

Colonial and Postcolonial Logistics

Giulia Scotto

Introduction

This article addresses the logistical aspects of colonial and postcolonial governmental practices and the way in which such practices structured the African territory. In particular, it focuses on Zambia (Northern Rhodesia at time of British domination), a landlocked country located in the centre of Southern Africa, whose historical evolution, since it was conquered at the beginning of the twentieth century, is deeply intertwined with the discovery, extraction and export of copper and with the import of fossil fuel. It does so by presenting a series of episodes of Zambian history, from its foundation until the early postcolonial phase.

In the first part of the text, I introduce the concept of 'colonial logistics' intended as the modification of territories for military and political domination, and the extraction and export of resources. Through the observation of Northern Rhodesia, its foundation, its territorial delineation and the first planning of its capital city, the article demonstrates how European states, especially in the early colonial era, did not aim at governing the colonies with the same uniformity and intensity that was applied to their own territories, but rather to define a rational and controllable geography of lines and enclaves in order to efficiently control and exploit African resources. With the goal of efficiency, the logistical governmental mode of colonial power expanded the planetary infrastructure of capitalist accumulation and rearranged new territorial structures and hierarchies at different scales.

In the second part of the article, I show how, after independence, Zambia dealt with a complex geopolitical entanglement, partially inherited from colonial planning and partially generated by the end of direct forms of imperialism, which required the rerouting of the export and import of resources and the rebalancing of uneven territorial structures. To do so, the postcolonial nation state re-applied the instruments inherited by the 'colonial logistic' but, for lack of resources and expertise, it opened the door to a set of international patrons.

The analysis of infrastructure development in postcolonial Zambia illustrates the competing strategies through which imperialist powers attempted to secure a new form of control on Africa and elucidates the role of logistics as a decisive tool to shape the African territory at the various scales.

Colonial logistics

In modern philosophical thought and European political practice and imaginary, the colony represents the site where (...) "peace" is more likely to take on the face of a "war without end". (Mbembe, 2003)¹

Now broadly considered as the sum of infrastructures and processes needed to efficiently relocate goods from the point of production to the point of consumption, the notion of logistics was initially associated with military operations such as the planning of defence systems, troops dislocation, and goods supply.

In the early colonial era, military expeditions and private industrial companies, both supported by Western governments, conquered and acquired African territories and administered, exploited and controlled them through the construction of railways and roads, the planning of urban settlements and military outposts, the arrangement of plantations, mines, and reserves, and the management of trading and exporting. This ‘imperialism of free trade’², as it was defined by Gallagher and Robinson, was not aiming at imposing direct political control on the conquered land, but at its exploitation through military and paramilitary violence.

My thesis is that the hybrid nature of colonial administration merged the martial and the neoliberal characters of logistics, producing a governmental strategy that I define as ‘colonial logistics’. Colonial logistics is about imposing rationality and efficiency on the unpredictable and the uncontrolled – wild lands, savage people and inefficient processes – in order to transform nature into a resource for commodity production and capital accumulation.³ Colonial logistics produced specific spatial and social relations at the local, regional and continental scales.

Rhodesia Railway

Like many other modernist tendencies, logistics in its various forms found broader application in the colonies. Colonialists’ first ally was the railway or ‘the permanent way’ as it was often called. In ‘Railway Imperialisms’, Ronald Robinson observes how ‘the railroad was not only the servant but also the principal generator of informal empire; in this sense imperialism was a function of the railroad’.⁴ By drawing straight lines of steel, European engineers could impose their order on the unfriendly African landscape, control times and distances within unknown territories, and define a new geography of lines, points, nodes, axes, and cities they could understand and control.

The first colonial power to impose its presence on what would become Northern Rhodesia, was a private company, the British South Africa Company (BSAC) led by Cecil John Rhodes. In the second half of the nineteenth century, Rhodes and his company’s paramilitary forces acquired and ruled over vast African territories reaching from the Cape in the south to the Zambesi river in the north. The Chartered BSAC combined the role of a private enterprise with the legitimization of the Victorian state. It traded with local chiefs for land acquisition, built and owned railways, and extracted and exported metal ores and diamonds toward South Africa’s ports.⁵ [Fig. 1]

The oddly shaped territory of Northern Rhodesia, once part of the Lozi and Bemba empires, was the result of infrastructural expansionism, geopolitical contingencies and of the discovery of copper deposits.⁶ Rhodes’s imperial ambition was to expand the ‘Rhodesia Railway’ to the north, in order to reach the British colonies on the Mediterranean Sea through the envisioned, legendary ‘Cape to Cairo Railway’ but, after crossing the Zambesi river at the Victoria waterfalls, in 1905, the ambitious mission had to be aborted. Unable to cross German East Africa and the Belgian Congo, the railway was converted into an exporting tool for the copper deposits which were then discovered in the region.⁷ Known to some of the oldest civilisations, since the invention of the telegraph and the telephone, copper had become the most needed non-precious metal for electrical and communication wiring.

The trains of the Rhodesia Railway, departing from Port Elizabeth or Durban, would stop in Wankie (Southern Rhodesia) to collect coal, and then proceed to the north. Once they reached the Copperbelt, coal was unloaded and used to activate the mining engines while copper was loaded and shipped southward to South Africa and Mozambique and from there to the whole world. [Fig. 2]

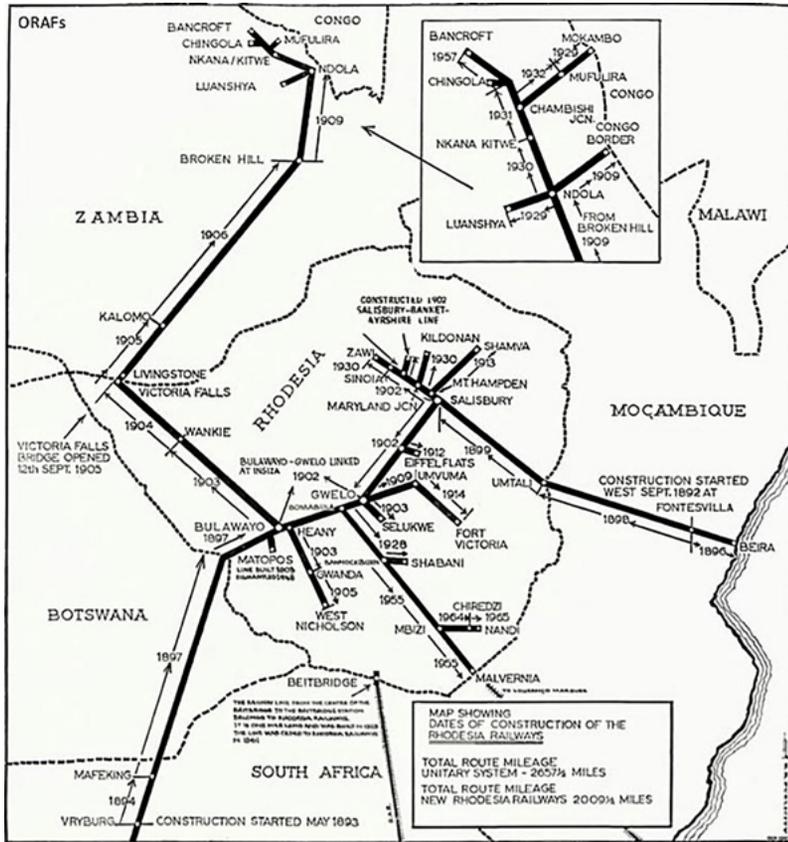


Fig. 1



Fig. 2



Fig. 3

Fig. 1: Map of Rhodesia Railway with construction dates. Lusaka is not marked between Kalomo and Broken Hill.

Source: <https://www.britishempire.co.uk>.

Fig. 2: Rhodesia Railway train exporting copper bars. Source: *Horizon*, February 1965.

Fig. 3: Lusaka old town, view from the north, about 1950. Source: George Kay, *A Social Geography of Zambia*. (London: University of London Press, 1971).

Thanks to the efficiency of the railway and the stable growth of the price of copper, the mining industry of the Copperbelt flourished and the railway line became the economic backbone of the colony. Most urban settlements, industries, and economic activities developed within a narrow area along the rail line while the sparse population lived of subsistence agriculture in the less accessible provinces.⁸

In 1924 the territories acquired by the BSAC through agreements with local chiefs were sold to the British government, who assumed administrative responsibility over Northern and Southern Rhodesia (now Zambia and Zimbabwe), and Nyasaland (now Malawi).⁹

In order to encourage European migration to Northern Rhodesia, the Colonial Office decided to set aside plots of land for exclusive European use. The most fertile, productive and accessible swaths of land – mainly along the railway and around the mines – were designated as ‘Crown Land’ and could be purchased by white settlers. Africans were not allowed to permanently reside on Crown Land and had to relocate to the ‘native reserves’. The reserves soon became overcrowded and shortages of land and food pushed the African population to migrate towards the mining and urban areas seeking wage labour.¹⁰

In order to limit the flow of migration, the administration determined that only single African male workers were allowed to temporarily live around cities and mines but despite the limitation, the demographic imbalance between the urban and the rural areas kept on growing.¹¹ The divide between ‘coloured’ and white became a territorial and an urban issue, solved, at a different scales, with the definition of new borders and racial enclaves. The north-south orientation of the Zambian urbanisation pattern reflected the political and economic dependence of Northern Rhodesia on Southern

Rhodesia and South Africa. This dependence would continue to affect her future development long after independence.

Railways were not the exclusive prerogative of the British empire; French, German, Belgian and Portuguese railways were also penetrating the continent, each of them with different aims and standards. The fragmented and outward-oriented logic of colonial infrastructures systems, together with the establishment of national and internal borders is the main cause of the current uneven geography of the continent.¹²

Lusaka

Lusaka, the capital of Northern Rhodesia from 1931, was established in 1905 as a technical stop on the railway line. Steam engines needed periodically to be refilled with water; therefore, the BSAC built loading and unloading platforms every twenty miles. Named after the chief of nearby Lenje Village, Lusaka was twenty miles north of the Chipongwe stop and offered a flat dolomitic soil and consistent water reservoirs. In 1906, when the railway construction ended at the border with the Congo, many who were left without work purchased farmlands in its surroundings. The White Fathers mission and the BSAC also settled in its proximity. Thanks to the growing farming activities, a marketing centre grew around the train stop where products were loaded and unloaded.

By 1913 the new settlement included a post office, a veterinary office, three mills for grinding maize and other grains, two lime kilns, a mission school serving the farmer’s community, a government school, several shops, a small hotel, a rifle club and a sports’ club. In the same year, the BSAC developed a simple master plan to control the growth of the township.¹³ The railway and the dirt track running parallel to it – named ‘Cairo Road’ in memory of Rhodes’s imperialist vision – constituted

the main axis of a linear gridded master plan expanding for two miles along the railway.¹⁴ Logistic and storage spaces were located towards the rail line while the main public buildings and services sprang up along Cairo Road. White colonists also settled within the gridded structure while African workers lived in compounds south of the town. [Fig. 3]

In 1931 the colonial government of Northern Rhodesia decided to relocate its capital from Livingston to a more central location. Lusaka, which in 1931 had a population of four hundred and seventy Europeans, was chosen for its favourable position and pleasant climate. In 1935 a new master plan for the expansion of the capital city to the East of the existing settlement was developed by the British architect S. D. Adshead. The new capital was planned as a colonial, therefore racially divided, garden city of tree-lined boulevard and big plots for the Europeans' villas. Lusaka Old Town survived as the commercial core of the city.¹⁵

Originally deployed for military settlement, the grid became the preferred device for the structuring of new colonial settlements. The quintessence of all ordering structures, it was broadly used by colonisers as an instrument of space rationalisation. It recreated a known and recognisable environment and its compact layout provided feelings of urbanity and protection against the unfamiliar African landscape. With its image of scientific rationality, the grid, a non-figurative configuration with clear internal rules, can be read as the representation of the modern.¹⁶ The exemplary grid of Lusaka's first master plan, in contrast to the organic shapes of the existing local settlements, evokes the colonial administration's self-proclaimed civilising mission.

Zambia 1964–1965

In the late 1950s, the possibility of maintaining good post-independence economic relations and the

presence of various private British companies in the most strategic areas of Africa convinced the British government to renounce to colonial sovereignty and negotiate the conditions for independence.¹⁷

In 1964, Kenneth Kaunda, leader of the nationalist movement from the early 1950s, became the first president of Zambia with the support of the United National Independence Party (UNIP). His own philosophy, was a mixture of 'Fabian socialism, nineteenth-century liberalism, Christian morality and idealisation of the communal values of Zambia's pre-capitalist past'.¹⁸ Kaunda's domestic politics was characterised by socialist-oriented authoritarianism, which led to the creation of a state monopoly for manufacturing and trading companies, and the acquisition of 51% of the mining companies' shares.¹⁹ At the same time, beyond political ideology, he maintained opportunistic and pragmatic foreign relations with Britain, the USA, the Communist Bloc, and the non-aligned movement.

In the year of its independence, Zambia was the third larger copper producer in the world (after the Congo and Chile), and exported between 50,000 and 60,000 tonnes of Copper a month. Copper constituted over 90% of Zambian export and almost 50% of government revenue.²⁰ During the 1960s, thanks to the high price of copper, Zambia was rated one of the most prosperous countries in Sub-Saharan Africa but its little-diversified economy depended heavily on copper price fluctuation and on its ability to negotiate favourable trading agreements with neighbouring countries in order to maintain the flow of copper and fuel.²¹

Throughout colonial domination and during the first year of Kaunda's government, all of the copper export and ninety-five percent of imports had been shipped via railway through the British controlled territories to the ports of South Africa, but after Southern Rhodesia's Unilateral Declaration of

Independence (UDI) of 1965, Zambia was forced to secure a new outlet to the sea.²² The self-proclaimed independence of the Rhodesian white minority, condemned by Britain and unanimously by the United Nations, entailed a complete embargo on goods to and through the country.²³ The UN economic sanctions against Southern Rhodesia affected Zambia more than the ruling white elites of Rhodesia itself, who could still count on illegal South African and Portuguese supplies, through Mozambique and Angola. The effect of the trading ban on the Zambian economy revealed its dependency on foreign imports and on Southern Rhodesia's infrastructure.²⁴

With the UDI, the border between Zambia and Southern Rhodesia became the border between independent Africa, in the north, and the white and colonial south. Tensions along this African iron curtain was worsened by the fact that Zambia and Tanzania, together with Cuba, the Soviet Union, Yugoslavia, and other socialist countries, were offering support and protection to armed groups fighting for freedom in Mozambique and Rhodesia.²⁵ Zambia found itself surrounded by enemy territories; the only accessible route toward the sea were the Benguela railway, running through the Congo and Angola, and the Great North Road, a dirt track passing through Tanzania.

The Benguela railway, built between 1903 and 1930 by the Portuguese government, connected the mining area of Katanga in the south of Congo to the Angolan port of Lobito on the Atlantic Ocean.²⁶ During colonial times Northern Rhodesia made little use of the Portuguese railway because of binding agreements between British-controlled protectorates. After the UDI, Zambia began to use the Benguela route but there were serious technical limitations to the railway's capacity, so it could not fully comply with Zambia's sudden request. Furthermore, the Congo and Angola were considered unstable commercial partners; the

Congo, since its independence in 1960, was facing acute political tensions and Angola was still under Portuguese colonial rule.²⁷ [Fig. 4]

Tanzania, Zambia's most politically reliable neighbour, had been independent since 1961 and was governed by Julius Nyerere, who shared Kaunda's socialist and pan-Africanist beliefs. Despite the fact that both countries had been British colonies since WWI, the only physical connection between the two was the 'Great North Road', an unpaved track built in 1917 to convey British troops from Northern Rhodesia to the German East African front. Since then, Tanzania, together with Kenya and Uganda, was part of the British East African administrative unit which had almost no exchange with Northern Rhodesia and the British Central Africa Federation.²⁸

Early in 1966, an oil airlift was organised by the British, American and Canadian air forces to solve Zambia's oil crisis. Cargo planes flew oil in from Dar es Salaam and Nairobi while trucks imported oil and exported copper via the Great North Road. This provisory solution proved inefficient; the cost of the air-lift was too high and a big quantity of oil was consumed by the heavily loaded planes. Furthermore, only a few months after the UDI, the unsurfaced and poorly engineered Great North Road became impassable.²⁹

The closing of the border with Southern Rhodesia, the consequent lack of fuel and the stack of copper waiting to be shipped out of the country required a prompt and durable solution. Kaunda and Nyerere envisioned a double long-term answer to Zambia's isolation: an oil pipeline and a railway. Both infrastructures would run almost parallel to the Great North Road and connect Zambia to the Indian Ocean at Dar es Salaam. The pipeline had to supply oil to the mines while the 'freedom railway', as it was often called, would guarantee the flow of copper with the minimum need to import fuel and vehicles.

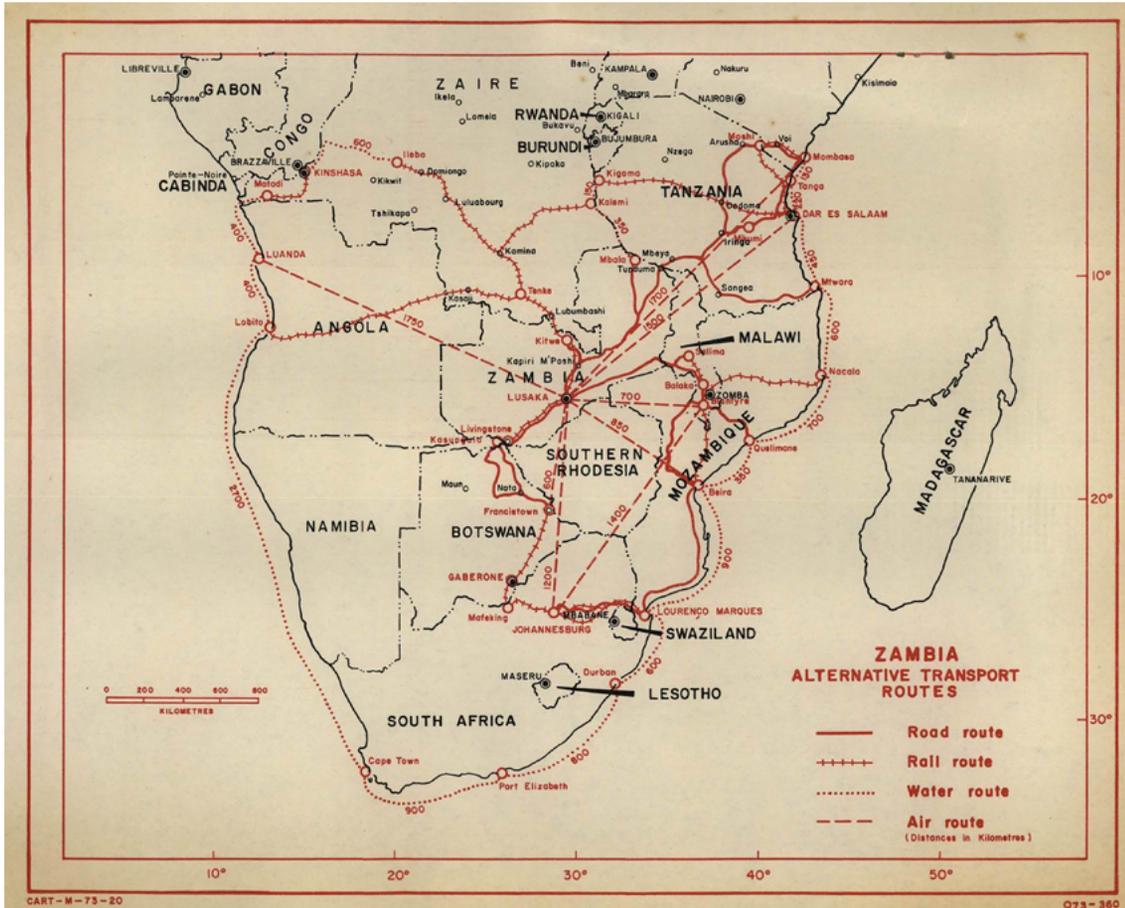


Fig. 4: Zambia's alternative transport routes after Southern Rhodesia's Unilateral Declaration of Independence. The Great North Road connects Lusaka to Dar es Salaam. Source: United Nations Economic Commission for Africa, Foreign Trade Routes of Zambia 1n 1973. Report No. E/CN.14/ECO/61, 8 June 1973.

With the construction of the new railway, presidents Kaunda and Nyerere hoped to increase self-reliance and to distribute development and industrialisation to the sparsely inhabited but potentially fertile rural areas.³⁰ However, neither Zambia nor Tanzania could count on sufficient capital or knowledge to undertake the construction of such large-scale infrastructure.³¹

The diplomatic effort carried out by the two countries to gather foreign aid and assistance led to an unexpected but paradigmatic African Cold War situation where global political tensions intertwined with struggles for decolonisation and independence.

In 1966, the Zambian government awarded the Italian National Hydrocarbons Agency ENI (Ente Nazionale Idrocarburi) a contract to construct an oil pipeline from Dar es Salaam to the Copperbelt mining area. The Italian company's proposal unexpectedly defeated the bid of the British company Lonrho (London and Rhodesian Mining and Land Company), the historical industrial partner of the two Rhodesias during the colonial era.³²

The railway project, on the other hand, had been dismissed by various western donors as uneconomic and unnecessary. After the refusal of Britain, the USA and the Soviet Union, in 1967 the People's Republic of China unexpectedly offered to build the rail link while the World Bank, adverse to the railway construction, but willing to participate in solving the crisis, granted loans to improve different sections of the Great North Road, renamed Tanzam Highway.³³ [Fig. 5]

Postcolonial logistics

Funding for the pipeline was raised by a consortium of Italian banks and offered to Zambia and Tanzania on soft-loan terms³⁴ while the engineering was carried out by SNAM PROGETTI, an affiliate of ENI. ENI, which promptly understood the commercial potential of decolonisation, started investing

in Africa right after the end of the Second World War.³⁵ Supporting the independence claim of colonised countries and despite Italy's colonial past, ENI gained a new image of political neutrality within the Cold War, allowing it access to the markets of various African nations.³⁶

The construction of the pipeline started from ENI's refinery in Dar es Salaam in May 1967 and ended in the Zambian Copperbelt, where a terminal tank and a distribution system were developed in September 1968. A core team of Italian engineers and technicians was sent to Tanzania to collaborate with local workers. The forty five thousand tons of steel pipe, imported from Italy via the Cape, because of the Suez Canal blockade, were transported along the dangerous Great North Road on trucks. The laying of the pipeline, which was completed sooner than forecast, comprised the clearing of the tropical forest, the excavation of a two-metre deep furrow and the positioning and welding of the pipes. The complex topography and the presence of game reserves, marshes and rivers made the enterprise particularly arduous. [Fig. 6, 7]

The pipeline, 1,680km-long and eight inches in diameter, carried refined oil products until 1975 when, based on the trust earned from the pipeline construction, the ENI group was appointed to build the first refinery of Zambia. The refinery allowed Zambia to buy crude oil directly from oil-producing countries and thus cut its energy dependence from colonial dealers and the oil cartel. The completion of the pipeline first, and of the refinery a few years later, were indeed received by Zambians as the first step towards real economic independence. During the inauguration of the pipeline in September 1968, President Kaunda declared that 'the completion of this pipeline ... greatly improves the capacity to overcome our difficulties in the field of development' and that it 'is an example of our serious intent to work together ... to develop the basis of self-reliance.'³⁷

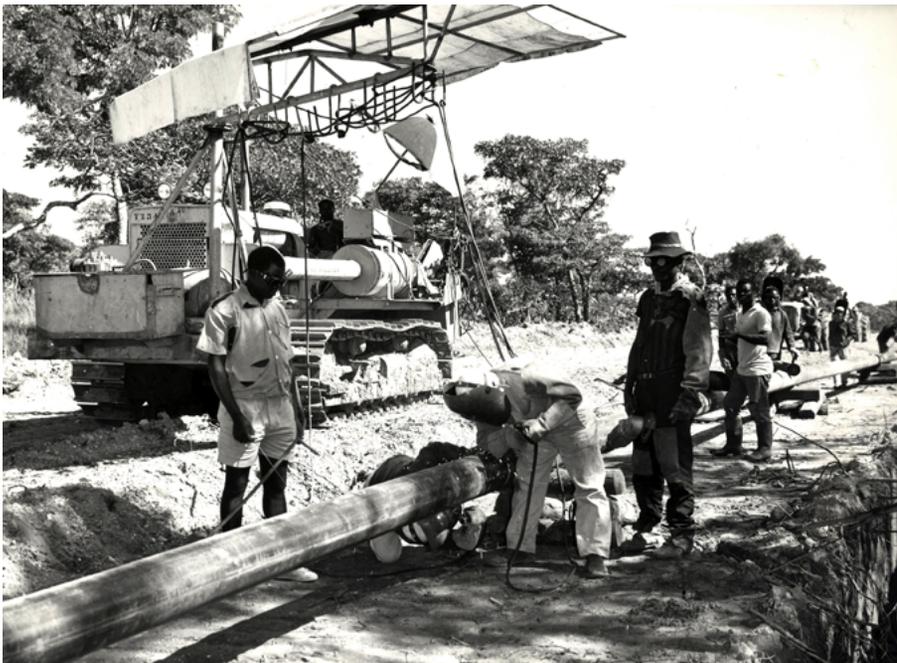
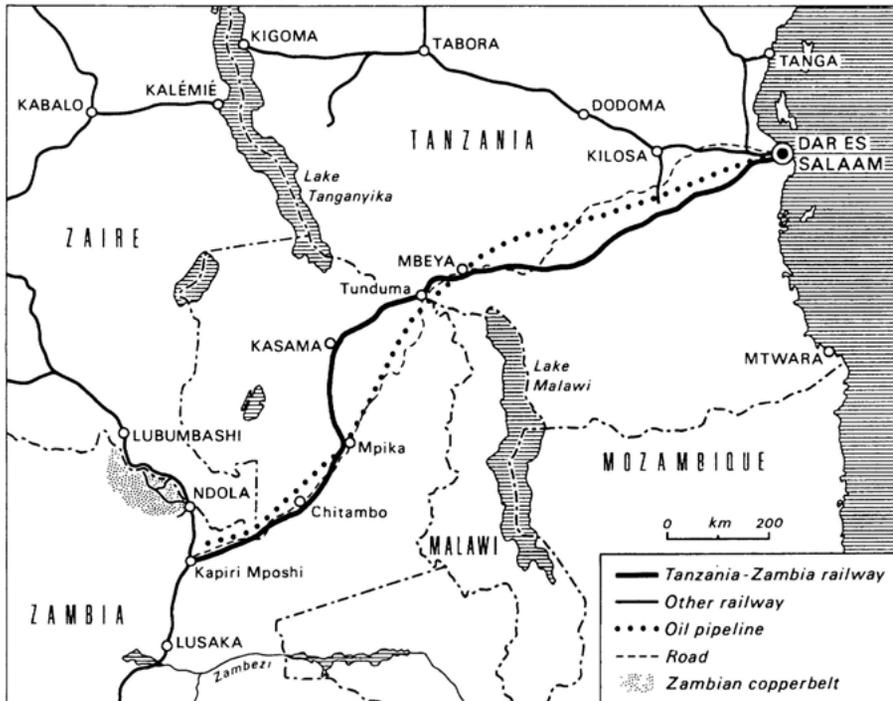


Fig. 5: The Dar es Salaam multimodal corridor. Source: Michael B. Gleave, 'The Dar Es Salaam Transport Corridor: An Appraisal', *African Affairs* 91, no. 363 (1992): 249–67.

Fig. 6: Construction of the Tazama Pipeline, 1967. Source: ENI Historical Archive, Rome.

The alignment and paving of the Tanzam highway started from Zambia and was completed in four years between 1968 and 1972. The World Bank's role was to collect the capital and supervise the project from a legal and technical point of view. Funding came from the Swedish government, the US, the UK and the Bank itself. The World Bank, created in 1944 at the Bretton Woods Conference to increase global 'productivity, employment, and living standards through international cooperation',³⁸ provided loans and assistance to low-income countries in order to 'foster an environment conducive to private foreign investment'.³⁹

The project of the highway was divided into sections, each of which was the object of separate calls for bids for engineering and construction. This procedure was intended to 'enable smaller contractors to compete with larger firms and thereby help ensure competitive pricing'.⁴⁰ Most of the contractors were foreign companies that imported machinery and experts and made little use of local labour.

Construction moved slowly towards the Indian Ocean. Some observers noted at the time that the highway construction sites were used by western donors and by the World Bank to control the Chinese operation in Tanzania and Zambia.⁴¹

The improvement of the Great North Road was the less spectacular of the interventions along the Dar es Salaam transport corridor; the highway didn't require any secondary infrastructure and followed an existing road. However, after Rhodesia's unilateral declaration of independence and the rerouting of traffic toward Tanzania, the flow of trucks increased and the cities and the rural areas along the road became more and more linked to urban regions along the Rhodesia Railway.

After two years of negotiations and three years of surveys, the construction of the railway began

in Dar es Salaam in 1970. The 'mobile construction site' proceeded at the average speed of three kilometres a day and reached the Zambian copper belt five years, three hundred bridges, twenty-one tunnels and ninety-three stations later. Together with the railroad, the project included the construction of peripheral infrastructure and services such as train stations, power plants, electric and water networks, offices, warehouses, workshops and industrial plants.

The Chinese state played a prominent role in all phases; it granted the interest-free loan and coordinated the project from the initial survey to the construction. The working team of the People's Republic of China deployed a labour-intensive strategy that was considered suitable for developing countries – Zambia, Tanzania, and China – with a shortage of capital and a surplus of underemployed manpower. Between twenty thousand and fifty thousand Chinese workers, engineers, supervisors, and doctors were sent to Africa to build bridges, tunnels, workshops, offices, stations, and housing for the railway authority's employees. The 310,000 tons of steel rails, together with cement and timber to integrate the local production had also to be imported from China.⁴²

The stations were designed following a modular scheme. The smaller stations, occurring most commonly, were mainly deployed in sparsely inhabited areas. The L-shaped building was divided in two; half of the station served as waiting room, the other half as office space for railway workers. Medium-size villages were assigned medium-size stations, composed of a flexible number of modules articulated around the entrance space. The main stations, however, were specifically designed. Despite the fact that they had to cope with peculiar topographic and urban conditions, all main stations featured a monumental hall with a high ceiling and a glass façade. Other elements such as perforated

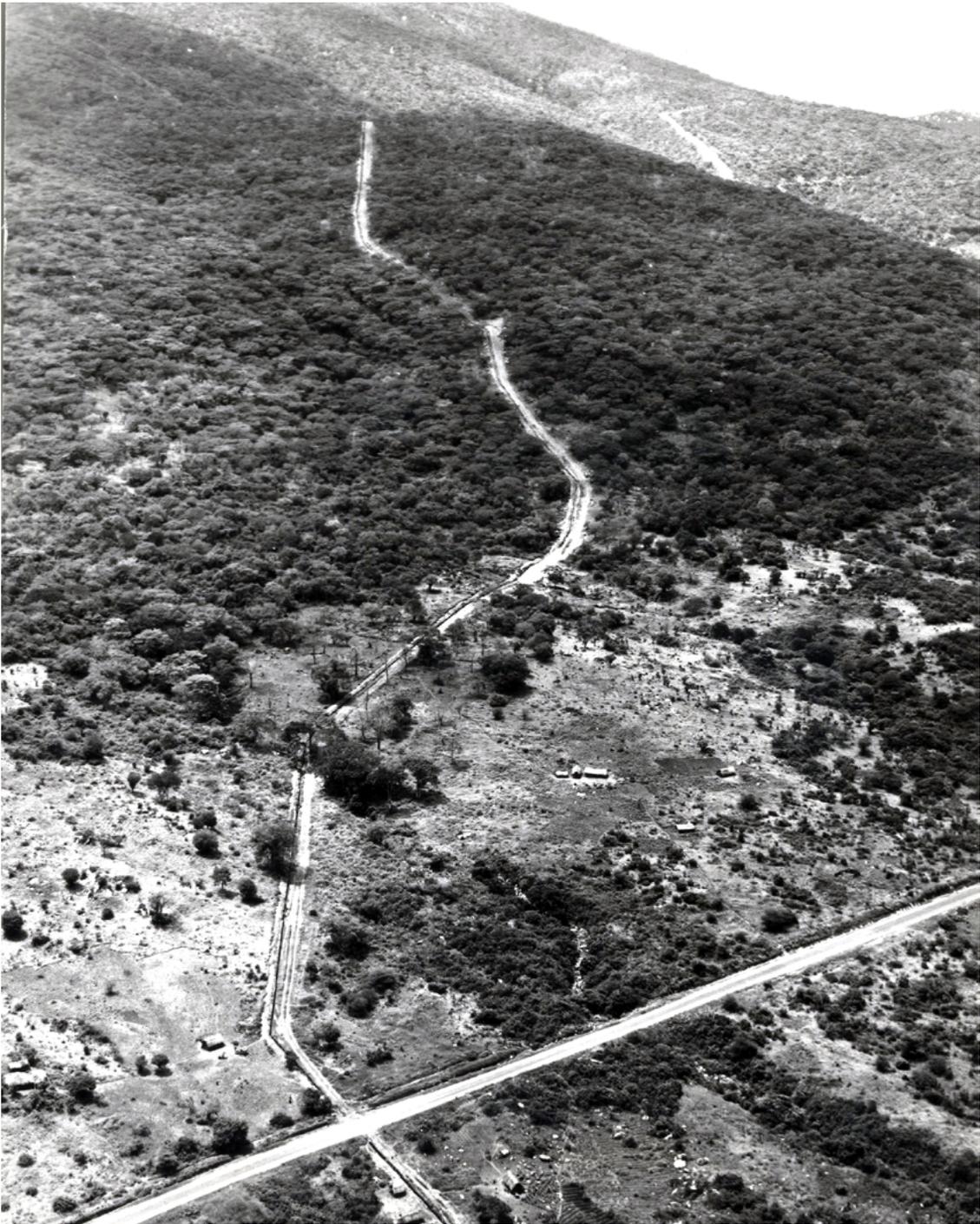


Fig. 7: The Tazama Pipeline and the Great North Road, 1967. Source: ENI Historical Archive, Rome.

panels, platform roofs and standardised graphic signage provided a uniform style to the different buildings. The overall consistent aesthetic of the Tazara (Tanzanian-Zambian Railway Authority) underlines its extra-statal nature: it is a territorial enclave designed by the People's Republic of China and managed by the railway authority.⁴³

The careful design of the passenger train stations suggests an additional purpose of the railway: to increase the mobility of people living along the corridor and enhance their economic opportunities. With the cooling of the geopolitical situation in Southern Africa and the liberalisation measures of the 1980s and 1990s, small dealers who couldn't rent and fill entire cargo wagons, started shipping their goods as luggage on the passengers' 'ordinary train'. The 'ordinary train' became a moving market from which, twice a week, farmers and traders could buy and sell homegrown agricultural products or imported goods coming from the port of Dar es Salaam.⁴⁴ The unforeseen use of the railway as a small-scale logistic device radically changed the life of people living along the corridor.

African Cold War

L'indépendance, c'est de bien calculer les interdépendances. (Tjibauou, 1996)⁴⁵

The spectacular and intrepid construction of the railway was widely reported in the Chinese and international media where it was advertised as the 'friendship railway', a 'common third world struggle against the forces of neo-colonialism'⁴⁶ based on solidarity among countries who shared a 'history of imperial conquest and colonisation.'⁴⁷ From the beginning of the Sino-African collaboration, Western newspapers envisioned what they called 'yellow peril',⁴⁸ the threat of communist propaganda and the spread of Maoism on the African continent. The Tanzanian and Zambian governments were indeed considered ideologically close to the

communist bloc, even more after receiving China's assistance.⁴⁹ [Fig. 8]

More than Communism, though, Maoist China needed to export goods and establish new political alliances. After the Sino-Soviet split of the early 60s and the US embargo, the People's Republic of China was left politically and commercially isolated. The Chinese government, who lacked foreign currency to pay African workers and suppliers, proposed a commodity trading agreement to the Zambian and Tanzanian governments. The latter committed to selling, through their national wholesale corporations, a list of Chinese products whose revenues were used to pay salaries of African workers and local expenses.⁵⁰ Initially criticised for their poor quality, Chinese beers, bicycles, napkins and other goods started filling the shelves of Zambian shops. After an initial resistance, willing or not, Zambian consumers got used to the new products that were shipped from China to Zambia through Dar es Salaam and on the Tazara wagons.⁵¹

This historical episode, that brought together three different and competing actors – ENI, the World Bank, and the People's Republic of China – is paradigmatic of how the 'Global Cold War' unfolded outside the classic Eurocentric vision and determined neo-colonial dependencies.⁵² The creation of the non-aligned movement, which Zambia joined in 1964, did not spare the Third World from the imperialist aims of the 'First' and 'Second World' and decolonisation made Africa the perfect prey for the First and Second worlds' hegemonic ambitions. With the withdrawal of colonial powers, emerged a new form of non-territorial conquest.

The competing actors involved in the rerouting of Zambian resources were all offering different recipes to achieve development. The railway and the highway, in particular, can be seen as an embodiment of the clash between a socialist vision



Fig. 8: Chinese poster depicting the construction of the Tazara railway, 1971. 'Serve the revolutionary people of the world'. Source: Martin Bailey, *Freedom railway* (London: R. Collings, 1976).

of society, in which the state plays a prominent role and a capitalist vision of free-flowing commerce and increasing individual mobility.⁵³ While China proposed independence as the result of a collective effort, roads and automobility were promoted by the West as an instrument of decolonisation and emancipation. Despite the colliding interest of the different actors involved, the three infrastructures all contributed to the transformation and reorientation of the Zambian territory and show how logistics had to cope with 'political irrationalities' and historical contingencies.

Territorial decolonisation: between panafricanism and nationalism

Even though the main goal of the 'Dar corridor' was the rerouting of copper and oil, the postcolonial regime conveyed the new infrastructure projects into narratives of Pan African unity and nationalist decolonisation. Within Zambia, the new infrastructures became the embodiment of nation building and reorganisation of the territorial structure inherited from colonial planning.

Presidents Kaunda and Nyerere were strong supporters of the Pan-African ideals. They both believed in the principle of collective self-reliance and unity in opposition to colonial fragmentation, which they saw as the main reason for Africa's underdevelopment. The idea, both material and utopian, that networks of exchange and trade would bring wealth and peace was not an invention of Pan-Africanist politicians and intellectuals. A diffuse Saint-Simonian blind faith in communication and transport networks characterised modernist theories of development from the late colonial era onwards.⁵⁴

During the inauguration of the Tazara head station in Kapiri Mposhi, President Kaunda declared that linking the newly founded African states would invert the colonial 'divide and rule' balkanisation strategy

and that unity was the strongest weapon against imperialism.⁵⁵ The 'freedom railway' was seen – in opposition to the colonial 'Rhodesia Railway' – as the symbol of Zambia's decolonisation and freedom from the rule of the white-controlled south. Moreover, the newly established link between Zambia and Tanzania subverted the continental patterns of colonial fragmentation and brought together two fellow countries which had been kept apart by historical contingencies and external interests.⁵⁶

Independent Zambia inherited the territorial imbalance created by the Rhodesia railway and the demarcation of Crown land and native reserves with the majority of people, industries and services concentrated along the Rhodesia Railway. Once the colonial anti-migration law was abolished, the urban population along the railway grew at an impressive speed while, away from the railway line, people were living on subsistence agriculture in the sparsely distributed villages and small towns.⁵⁷ A large percentage of the population was isolated and, most importantly, was not contributing to the country's wealth. Through the development of the corridor, the government was creating the conditions needed to transform subsistence agriculture into a cash crop economy and redefine national patterns of production and consumption. Furthermore, similar to the effect generated by the colonial railway, the Tazara was expected to attract the sparse population of the northwest province, making them easier to reach, control, tax and serve.

Within the nation-building process, the rail, the road and the pipeline served as a medium, but also as a message. Especially in the most remote and poorly served areas of the country, the newly built infrastructures became one of the few signs of the territorial presence of the new state. Indeed, both the railway and the pipeline were selected by Southern African and colonial military forces as a symbolic military target. Despite the protective fence installed

around the pumping stations, the pipeline was already bombed during the night of Christmas 1969, while railway bridges were bombed repeatedly in 1979, forcing the establishment of extraordinary security measures along the railway line.⁵⁸

De-, Post- or Neo- Colonisation

The end of colonial direct domination marked the beginning of a phase that could ideally lead to radical political, economic and territorial redefinitions such as the constitution of a new continental political power or the reaffirmation of precolonial non-territorial strategies of government. In 1963 Kwame Nkrumah – first president of Ghana and co-founder of the Organisation of African Unity (OAU) – proposed the creation of a continental political subject in order to avoid the balkanisation of the continent into dozens of independent states. His idea of complete solidarity and political unity was soon dismissed and the OAU itself legitimised the creation of nation states and the inviolability of their boundaries.⁵⁹

Despite the efforts of some of the most radical African leaders, the nation state emerged as the universal form of government. Indeed, independence was not a sudden episode; it was the peak of a long process and the result of precise calculations. Colonial powers gave up sovereignty only after creating the conditions for their profitable future relations with the former colonies. Such conditions included the establishment of a local political elite and the development of nationalist sentiments, which could only lead to the creation of modern nation states.⁶⁰

Soon after independence, the nationalist ambition of Zambian self-reliance clashed with the new state's difficulty to overcome its colonial cultural and territorial inheritance, and with the harsh reality and slowly-evolving extractive industry that relegated Zambia to the periphery of the global economy.⁶¹

As Immanuel Wallerstein's world-system analysis suggests, within the logic of the global commodity market, different states occupy different positions. The role of the periphery is to provide raw materials and low value-added products for core countries that, by contrast, focus on higher-skill capital production.⁶² This global spatial model clearly criticises the modernisation theory of progress as a temporal and univocal path from tradition to modernity according to which different areas of the world find themselves at different stages of development and move, at different speeds, towards the Euro-American living standards that they will reach at some point in time.⁶³

Ironically, the struggle for independence and decolonised trade forced Zambia to open its doors to a set of new actors – foreign companies, foreign states and international organisations – who offered financial aid and technical support with the promise to enhance development and self-reliance. Fredrik Cooper's definition of postcolonial 'gatekeeper states' perfectly matches the conditions of post-independence Zambia where the price of and demand for copper, the state's main source of revenue, depended purely on external factors.⁶⁴ This fragile and externally oriented constellation forced the government 'astride the interface between a territory and the rest of the world, [into] collecting and distributing resources that derived from the gate itself': customs revenue and foreign aid.⁶⁵ The management of the export of resources and the supply of fossil fuels remained the main goal of the postcolonial regime whose only 'freedom' was to choose its commercial partners and political models.

The newly founded Zambian state sought to decolonise its territorial imbalance with the same instruments previously deployed by the BSAC and by the colonial administration, and with the support of new international patrons. Willing to define its authority over land and population, the postcolonial regime, unable to imagine alternative models

of development, invested in monumental and large-scale projects, adopting a slightly different form of 'colonial logistics'. The postcolonial geography of lines, nodes, and grids altered the colonial territorial structure but reproduced a geography based on resource extraction and control at the local and global scale: control of the Zambian population by the Zambian state, but also control of Zambian resources by external neo-colonial powers.

Notes

1. Achille Mbembe, 'Necropolitics', *Public Culture* 15, no.1 (2003): 11–40, 23. doi:10.1215/08992363-15-1-11.
2. 'Trade with informal control if possible; trade with rule when necessary.' John Gallagher and Ronald Robinson, 'The Imperialism of Free Trade', *Economic History Review*, VI (1953): 1–15.
3. 'The white man's "civilizing" burden was thus an essential part of developing natural resources, and making them available for commercial exploitation. The relationship of people to nature was transformed, from one based on responsibility, restraint and reciprocity to one based on unrestrained exploitation'. Vandana Shiva, 'Resources,' in *The Development Dictionary*, ed. Wolfgang Sachs (London: Zed Books, 2009), 250.
4. Ronald E. Robinson, 'Introduction: Railway Imperialism', in *Railway Imperialism*, ed. Clarence Baldwin Davis and Kenneth E. Wilburn (New York: Greenwood Press, 1991), 2.
5. Jon Lunn, 'The Political Economy of Primary Railway Construction in the Rhodesias, 1890–1911', *The Journal of African History* 33, no. 2 (1992): 239–54.
6. Andrew Roberts, *A History of Zambia* (New York: Holmes & Meier, 1976), 149–185.
7. Jan-Bart Gewald, *The Speed of Change: Motor Vehicles and People in Africa, 1890–2000*, vol. 13, Afrika-Studiecentrum Series (Leiden: Brill, 2009). <http://sfx.metabib.ch>, 22.
8. Alan J. F. Simmance, International Urbanization Survey, and Ford Foundation, *Urbanization in Zambia* (New York: International Urbanization Survey, The Ford Foundation, 1972).
9. Roberts, *History of Zambia*, 149–185.
10. Ibid.
11. World Bank, *Zambia – Urban Sector Survey (Vol. 2): Annexes (English)* (Washington, DC: World Bank, 1976). <http://documents.worldbank.org>
12. Achille Mbembe, 'At the Edge of The World: Boundaries, Territoriality, And Sovereignty in Africa', *Public Culture* 12.1 (2000): 259–284.
13. George Kay, *A Social Geography of Zambia* (London: University of London Press, 1971), 112.
14. Cairo Road is one of the few colonial street names that survived Zambian independence. After 1964 it acquired a new Panafrican meaning. Karen Tranberg Hansen, *Keeping House in Lusaka* (New York: Columbia University Press, 1997), 2.
15. George Kay, *A Social Geography of Zambia* (London: University of London Press, 1971), 118.
16. Paola Viganò, *La Città Elementare* (Milano: Skira, 1999), 139.
17. Frederick Cooper, *Africa Since 1940* (Cambridge: Cambridge University Press, 2002), 198.
18. Megan Vaughan, 'Exploitation and Neglect: Rural Producers and the State in Malawi and Zambia', in *History of Central Africa: The Contemporary Years since 1960*, ed. David Birmingham and Phyllis M. Martin, (London: Longman, 1998), 167–201.
19. Hugh Macmillan, "'The devil you know": The impact of the Mulungushi economic reforms on retail trade in rural Zambia, with special reference to Susman Brothers & Wulfsohn, 1968–80' in *One Zambia, Many Histories*, ed. Jan Bart Gewald, Hinfelaar Marja, and Macola Giacomo (Leiden: Brill, 2009), 191.
20. International Bank for Reconstruction and Development, International Development Association, *Tanzania Appraisal of the Second Highway Project*. Report No. TO-690a, 1969; International Bank for Reconstruction and Development. International Development Association. *Zambia Appraisal of the Second Highway Project*. Report No. TO-676a, 1968.
21. World Bank, *Zambia – Urban Sector Survey: Main text*

- (English) (Washington, DC: World Bank, 1976). <http://documents.worldbank.org>
22. DeRoche, 'Can't fight guns with knives', in *One Zambia, Many Histories*, ed. Jan Bart Gewald, Hinfelaar Marja, and Macola Giacomo (Leiden: Brill, 2009), 82.
 23. 'United Nations: Security Council Resolution Authorizing United Kingdom to Use Force to Prevent Oil Deliveries to Southern Rhodesia', *International Legal Materials* 5, no. 3 (1966): 534.
 24. DeRoche, 'Can't fight guns with knives', 83; I. L. Griffiths, 'The Tazama Oil Pipeline', *Geography* 54, no. 2 (1969): 214–17.
 25. Clapperton Chakanetsa Mavhunga, 'A Plundering Tiger with Its Deadly Cubs? The USSR and China as Weapons in the Engineering of a "Zimbabwean Nation", 1945–2009', in *Entangled Geographies: Empire and Technopolitics in the Global Cold War*, ed. Gabrielle Hecht, (Cambridge, MA: MIT Press, 2011), 237.
 26. William A. Hance and Irene S. Van Dongen, "The Port of Lobito and the Benguela Railway." *Geographical Review* 46, no. 4 (1956): 460-87. doi:10.2307/212105.
 27. Martin Bailey, *Freedom Railway* (London: R. Collings, 1976), 12.
 28. Ibid.
 29. Michael B. Gleave, 'The Dar Es Salaam Transport Corridor: An Appraisal', *African Affairs* 91, no. 363 (1992): 249–67.
 30. 'The Great North Road provides access to an area of nearly 60,000 square miles with a population of about 600,000.' International Bank for Reconstruction and Development. International Development Association. *Zambia Appraisal of a Highway Reconstruction Project*. Report No. TO-525b, 1966.
 31. In 1963 fewer than one hundred Zambians held university degrees and fewer than a thousand had a secondary school certificate. Roberts, *History of Zambia*, 234.
 32. Andrew Cohen, 'Britain and the Breakdown of the Colonial Environment: The Struggle over the Tanzam Oil Pipeline in Zambia', *Business History Review* 88, no. 4 (2014): 737–59. <https://doi.org/10.1017/S0007680514000749>.
 33. Bailey, *Freedom Railway*; Hall and Peyman, *Great Uhuru Railway*; Jamie Monson, *Africa's Freedom Railway: How a Chinese development project changed lives and livelihoods in Tanzania* (Bloomington: Indiana University Press, 2009).
 34. Soft loans are usually granted by governments to development projects; they have a lower interest rate than the standard market rate.
 35. Prior to the construction of the Tazama Pipeline, ENI had built refineries in Ghana, Tanzania, Morocco, and Congo, and it was extracting oil in North Africa and the Middle East. Elisabetta Bini, *La potente benzina italiana: Guerra Fredda e consumi di massa tra Italia, Stati Uniti e Terzo mondo (1945–1973)* (Rome: Carocci, 2013), 219.
 36. In the notes written for a speech in Tunis in 1961, Enrico Mattei, president of ENI, wrote: 'I do not only believe in decolonization for moral reasons of human dignity but for economic and productivity reasons too.' Giuseppe Accorinti, *Quando Mattei era l'impresa energetica io c'ero* (Matelica: Hacca, 2008).
 37. 'Oil together! – it is no longer a pipe dream'. *Times of Zambia*, 3 September 1968.
 38. Amy L. S. Staples and Amy L. Sayward, *The Birth of Development: How the World Bank, Food and Agriculture Organization, and World Health Organization Changed the World, 1945–1965* (Kent, OH: Kent State University Press, 2006).
 39. Ibid.
 40. International Bank for Reconstruction and Development. *International Development Association. Zambia Appraisal of a Highway Reconstruction Project*. Report No. TO-525b, 1966.
 41. Bailey, *Freedom railway*, 125.
 42. Martin Bailey, *Freedom Railway*, 88–93.
 43. 'As a site of multiple, overlapping, or nested forms of sovereignty, where domestic and transnational jurisdictions collide, infrastructure space becomes a medium of what might be called extrastatecraft—a portmanteau describing the often undisclosed

- activities outside of, in addition to, and sometimes even in partnership with statecraft'. Keller Easterling, *Extrastatecraft: The Power of Infrastructure Space* (London: Verso, 2014).
44. Monson, *Africa's Freedom Railway*, 93–124.
 45. 'Independence is the good management of interdependence'. Jean-Marie Tjibaou and Alban Bensa, *La présence kanak* (Paris: Jacob, 1996).
 46. Bailey, *Freedom Railway*, 93–124.
 47. Ibid.
 48. Charles Mohr, 'Kaunda Leads Tanzam Rail Ceremonies', *New York Times*, 27 October 1970.
 49. Bailey, *Freedom Railway*, 71–76.
 50. Ibid., 65, 82–86.
 51. 'Made in China', *Times of Zambia*, 27 July 1973.
 52. Odd Arne Westad, *The Global Cold War: Third World Interventions and the Making of Our Times* (Cambridge: Cambridge University Press, 2005).
 53. Monson, *Africa's Freedom Railway*, 2.
 54. 'Through an increasingly mobile, globalized exchange of goods, information, and people, the time and distance that had traditionally kept human beings separated into antagonistic groups would soon be dissolved. The Saint-Simonians referred to this ideal as "universal association". The coming organic era would be characterized by global unity and cultural synthesis between nations, an end to wars, an end to class antagonisms, material prosperity beyond all previous reckoning, and unparalleled human creativity in every arena.' Richard Wittman, 'Space, Networks, and the Saint-Simonians', *Grey Room* (1 July 2010): 24–49. https://doi.org/10.1162/GREY_a_00004.
 55. 'Uhuru Railway Opens Today', *Tanzania Daily News*, 23 October 1975.
 56. Robert Gardiner, 'Distance and Development', *Africa: Rivista trimestrale di studi e documentazione dell'Istituto italiano per l'Africa e l'Oriente*, 1 (1973): 25–35.
 57. Between 1963 and 1969 there was an estimated migration of 282,000 to the line of rail provinces. World Bank, *Zambia - Urban Sector Survey*.
 58. Monson, *Africa's Freedom Railway*; *ENI Archive*, 82–85.
 59. 'Pan-Africanism, however was becoming a relationship of states, not of people. Nkrumah's hope for a United States of Africa achieved little support from African leaders intent on protecting the sovereignty they had so strenuously fought for.' Frederick Cooper, *Africa Since 1940* (Cambridge: Cambridge University Press, 2002), 184.
 60. Ibid.
 61. 'The sub-structure of the periphery – the capitalist and extractive modes and relations of production – evolves slowly, but the super-structure – the politics and ideology of the state – are considerably more volatile. Given the organic links between the sub- and super-structure, the instability of the latter affects the continuity of the former'. Timothy M. Shaw, 'Beyond Neo-Colonialism: Varieties of Corporatism in Africa', *The Journal Of Modern African Studies* 20, no. 2 (1982): 239. doi:10.1017/s0022278x00024460.
 62. Immanuel Maurice Wallerstein, *World-Systems Analysis: An Introduction* (Durham, NC: Duke University Press, 2004).
 63. Cooper, *Colonialism in Question: Theory, Knowledge, History* (Berkeley: University of California Press, 2005), 9.
 64. Cooper, *Africa Since 1940*, 183–187, 156–161.
 65. Ibid, 157.

Biography

Giulia Scotto is a PhD candidate at the Urban Studies department at the University of Basel. She holds a master's degree in architectural design from the IUAV (Istituto Universitario di Architettura di Venezia) University of Venice, and the ETSAB (ETSAB Escuela Técnica Superior de Arquitectura de Barcelona) of Barcelona. Prior to joining the University of Basel, Giulia worked as architect and urban planner for OMA – Office for Metropolitan Architecture (Rotterdam) and for KCAP architects & planners (Zurich). She has also worked as research assistant at the Urban Think Thank (UTT) chair of architecture and urban design at the ETH (Eidgenössische Technische Hochschule) Zurich.