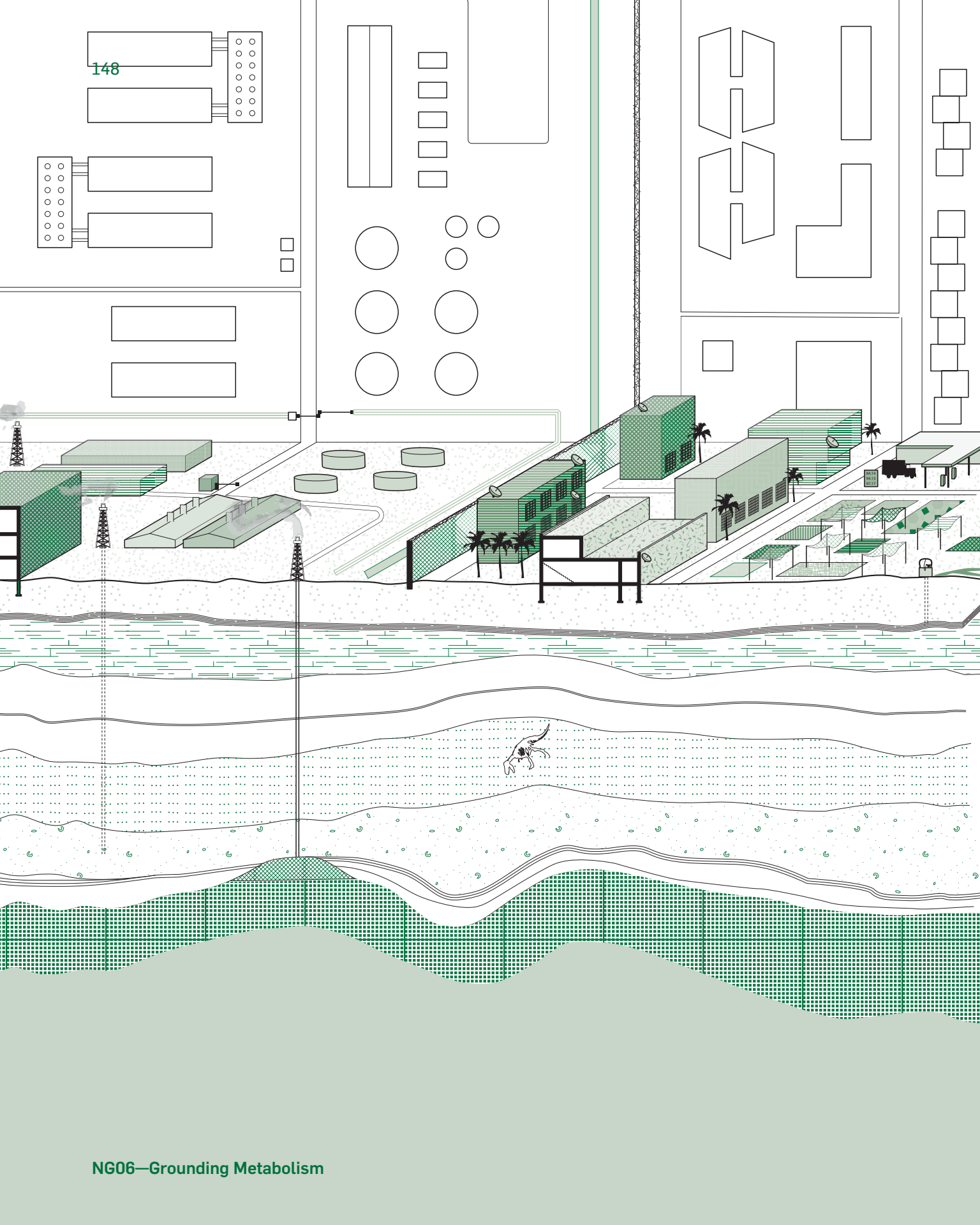
The French conquest of the Sahara in the nineteenth century aimed to secure the empire’s geostrategic interests in Africa and pacify internal revolts against colonial rule. The “poor” Sahara, or the Southern Territories, as the region was referred to in relation to the Algerian North, did not represent an economic interest in itself and continued to be portrayed as a “miserable” and “quasi-sterile” space for the first half of the twentieth century.¹⁶ The value of the Sahara shifted radically in the mid-1950s with the beginning of the armed Algerian revolution and the discovery of oil. For French officials, the Sahara represented the utopian optimism for the economic development of the *Métropole* (referring both to the metropolis and the European territory of France). “For the majority of French people, the Sahara and its 4 million km² represent the last chance for France to remain a major power,” noted a French official. “It is the ultimate hope for the Franco-African whole, the panacea of all ills.”¹⁷

The wealth of the hydrocarbon Sahara was predicated on the flow of material and labor into exploration fields and of the extracted resources out to markets. Hence, since the mid-twentieth century, the expansive hydrocarbon territory has been inscribed into circulatory networks. Prior to 1956 the Sahara had virtually no

tarmac roads.¹⁸ So the first major work in 1956 was the construction of 2,000 kilometers of roads and 7,000 kilometers of tracks, funded by regional authorities and the oil companies. Exports soon began first via a combination of a short pipeline and railway to the Mediterranean port of Philippeville (Skikda), to be replaced in December 1959 by a more efficient 400-mile 25-inch pipeline to a new oil terminal at Bougie (Annaba). Oil-producing regions were also connected to the air network through a series of airports: Hassi Messaoud (1957), Ouargla (1960), In Amenas (1962), and Hassi R’Mel (1962).¹⁹

The revised administrative status of the Sahara established new logistical nodes. Long under military rule, the Southern Territories and its inhabitants were reformed in 1957 into a setup similar to that of the North or the Métropole. In December 1959 and July 1960, two ordinances instituted the “industrial centers” of In Amenas and Hassi Messaoud and assigned their management to the newly established Organisation Commune des Régions Sahariennes (OCRS), whose mission was the “development, economic growth and social advancement of the Saharan areas of the French Republic.” Without being elected, the OCRS director held political and economic power over the organization of the territory.

The planning of the new centers posed a set of concerns. With the discovery of natural resources in its early days, the minister of the Sahara attested in 1958, “It is quite difficult to predict the future of these Saharian agglomerations. New explorations can still emerge in different places. The possibilities of expansion of a locality should not be followed up and the problem should be approached differently.”²⁰ The planning studies were conducted to enable the centers to receive a threefold increase in population or operate should growth fall clearly below these numbers. “In other words,” he concluded, “the planning projects in the Sahara should be conceived as living programs rather than fixed drawings, so as to anticipate new developments.”²¹ The corresponding spatial organization was the zoning of the center into sectors, programmatically assigned and with a set population density. The splitting of the oil field by the concession boundaries of the two operating French companies resulted in two camp settlements: the Maison Verte-CPFA in the north (currently known as Base February 24), and the Base Irara in the south. The industrial center had to compensate as well for the absence of agglomerations at short or medium distance and house the services and workers of the oil fields.



“The Miracle of the Sahara,” *Time* Magazine had reported in 1957, promised to “cure France’s chronic foreign-trade deficit.”²² Such a miracle, however, faced the reality check of the Algerian Independence war. Etienne Hirsch, head of the Fourth Republic’s economic modernization program, warned that the war against Algerian independence had become a literal road-block, with France’s economic prosperity depending on Algerian roads and labor. “Moslem rebel gangs,” *Time* reported, blocked vital routes to the Mediterranean, an implication that “without peace in Algeria, the Miracle of the Sahara could easily become a mirage.”²³

The long decolonization war led to Algeria gaining its independence from France in 1962. Shortly after that, Sonatrach was established as the national hydrocarbon company. The role of Sonatrach was initially limited to the construction of a third export pipeline, the first Algerian one, from Hassi Messaoud to the Arzew oil terminal on the Mediterranean, and progressively expanded to include all aspects of hydrocarbon exploitation—research, production, transformation, and commercialization—until the nationalization of the oil and gas sector in 1971. The nationalization of the hydrocarbon sector made the industry even more thoroughly bound up with national-level social and territorial agendas.²⁴ For the sovereign, the company and the hydrocarbon Sahara were the lynchpin of a self-contained heavily industrialized economy.

A series of administrative policies asserted the significance of the Sahara to the newly independent state. The Sahara was divided into nine *wilayas* (provinces), in relation to just two in 1962, and dotted with infrastructures such as hospitals, schools, universities, post offices, and banks. In 1965, The Algerian central authorities proclaimed Hassi Messaoud an “administrative center” to be governed by the central administration from the provincial capital in Ouargla, a status that Hassi Messaoud maintained after the nationalization of the industry.

II. Hassi Messaoud Commune 1984–2004

Owing to the tremendous growth of rents after the 1973 oil embargo, Algeria had ambitious plans to use its rising income from the hydrocarbon sector for the socialist modernization of its society and economy. The heroic model of industrial modernization was laid bare with the precipitous decline in oil prices and the intensification of socio-economic hardships in the 1980s. The absolute power of the hydrocarbon sector

was curtailed, with struggles among the state’s power factions leading to the decentralization of Sonatrach and the subdivision of many of its responsibilities into separate enterprises. Like other oil-exporting economies that had engaged in heavy industrialization, Algeria faced problems with pronounced territorial distributional effects as well as an acute housing crisis and a fast pace of urbanization.²⁵ The new slogan *Pour Une Meilleure Vie* (For a Better Life) aspired to reduce dependence on the hydrocarbon sector and reorient development toward previously neglected sectors such as agriculture, consumer goods, and social infrastructure. In this respect, the government sponsored agrarian reform programs and investments in rural housing to improve the quality of farm life and the stability of rural population. Soon after, in the 1985 plan “The Sahara at Horizon 2000,” the Ministry of Planning defined the fundamental objectives of relieving the acute pressure on urban housing and the Algerian coast and that by “redistributing population and activities” throughout the territory and making better use of the natural potential as well as the social advancement of the people and the country.

The potential economic opportunities of Hassi Messaoud incited the state to “develop” its productive hinterland and reinforce the presence of population over the diffuse territory. The limitations of the administrative center model had already been the subject of discussions in the 1970s. Hassi Messaoud was mostly tied to Algiers and the European capitals and did not offer a stable element for the future population. “The different nuclei are not the elements or a true urban ensemble,” noted the geographers Marc Côte and Claude Castevert in 1970. “The urban fabric remains loose or even absent, not because of distances but because of the nature of the parts that forbids all centrality its *raison d’être*.”²⁶ The Law of February 1984 on the territorial organization of national space lifted the exceptional status of Hassi Messaoud and zoned it as a municipality with an elected local assembly. The industrial oil zone was inscribed in national political representation. Following the change in its administrative status, Hassi Messaoud witnessed significant if unplanned growth. The political ascension of populist parties in the Sahara municipalities facilitated the acquisition of land at a nominal price and building permits in Hassi Messaoud. The town significantly grew in size and population during the 1990s, a decade when the highly secured city was one of the few secured sites in a country otherwise rocked by terrorism. Between 1987 and 1998, the population of Hassi Messaoud, not accounting for oil bases and informal settlements, grew thus from 11,428 to 40,368.

Figure 01. Hassi Messaoud core sample: a geological section [opposite] through the town.

III. New Town of Hassi Messaoud, 2004–
Following the 1990s “Black Decade” of terrorism, the state embarked on the double task of liberalizing the economy and building “social peace” throughout its territory. In negotiation with the International Monetary Fund, the revised economic policies of the 1990s aimed to provide more competitive terms to attract foreign partners into oil and gas exploration in Algeria. The increased presence of multinational partnerships with the state oil company, as well as broader concerns of the settlement and security of the Sahara, brought forth the desire to dissociate the urban population of Hassi Messaoud from the industrial grounds. Hassi Messaoud’s urbanization between 1984 and 2004 has mostly led to the uncontrolled growth onto the perimeter of the oil field, with some houses being built on pipelines and in proximity to oil infrastructures. In November 2004, Hassi Messaoud was proclaimed a “zone of major risks.” Commissioned by the ministry of energy and Sonatrach, the experts’ report defined risks of explosion, fire, contamination, and pollution that affect residents in areas adjacent to the petroleum installations. “These risks, should they advent, would cause the loss of human lives and the destruction of installations that have cost tens of millions of dollars.” The minister of Energy and Mines, Chakib Khelil, emphasized how important it was that Hassi became again what it was originally, a zone of oil exploitation. “The logistics base should be separated from *la base de vie*.”²⁷

The latest iteration, the project of NewTown of Hassi Messaoud, can be conceptualized at the intersection of two main lines for the state’s policies in the 2000s: the security of its strategic hydrocarbon interests and the “Reconquest of the Sahara” within the national plan for the development of new towns. The desire to relocate the population joined the national desire to operationalize regional development as “peace balm.” Although the incorporation of Hassi Messaoud ought to have brought it important industrial taxes from the oil operations, the town continued to be underinvested and presented little economic opportunities for its residents. Regional movements, such the Children of the South for Justice and the Movement of Citizens of Ouargla, protested against poverty, lack of provision of basic infrastructures, the nontransparent allocation of social housing, unemployment, and more broadly social exclusion from the state’s territorial contract. State institutions painted a similar picture. The 2007 National Report on Human Development explicitly referred to regional disparities and the unequal distribution of the

“fruits of development.” National planning schemes sought to balance the development of the Coast, High Plains, and the Sahara by establishing the new towns of Sidi Abdallah, Bouinan, and Boughezoul in the semi-arid areas south of the fertile coastal zone.

Born out of the concurrent desires for relocating Hassi Messaoud and establishing new towns, the Ville Nouvelle de Hassi Messaoud was promoted as a pole of innovation and productivity for renewable energy. The state has claimed a monopoly on the (violent) organization of space: the town was to be transferred out of the oil territory. The government declared Hassi Messaoud a matter of national interest, put in place a plan of action to secure the oil field of Hassi Messaoud, and froze all construction permits pertaining to activities that nonessential to the petroleum sector. A 2004 decree promulgated the delocalization of the population and the establishment of a new town, 80 kilometers from the existing Hassi Messaoud and equidistant to the other regional cities of Touggourt and Ouargla. The new city is projected to house around 80,000 inhabitants and occupy an area of 4,483 hectares, divided into an urban perimeter and a logistics activities zone. The regional governor in Ouargla was instructed to carry out the destruction of slums and illegal buildings erected in the oil zone and in the town of Hassi Messaoud. The compensation and relocation of the residents of Hassi Messaoud remains, however, a pending matter.

Conclusion
“Closely following the oil,” as Timothy Mitchell suggests, means “tracing the connections that were made between pipelines and pumping stations, refineries and shipping routes, road systems and automobile cultures, dollar flows and economic knowledge, weapons experts and militarism”—all of which, as Mitchell says, do not respect the boundaries between the material and the ideal, the political and the cultural, the natural and the social.²⁸ For the modern Algerian state, closely following the oil takes you to Hassi Messaoud. The genealogy of Hassi Messaoud’s statuses embodies the different territorial agendas in which resource metabolism was enmeshed in the state’s projects of population, economy, and security. The sociopolitical contradictions between the reproduction of resources (metabolism) and the reproduction of the population and workers (settlement)

Figure 02. Spatial genealogy of Hassi Messaoud: from [opposite] industrial center to town, and project for new town.

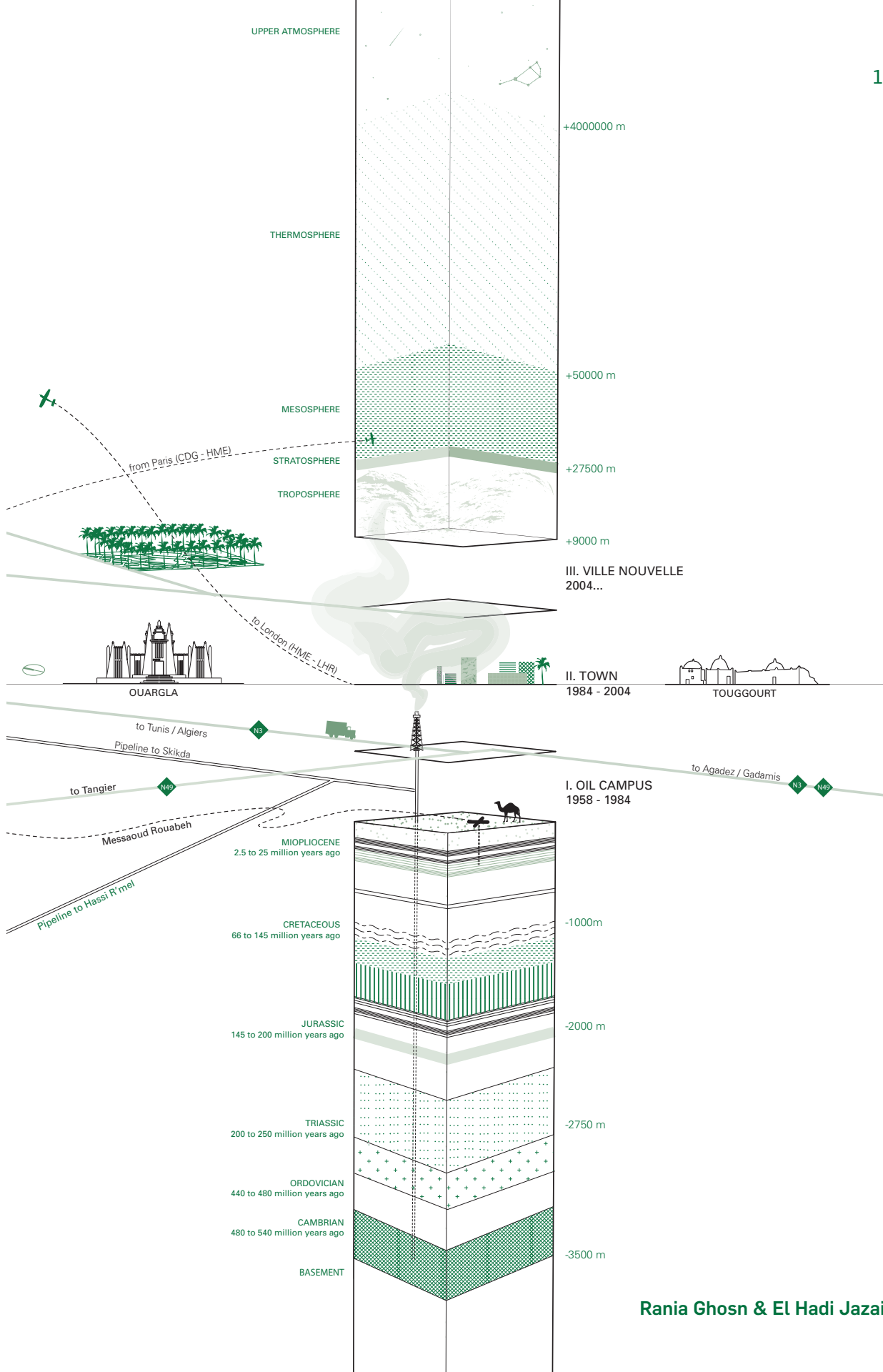




Figure 03. Landscapes of Hassi Messaoud: *base-vie* and torchers.

become negotiated in the space of resource urbanism. In the early years of oil development, the state favored a strategy of territorial exceptionalism to control the implementation of an idealized industrial site. From a deterritorialized site, Hassi Messaoud was gradually grounded in territorial population dynamics. Politically represented, the residents of the town of Hassi Messaoud could conceivably claim a larger share of the resource pie and become a nuisance in a region of high productive value for the state. The project for the NewTown of Hassi Messaoud is a displacement of the contradictions at stake on the ground by displacing the population, the dissociated attribute from the territory, as defined above.

Through the case study of Hassi Messaoud, we interrogate whether it is possible to conceptualize the landscape of resources (or *paysage*) by recentralizing the country (*pays*) and the worker of the land (*paysan*) in the organization of nature’s metabolism. Could we conceive of a Hassi Messaoud that negotiates the triad of *pays-paysan-paysage*? Otherwise the cities of Hassi Messaoud might be continuously fleeing the shadows of productive Hassi Messaoud. From this perspective, Hassi Messaoud becomes the ground zero of the

metabolic conceptualization of the city-territory, in which urbanization is a process of contiguous deterritorialization and reterritorialization through metabolic circulatory flows.²⁹The forms of territorial ordering associated with industrial bases, so vividly embodied by Hassi Messaoud, appear less as a spatial exception and more as an integral dimension of urbanism, in the sense that the securitization of industrial ecologies, the containment of risks and clogs, and the externalization of undesired costs have been the cornerstones of the urban condition.

Acknowledgments

The authors would like to thank the following individuals for their valuable contributions to the Hassi Messaoud visit: Ali Bouguerra, Mourad Zeriat, Salah Mekmouche, Yacine Laroui, Ouahiba Atoui, Hammoudi Moussa. We also thank Alexandra Chen for her graphic collaboration on this essay.

Notes

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