

Joshua Grace, *African Motors: Technology, Gender, and the History of Development* (Durham: Duke University Press, 2021), pp. 432, \$30.95 (paperback). ISBN: 9781478011712.

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In the book *African Motors*, Joshua Grace explores the history of technology and development in Tanzania over 150 years. The book draws on a combination of mechanical fieldwork, oral histories, and archives (personal and public), and investigates the knowledge, labor, and energy of Africans who maintained, created, and used motor vehicles, as well as those who built automobile infrastructure and facilitated mobility. Grace begins the book by showcasing Frank Taylor's rally-winning car constructed from various models and makes in different parts of the world. Grace demonstrates that Africans made automobiles as their own technology and utilized their resourcefulness and skill to shape the materials and concepts of development. Furthermore, the book shows how possessing technological and mechanic skills for repairing and maintaining automobiles had implications on "gendered adulthood" (pp. 19–20). The approach demonstrates African creativity and challenges the commonly held belief that non-Western societies, like Tanzania, are technologically inferior. This perspective offers a valuable alternative more useful than the traditional top-down approach to development histories that often disregard African perspectives and experiences.

While recognizing the fact that the introduction of the automobile in Tanzania enabled people to travel long distances in a shorter period than before, thus making it a tool of imperialism and colonial rule, Grace insists that all that would simply not have gotten off the ground without pre-established routes and African ways of knowing and doing things. The outcome of imperialism and colonial rule depended on the mobility of troops, bureaucrats, and experts to manage various tasks such as suppressing rebellions, collecting taxes, creating maps, conducting censuses, settling disputes, conducting surveillance, and constructing roads. The success of these movements was due to the contributions of Africans, but this did not necessarily mean that they were supportive of imperialism and colonial imposition. Historians view African assistants not only as individuals who helped run the empire and shaped imperial policies but also as those who aided imperial agents in pursuit of their own political, economic, and social goals. Grace's portrayal of this agency aligns with this perspective. Although Africans became "technical actors" as drivers who embraced the car and road as aspects of everyday life, their choices did not displace the pre-car "mobilities and built worlds" that colonial mobility came to depend on (p. 36). The drivers played a crucial role in reproducing their skills and transporting migrant laborers to the economic production sites essential for the British colonial regime. They ensured the sustainability of this mobility that allowed for the continued reproduction of the colonial workforce.

African Motors highlights familiar experiences and narratives that may resonate with scholars who have studied African societies. For instance, there are traditions of people who traveled long distances to gain knowledge and skills from respected experts. Since the introduction of Western education, some individuals have opted for practical skills, such as mechanical apprenticeships, instead of theoretical knowledge taught in classrooms and validated through books and certificates. In my hometown of Wa, located in the Upper West Region of Ghana, peers chose to drop out of school and pursue street-

side mechanical skills to achieve respect as men in society. Even at the University of Ghana, there are stories that discredit book-based knowledge and celebrate the achievements of street-side mechanics (fitters) who fixed broken cars in the middle of nowhere when certified engineers from Kwame Nkrumah University of Science and Technology failed. Grace sees garages, under trees, and homes where mechanics acquired their tacit knowledge as places of innovation. In these places, they learned about numerous car models and makes, body and engine overhauling and redesigning, and debates about the best cars and car parts in the country's auto work. This expertise gave the mechanics the opportunity to gain respect as adult men through their own signature in collecting, repairing, and repurposing the used parts of cars. Grace calls that "effective masculinity" (p. 86). The mechanics defied Western notions that Africans were without technological knowledge.

Grace is knowledgeable about how locals have adapted to global forces, such as socialism, and the promises and expectations that come with formal decolonization. The book provides an intriguing explanation of how local experiences relate to socialism and independence. The discussions about cars and their components were not limited to repair shops but also took place in unexpected locations such as bus stops, inside cars, and on city streets. Through letters and poems published in newspapers, residents of Dar es Salaam shared their daily experiences of waiting in line for state-controlled buses, uncomfortable conditions while inside the buses, and broken (and breaking) bus components. From these experiences, the poets and letter writers understood and disseminated their notions of *Ujamaa* and being a citizen in the urban context while shaping ideas of the alternatives to the state-controlled system of urban mass mobility. As Julius Nyerere's (an anticolonial activist and first president of Tanzania) central development policy, *Ujamaa* was a "villagization" scheme aimed at aggregating smaller and dispersed villages into larger ones to ease the deliverance of improved technology and advice for agriculture, and provide water, education, health, roads, and other infrastructure. During the challenging post-colonial times, urban Tanzanian citizens anticipated dysfunction in automobility. Residents successfully argued that private vehicles, once criticized as a symbol of capitalism, actually had some socialist benefits. They encouraged the government to accept them as a supplement to, rather than a replacement of, state-owned vehicles. In engaging with officials to boost transportation, the city's residents approached socialism as an "infrastructural project" that needed to be mended and remade rather than neglected during tough times (p. 146). The conversion of the private automobile into a "people's car" provided the city with a "form of socialism on wheels" and serves as an effective example of adapting socialist principles to address a local mobility need (p. 146).

As part of automobility's "machinic complex," oil and its refining were critical to Tanzania's economic growth and sovereignty from the 1960s to the mid-1980s. Grace shifts the focus from repair shops and city streets to the government officials who implemented an agriculture-based rural modernization project as part of *Ujamaa* and African socialism (p. 189). The success of rural agriculture in Tanzania was dependent on global oil markets as it was a technological project. The country's political class relied on this success to achieve economic growth and true independence. It means the global oil crisis in the years following formal decolonization compromised the true sovereignty and economic growth that political leaders strove for. The crisis made things even harder

for the government, which was already struggling to make up for the lack of infrastructure development left behind by the British colonial regime. Using oil as a unit to analyze Tanzania's post-colonial challenges, Grace demonstrates the effort of the government toward economic growth and real independence while criticizing views of "state failure" and decline attributed to bloated bureaucracy and costly (and haphazard) technological projects. However, the approach to development from the top suggests colonial paternalism and violence that continued the tensions that had existed between the colonial regime and subject populations. Thus, to rural Tanzanians experiencing Ujamaa, that colonialism was over did not mean the end of some of the regime's harsh realities.

The problem with oil scarcity in the late 1970s meant that the socialist state experienced challenges in distributing essential commodities, like clothes, food, soap, and salt, throughout the country. During this period, both men and women who drove vehicles and were passengers stepped up and distributed the goods. In the process, they leveraged the extensive knowledge of regional networks that they had acquired over decades to produce and sustain their livelihoods and families. State functionaries saw this crucial distribution role as economic sabotage, but the distributors and beneficiaries argued that the drivers and passengers performed broader socialist functions for tackling social insecurity exacerbated by the less viable official system of familyhood. In their effort, the drivers and passengers redefined familyhood to preserve socialist and Ujamaa values. As Grace explains, this context and an open border policy explain the expansion of motoring in Tanzania in the 1990s. However, the many cars on the streets raised concerns about pollution, terrorism, infectious diseases, and climate change. The concerns stoked negative views about automobility in Tanzania as an unacceptable alternative to modernity. *African Motors* addresses the unfavorable perceptions.

One clear and consistent theme in the book is the role of African technological creativity in development. This core idea is grounded in Kiswahili technological lexicon dating back to the period before the invention of the car (pp. 12–13). The meanings of the lexicon give shape to Grace's core idea: development. For a non-Kiswahili speaker, however, a separate note on the main Kiswahili lexicon before the introduction would have been very helpful. That aside, Grace's approach provides Africanists with an entry point into discussions about African perspectives and experiences of development in the twentieth century. A helpful takeaway to remember is the use of technology and machine-based concepts, like repair and repurposing, to improve Tanzanian political philosophy and efficiency.

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COMPETING INTERESTS

The author declares no competing interests exist.