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The infrastructural power of the military: The geoeconomic role of the US Army Corps of Engineers in the Arabian Peninsula

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Abstract

In analysing the role of the United States in the global expansion of capitalist relations, most critical accounts see the US military's invasion and conquest of various states as paving the way for the arrival of US businesses and capitalist relations. However, beyond this somewhat simplified image, and even in peacetime, the US military has been a major geoeconomic actor who has wielded its infrastructural power, via its US Army Corps of Engineers' overseas activities. The transformation of global economies in the twentieth century has depended on the capitalisation of the newly independent states and the consolidation of liberal capitalist relations in the subsequent decades. The US Army Corps of Engineers has not only extended lucrative contracts to private firms (based not only in the US and host country, but also geopolitically allied states), but perhaps most important, the Corps itself has established a grammar of capitalist relations. It has done so by forging both physical infrastructures (roads, ports, utilities and telecommunications infrastructures) and virtual capitalist infrastructures through its practices of contracting, purchasing, design, accounting, regulatory processes and specific regimes of labour and private property ownership.

Keywords

infrastructural power, geoeconomics, armed forces, capitalisation, grammar of capitalism, US Army Corps of Engineers, Saudi Arabia, Middle East

What is the relationship between the United States military and the capitalisation of economies in the Global South? In the aftermath of the US War on Terror, an oft-heard argument saw the US military's invasion of Iraq as either a war for oil, or as a means of facilitating the entry of US businesses into Iraq. While it is easy to find arguments about how the US pacification of intransigent peoples overseas has paved the way for the entry of US businesses, this scholarship does not necessarily attend to the deliberate and systematic way that the US military has acted in peacetime to construct new economic infrastructures that incorporated the pacified countries into the global capitalist economy. The main contention of this article is that the US military has used infrastructural power as a primary modality of establishing liberal capitalist relations in countries in transition and in times of global political and economic transformation. This argument requires us to take seriously the importance both of the peacetime work of US military institution in advancing global capitalism, as well as the importance of forms of power that do not easily fit within the rubric of economic *or* military. Rather, through both forceful and hegemonic means, US military institutions have forged the necessary scaffolding for a capitalist

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economy and its concomitant features of racialised labour exploitation, new private property regimes, and new discourses, standards, laws, and practices.

In this article, I will argue that the transnational role of the US military *as a wielder of capitalist infrastructural power* has to be taken into account when we think of the spread and consolidation of capitalist relations throughout the twentieth century. This role includes not only the US military's provision of large contracts to private businesses but also especially through the construction of the physical and virtual infrastructures that underlie the emergence of liberal capitalism overseas. Nor is this activity limited to wartime. In fact, it is in moments of global economic and political transition, and in ostensible peacetime, that the US military's infrastructural power has been a *dispositif* central to the task of disseminating liberal capitalism. Michel Foucault (1980: 194) has identified a *dispositif* as "a thoroughly heterogeneous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions" that encourage a particular regime of power. In this instance, these infrastructures encourage liberal capitalist production and consumption. Attending to infrastructures allows us to see the palimpsest of power and social relations that has been consolidated within these often invisible but fundamental ingredients of forms of control and rule.

The central concepts which frame my argument are infrastructural power and geoeconomics, which I will define in the sections that follow. A significant function of infrastructural power in the service of capitalist relations is the facilitation of circulation (of goods, people and capital), as set forth in Michel Foucault's *Security, Territory, Population*. The particular period I examine is the post-Second World War period when economies of the global South were capitalised during the Cold War. In this period circulation of goods and capital encouraged capital accumulation and the establishment of normative systems of governance. The specific case I will analyse is the extensive programme of civilian and military infrastructure building which the US Army Corps of Engineers implemented in the Middle East, and Saudi Arabia more specifically, after the end of the Second World War.

To do so, I shall delineate the range of scholarship that examines the relationship between militaries and capital in overseas and domestic social and economic activities. I shall discuss the lacunae in this scholarship as regards the US military's geoeconomic role worldwide. I will then lay out a brief sketch of the activities of the US military in the Arabian Peninsula since the end of the Second World War, drawing on archival research, publications by the US military (and especially the US Army Corps of Engineers), and official histories produced by the US military. I will then analyse the significance of the US Army Corps of Engineers' activities in the Peninsula by drawing on both critical political geographies that introduce the concept of geoeconomics as well as Foucault's discussion of circulation as a means not only of business but of government. I ultimately argue that to understand how many countries in the global South were incorporated into the global liberal capitalist sphere, we have to accept that many of our conceptual categories of public/private, state/corporation, domestic/foreign, or civilian/military are simply inadequate. Rather, I argue that we have to take account of how physical and virtual infrastructures were crucial to the capitalisation of the economies of the global South. And the US Army Corps of Engineers' role in the making of these infrastructures in the Arabian Peninsula shows that an arm of the US military could act as a local agent of government overseas, and as a business actor central to how decisions were made about the emplacement of these infrastructures, who financed their construction, who built them, how they were built, who used them, and who ultimately benefited from them.

I have chosen to focus on the US Army Corps of Engineers' activities in the Arabian Peninsula for reasons having to do both with the geographical location, and with the US military itself. In

a sense, the transformation of the Peninsula's economy from one that was based on mercantile trade to modern forms of capitalist production and new forms of incorporation into global trade is a clear instance of the transformation of the global South in the twentieth century. The case of Saudi Arabia is productive because so much of the transformation of the economy of the country and its embedding in global capitalism was the work of the Arabian American Oil Company (ARAMCO; under its earlier label as California Arabian Standard Oil Company or CASOC), but the functioning of ARAMCO could not be separated from the work of the US military. Further, Saudi Arabia is all too often understood through the lens of rentierism without attending to the familiar ways in which it functions as a capitalist economy. I have also chosen to focus on the US military, because the fascinating, decades-long, activity of the US Army Corps of Engineers in the Middle East *as an entrepreneurial agent* of capitalist infrastructural power allows us to question verities about the supposed differences between militaries and governments in the global South and the global North.

Militaries and capitalist relations

While political and social lives and afterlives of militaries have always loomed large in international relations literature, the political economy of militaries became a more significant object of IR scholarship in recent decades with a focus on military expenditures, procurement policies and defence budgeting (O'Hanlon, 2009; Ruttan, 2006). The privatisation of military functions that accelerated after the neoliberal turn, and in particular the outsize role of both military contractors and mercenaries in the ongoing US War on Terror, have been other aspects of such studies (Avant, 2005; Kinsey and Patterson, 2012; Kinsey, 2009; Singer, 2003; Stanger, 2009; Verkuil, 2007). These works engaged with the legal, political and economic effect of such activities and were particularly concerned with how such privatisation influenced military effectiveness, state sovereignty, and legal accountability.

Further, a rich body of scholarship has scrutinised the role of militaries as economic actors; but this research –often developed by area studies scholars– has been almost entirely focused on the domestic sphere and largely not within the disciplinary boundaries of International Relations (Grawert and Abul-Magd, 2016; Kandil, 2012; Marshall, 2015; Siddiq, 2007). The edited volume by Grawert and Abul-Magd has excellent case studies of the militaries in Egypt, Iran, Jordan, Libya, Pakistan, Syria, Sudan, Turkey, and Yemen. A similar volume by Brömmelhörster and Paes covers Argentina, Central America, China, Congo, Indonesia, Pakistan, Vietnam, and “the largest European army in business,” Russia. However, strikingly, in the introduction to these cases, the editors omit Russia from their overarching analysis, and consider military businesses a malfunction characteristic only of the global South (Brömmelhörster and Paes, 2003: 2).

Tarak Barkawi (2016: 2013) has written about a Eurocentric insistence in International Relations on excluding the role of war and militaries in the development of European societies. I argue that this inability to see the workings of militaries from the global North as also facilitating businesses, acting as business agents, or being implicated in spreading capitalist economies worldwide is itself an element of this blind spot. While the scholars I have cited above illuminate the practices of militaries of global South as potentially outside the norms of governance, what I show in this article is that the world's most powerful military has been crucial in enacting the geoeconomic interests of the US. The transnational economic role of the Northern militaries – not simply as *facilitators* of the work of private firms (via logistics and procurement contracts), but as engines for the production and consolidation of liberal capitalist relations– requires further study. This article aims to contribute to this field of research.

“Commerce, war, and transit”²

In his *Sources of Social Power*, Michael Mann (1986: 170) describes infrastructural power as “the capacity to actually penetrate society and to implement logistically political decisions” and considers its components to include elements of a common culture (such as literacy) as well as what he calls “legionary economy, or Rome’s version of compulsory cooperation” (1986: 297). This was as much a kind of centralised power that ensured some minimal cooperation from the ruled as it was about creating the physical infrastructures of rule (including fundamental necessities of economic operations, such as irrigation systems or roads). I use the phrase somewhat differently.

In this article, infrastructural power means the authority and power to forge and maintain the assemblage of practices, discourses, physical fixtures, laws and procedures necessary for the government of subjects and citizens, including their economies. This power emanates not only from bodies associated with states (e.g. public work ministries or in this article, the Corps of Engineers) but also overlapping institutions and organisations, whether parastatal or ostensibly private, that serve to bolster this power.³ The ultimate aim of infrastructural power is the (re)production and enforcement of capitalist relations.

Historians have illuminated the process by which militaries in the global North have developed both physical and virtual infrastructures that have in turn enabled the emergence of capitalist economies, new business sectors, and modern modalities of government (Edgerton, 2013; Epstein, 2014; Ruttan, 2006). Transport infrastructures in particular have acted interchangeably as conduits of commerce *and* arteries of war-making, particularly in the nineteenth century when the necessity of moving troops and supplies across the European continent further encouraged large-scale investment in railways and roads (van Creveld, 1977; Wolmar, 2012). A crucial corollary and benefit of this fungible infrastructure was that the military could “organize the resources of this or that town and set up a market” (van Creveld, 1977: 7), which in turn incorporated the conquered terrain into commercial and economic networks. War and commerce went hand-in-hand.

The same process also occurred in the colonies. Paul Rabinow’s magisterial account of French colonial modernity (1995:148) is particularly acute in its portrayal of how Marshals Gallieni and Lyautey brought with their wars of pacification new political economies and forms of government. He writes of Gallieni’s post-conquest work in Indochina:

Gallieni’s interest was infrastructural and instrumental. In village after village, he covetously and proudly noted every new bridge and road built; the French were spinning a growing spider’s web of installations-and Gallieni was the spider. Roads were the key; without them there could be no movement of troops, no commerce, and ultimately no society. Gallieni was adamant that posts be constructed in durable materials, to demonstrate that the French intended to remain permanently.

The centrality of conquering militaries in establishing fungible military and commercial infrastructures in colonial settings was widespread and not limited to the French (Headrick, 1990; Tripodi, 2009). The British railways in India transported commodities and troops. British sea power depended on both naval and commercial mastery (Kennedy, 2017). Rosa Luxemburg (2003: 401-402), in her account of railway building in Argentina, saw them not only as

² The phrase is drawn from Paul Nizan’s *Aden Arabie* (1987).

³ See Mitchell (1991) on the ostensible separation of “state/private” as a structural effect produced by the modern distribution of disciplinary power.

“spread[ing] commodity economy” but also “pav[ing] the way for military occupation”. What is particularly notable about the Luxemburg passage is that she periodises this infrastructure construction in a moment of transformation of global economies. She discusses how “capitalisation demands the progressive supercession of simple commodity production by capitalist economy”; “the employment of international capital in the construction of the international railway network” is the enabler of the process (2003: 401). Everywhere, capitalisation of global economies required both force for protection, and investment in far-flung places in infrastructures (also see Thorner, 1950).

In the European context, this decisive moment –of the emergence of territory as the space of government, populations as object of government, and security as the mechanism of government–is the subject of Michel Foucault’s *Security, Territory, Population* (2004). There, Foucault reflects on the mutual interdependence of police –the domestic apparatus of security– and commerce:

Finally, the last object of police [after “the number of men”, “necessities of life”, “the problem of health”, and “the activity of this population”] is circulation, the circulation of goods, of the products of men’s activity. This circulation should be understood first of all in the sense of the material instruments with which it must be provided. Thus police will be concerned with the condition and development of roads, and with the navigability of rivers and canals, etcetera... So the space of circulation is a privileged object for police (2004: 325).

Foucault is of course focused on the moment at which capitalist relations and new forms of government are becoming the prevalent *dispositif* within the national space of European states. His historical account is instructive in understanding that so much of the physical and virtual infrastructures that were required for the circulation of goods, capital and people were developed and regulated by the state’s coercive bodies. The police in Foucault’s account is a great wielder of the kind of infrastructural power of which I have written.

Given Foucault’s oft-commented-upon reluctance to extend his analysis to the colonial setting, the discussion of policing of circulation across national boundaries requires some theoretical adjustments. Here, the government of circulation requires the control of trade routes – not only lubricating the movements of goods and peoples but also sometimes circumscribing them. The production and attenuation of scarcity is as much a part of establishing the parameters of capitalisation in Asia and Africa as is the facilitation of European commerce at the expense of the global South (Rodney, 1982: 160-161; on “oil scarcity ideology” see Stern, 2013). “Limit[ing] the development of independent conduits” for the circulation of commodities and “maintain[ing] a grid of alternative supply routes and sources” (Mitchell, 2011: 163) has very frequently been the work of European commercial firms. In an imperial setting, a coercive force projected transnationally, a military acting as a global police, could also serve to both expand and constrict these routes and conduits of circulation along the lines Foucault delineated in *Security, Territory, Population*.

But beyond this regulation of scarcity and circulation, the militaries of the global North, and the US military in particular also served another characteristic of “circulation” discussed by Foucault. Foucault considers circulation as

not only this material network that allows the circulation of goods and possibly of men, but also the circulation itself, that is to say, *the set of regulations, constraints, and limits, or the facilities and encouragements that will allow the circulation of men and things* in the kingdom and possibly beyond its borders (2004: 325; emphasis added).

It is to understand this regulatory *dispositif* in an overseas context that I want to introduce geoeconomics as a central concept into this essay. In a sense, if Foucault's model conceptualises the uses of infrastructural power for the (re)production of capitalist relations within the boundaries of European nation-states, the concept of geoeconomics is the global conduit which allows for the projection of this infrastructural power across the surface of the earth, and especially in colonial or neo-colonial countries.

Geoeconomics as a concept was first used by Edward Luttwak in a now famous *National Interest* article in which he argued that "force has lost the role it once had in the age of mercantilism - as an admissible adjunct to economic competition" (1990: 21). In this world of geoeconomics, "the methods of commerce are displacing military methods - with disposable capital in lieu of firepower, civilian innovation in lieu of military-technical advancement, and market penetration in lieu of garrisons and bases", entailing a reconfiguration of "regulations, benefits, services, and infrastructures" with the aim of global domination (1990: 21). Critical geographers, including especially Deborah Cowen and Neil Smith, have argued for the utility of the concept in understanding "conflicts between the logics of territorial states and global economic flows, the proliferation of non-state and private actors entangled in security, and the recasting of citizenship and social forms" (Cowen and Smith, 2009: 25; also Smith, 2003; Morrissey, 2017). Cowen and Smith, however, do not argue for "a simple historical succession from geopolitical to geoeconomic logics" (2009: 25), but rather for "the geographical unevenness and radical incompleteness of this geoeconomic transition" (2009: 38).

Deborah Cowen (2014) has herself shown how global logistical infrastructures are crucial to contemporary geoeconomic domination. She traces the ease with which military encampments can become logistics hubs; and how logistical infrastructures can accelerate or slow down economic domination of some parts of the world over others. This connection between security and commerce is also made in Marc Levinson's absorbing history of the shipping container (2006), where containers used to transport materiel to the theatre of war in Vietnam in the 1960s were then utilised by Japanese electronics manufacturers to export their goods to the US, thus transforming trade patterns between the two countries.

This persistent transaction between commercial and security interests is also the subject of this article. What I argue is that in a time of economic transition in the Middle East, when the economies of the region –and in particular of the oil-producing states– were being ever more intimately incorporated into global capitalism, the US Army Corps of Engineers acted not only as a security arm of the US state, but also as an agent of geoeconomic transformation of the countries in which it operated. As trenchant accounts of political economy in Saudi Arabia have shown, the forging of Saudi infrastructures was crucial to the making and reinforcement of a capitalist order in which the exploitation of racialised and migrant labour, accumulation of capital through both transnational and local corporate bodies, and the internal protection of this system by repressive force became recognisable features of the system (Hanieh 2011; Jones 2010; Menoret 2015).

Corps of Engineers projects on the Arabian Peninsula, and Saudi Arabia more specifically, put into place military facilities (e.g. air fields, military cities and bases) that could be used both by the US and Saudi militaries; but also significant numbers of civilian (or dual use) infrastructures (like radio, television and telecommunication networks, and auxiliary structures around bases such as desalination plants and electric stations). Perhaps more significantly, the US Army Corps of Engineers' construction programmes also implemented virtual infrastructures of capitalist economies. These included legal and regulatory *dispositifs*, private property and labour regimes, rules of accounting and standards of engineering, and the broad range of business management

activities –procurement, sales, marketing, contracting, and the like– that construe and make possible business activities.

The US Army Corps of Engineers in the Arabian Peninsula

In a 1902 essay titled “Persian Gulf and International Relations”, the great naval power enthusiast Alfred T Mahan wrote,

In the general economy of the world, irrespective of political tenures, present or possible, the Persian Gulf is one terminus of a prospective interoceanic railroad. [...] The railroad will be one link, as the Persian Gulf is another, in a chain of communication between East and West, alternative to the all-water route by the Suez Canal and the Red Sea. [...] It will therefore serve particularly for the transport of passengers, mails, and lighter freights. On the other hand, for bulk of transport, meaning thereby not merely articles singly of great weight or size, but the aggregate amounts of freight that can be carried in a given time, water will always possess an immense and irreversible advantage over land transport for equal distances (2002: 217-8).

The strategic significance of the Arabian Peninsula as a node of transport, transit, and commerce was already clear to the colonial powers of nineteenth and twentieth centuries. Though the ports in the Arabian Peninsula had long had a rich history of facilitating Indian Ocean trade and Hajj pilgrimage, the colonial conquest of Aden in the nineteenth century, and the twentieth century establishment of air fields in Sharjah as a way-station between Europe and India incorporated the Peninsula into Europe’s colonial capitalist sphere (Bose, 2006; Heard-Bey, 1982; Mathew, 2016; Stanley-Price, 2012). Aden in particular was a significant coaling and, later, bunkering station, at one stage being the fourth most important ship refuelling port in the world (after New York, London and Liverpool; see Barak, 2015; Nizan, 1987). But the discovery of oil in commercial quantities in Bahrain and Saudi Arabia in the 1930s accelerated –with a brief hiatus during the Second World War– the process of capitalisation of the economies of the Peninsula. It is no surprise that the petroleum companies would be so centrally involved in the work of making infrastructures that would allow them to extract oil. ARAMCO in particular engaged in massive construction of transportation and communication infrastructures, utilities, and racially segregated labour camps and company towns (Vitalis, 2006; Mitchell, 2011).

During the Second World War, the US Army Corps of Engineers transformed an ARAMCO air strip into an air field, and after the war turned it into an air base in Dhahran. From then on, the US Army Corps of Engineers became involved in the construction of infrastructures –both civilian and military– in Saudi Arabia. These projects included a civilian air terminal at Dhahran, television and radio broadcasting facilities, and upgrading Jidda’s municipal water supply in the wake of a catastrophic flash flood which had “inundated water wells, destroyed pumps and pumping plants, and washed out the pipelines in the system that supplied the city with water” (Grathwol and Moorhus, 2009: 340-341). However, their most substantial and enduring contribution to the forging of Saudi Arabian state infrastructure was the development of a series of “military cities” throughout the kingdom which were to pin the borders of the kingdom in its most contested borderlands, provide bases for the country’s nascent military branches (later to be used for joint operations along with the US), and perhaps more importantly result in the development of secondary support structures such as logistics lines, dedicated ports, cargo terminals and other maritime infrastructures, as well as the construction of desalination, sewage and electricity plants to provide utilities to the military cities.

The geopolitical role of the Corps of Engineers –as that of other branches and divisions of the US military– is well established, especially in wartime, when the Corps would help build up the military infrastructures of its allies with the guarantee that these facilities would be made available to the US military. However, the Corps’ peacetime activities overseas tend to be somewhat more unique to the US military in the post-Second World War era and would more easily fit within a geoeconomic rubric. Just as the US Army Corps of Engineers has been engaged in civilian construction projects at home (see for example Logel, 2016) it has also been involved in peacetime operations overseas to facilitate the establishment, modernisation, and infrastructural consolidation of allied militaries.

At home, the Corps of Engineers (or its historical predecessor) was a crucial actor in the colonisation of the West and the settlement of indigenous lands (Shallat 1989, 1994). As both Nick Estes (2015) and Michael Lawson (1982) have argued, throughout the nineteenth and twentieth centuries the Corps’ large public works projects and its construction and management of waterways, irrigation, dams and levees in the United States worked in tandem with the official Indian Policy to dispossess and displace the land’s native populations. Its most major peacetime hydrological project overseas was the construction of the Panama Canal in early twentieth century, whose attendant regimes of racialised labour and imperial justifications were to haunt its project thereafter (Lindsay-Poland, 2003). Overseas, and especially beginning with the Second World War, the Corps of Engineers began largescale military and civilian construction projects throughout the Mediterranean and the global South (see US Army Corps of Engineers, 2008). In Iran, Pakistan, Afghanistan, and Turkey *inter alia*, the Corps was involved in building roads and other transport infrastructures that were meant to strengthen the alliance of these states, all of which were members of the Cold War era CENTO, the Central Treaty Organisation, formerly known as the Baghdad Pact (Adalet, 2018; Moore, 1969; Schubert, 1991; US Army Corps of Engineers, 1960; 2008). The strengthened alliance would of course support the US in the Cold War. The Corps’ civilian infrastructures projects often occurred in times of great political and socioeconomic transformation –for example US colonial expansion in the early twentieth century, or the Cold War– and were inextricably saturated with discourses of free markets, development, and modernity.

In a US Army War College thesis written in 1991, Colonel Albert Kraus argues that in the post-Cold War era, the US Army Corps of Engineers should enter bilateral engineering assistance agreements in order to address overseas environmental and economic disasters and aid developing militaries of the global South. Kraus writes that in the context of changed strategic circumstances and “domestic fiscal constraints”, “one strategic initiative that would greatly help to address the emerging threats and challenges, and strengthen America's economy and security, is a substantial increase in bilateral engineer assistance” (Kraus, 1991: ii). Where the Corps of Engineers was to be involved overseas, “the concept is not to try to build/rebuild an entire nation, but to help to put a country on the road to sustainable development through a systematic program of analysis, education, technology transfer, and corrective actions” (1991: 17). Kraus cites two historic examples of the kind of bilateral engineering assistance programmes that can show the way to the future. What is fascinating is that both examples show that the Corps of Engineers became involved in a large-scale developmental programme whose intent was not only the transformation of military facilities, but a re-engineering of the economic and political relations of the countries in question in a time of great economic transition. One example is Saudi Arabia, the subject of this article. Revealingly, the second example is the Support for Eastern European Democracy Act of 1989 which Kraus says “is designed to help Hungary and Poland transition to democracy and a market economy and will include efforts to help reduce severe environmental problems” (1991: 31-32). The programme in the end resulted in large-

scale engineering and logistics assistance, though almost all of it within the domain of military, rather than civilian, construction.

The infrastructural role of the US Army Corps of Engineers in the Middle East, however, went far beyond the construction of military infrastructures and explicitly advanced goals of economic development via expansion of civilian infrastructures. These contracts were financially lucrative for the US. A 1975 report assessing Army Security Assistance determined that engineering services were in fact more profitable than various other assistance services provided by branches of the US military:

Engineer construction FMS [Foreign Military Sales] projects in Saudi Arabia represent a unique use of Army Engineer capability in the furtherance of US foreign policy. In view of the situation in other oil rich countries, increased demands for Army engineer services can be expected and national interests may be better served by promoting the use of Army engineers instead of commercial sales.⁴

Historical accounts of contracts granted to the Corps of Engineers bear this out. The Corps' work in Saudi led to countries near and far calling in the Engineers for large-scale transport infrastructure construction. For example, they conducted a study of dredging in two Qatari ports (I have not found a record of whether or not they got the contract for its engineering or construction).⁵ Kuwait, Bahrain, Jordan, Egypt, and Sudan all saw other projects by the Corps (Grathwol and Moorhus, 2009). They also eventually were intimately involved in the construction of a number of modern ports in Oman, including overseeing the expansion of Sultan Qabus port in Muscat, and at least some of the initial construction work in ports of Sohar and Salalah.⁶

The Corps' geoeconomic role occurred along a number of vectors. First, Corps of Engineers construction projects occurred in concert and cooperation not only with private corporations involved in engineering, design, and construction; but also with US firms abroad which were *not* construction firms. The Corps of Engineers' symbiotic relationship with ARAMCO in the former's early stages of operation in Saudi Arabia is instructive in understanding the inextricability of military and commercial activities. Even more interestingly, the US Army Corps of Engineers not only subcontracted to local firms (as often required by local laws), but also brought in firms from allied countries from outside the Middle East. Second, and less remarked-upon, the particular modalities of operation of the Corps of Engineers *as a business* are worthy of note. The Corps acted as a commercial agent of the Saudi Arabian government through overseeing the process of contracting with other actors; but even more importantly, the very methods, techniques, procedures, and practices deployed by the Corps, in its activities as both construction and contracting agent, wielded an infrastructural power to consolidate a capitalising *dispositif*.

Corporate collaborations

⁴ "A Study on Army Security Assistance" (October 1975), p. A9; 870-5b Study on Army Security; Series 77-92-0001; Box 24 of 38; US Army Corps of Engineers Records; US National Archives.

⁵ "Countries May Seek Corps' Help"; Mideast Engineer (December 1978); 870 5b Mideast Engr Newspaper COE pub -78; Series 77-92-0002; Box 1 of 35; US Army Corps of Engineers Records; US National Archives.

⁶ 870-5b Oman File 1981; Series 77-92-0002; Box 32 of 35; US Army Corps of Engineers Records; US National Archives. Critchfield Papers; Georgetown University Archives.

From the very beginning of US military involvement in the Arabian Peninsula, the various branches of the US military had depended on private firms for advancing their programme of logistical support and construction. During the Second World War, the US was primarily interested in northern Gulf and the supply route across Iran to the Soviet Union; in Saudi Arabia itself, the US Air Force put to use an air strip previously used by ARAMCO. ARAMCO had discovered petroleum in commercial quantities in Saudi Arabia in 1935. Given the absence of transport infrastructures in the region, it had used a rudimentary air strip for flying engineers around the region. The airstrip was used by the US Air Force during the Second World War and was incorporated into the air supply route to US forces fighting in the Pacific (Grathwol and Moorhus, 2009: 29). In the postwar period, the US decided to maintain control of the field. At this stage, the US minister to Saudi Arabia, Colonel William Eddy, negotiated the terms of the establishment of the airfield with the Saudi governments in 1945. “A U.S. military team would construct the airfield and a 300-mile road from Dhahran to Riyadh (The Saudis wanted the paved road to go all the way across the country to Jeddah, but the War Department declined to make that commitment because there would be no military justification.) U.S. commercial airlines [specifically Transcontinental and Western Air Company or TWA] would have exclusive landing and transit rights” (Lippman, 2008: 158). In the case of the road, it was eventually constructed with the aid of ARAMCO, in a congenial division of labour. Eddy had the distinction of eventually leaving government service for work with ARAMCO.⁷ Once the construction of the air field began at the end of the 1940s, the US Army Corps of Engineers would not have been able to manage the process without the logistical support of ARAMCO and the use of their skilled craftsmen, equipment, and maritime transport infrastructure for the importation of materials needed for construction (Grathwol and Moorhus, 2009: 37). The construction company contracted by the Corps of Engineers to build the airfield was Fluor, which was also the preferred construction contractor for ARAMCO (Ibid: 32).

The malleability of the reasoning given for the decisions regarding infrastructure construction in Saudi Arabia pointed to the indivisibility of commercial and security reasons in US policy-making broadly, but in the decisions of the Corps of Engineers more specifically. As Mark Neocleous has written in his *Critique of Security* (2008: 76-81), a central task of the security apparatus is the “fabrication of the economic order”. In some instances, the concept of military security acts as an alibi for economic exploitation; in other instances, commercial reasons are cited as excuses for militaristic *raisons d'état*. In Saudi Arabia's case, ARAMCO's peculiar position “illustrates how the institutional mechanisms of a modern political order are never confined within the limits of what is called the state” (Mitchell, 1991: 90). The roles of ARAMCO and the Corps of Engineers seem to have been overlapping, with the distribution of commercial, diplomatic, security, and developmental tasks not being easily designated as public or private; or as military or civil. Even the establishment of a military base thought to be part of the US Strategic Air Command could be folded into ARAMCO's role with some tasks being allocated to the latter rather than to the institutions of the military.

Beyond the formal establishment of the bases, there were all the ways in which military officers and ARAMCO shared resources of various sorts, especially scarce transportation resources. These exchanges began during the Second World War and even during the shortages managed by the Middle East Supply Centre (Wilmington, 1971). For example, at the end of 1944, the ARAMCO annual report tells us, the Company received military trucks and cars to aid it in its massive construction; and conversely, the Company provided vast amounts of maintenance and

⁷ “Memo from William Eddy to Shaikh Yusuf Yasin on the Dhahran Airfield” (5 August 1945); William Mulligan Papers, Box 7, Folder 23; Georgetown Archives.

support for airfields, naval vessels, and a wide range of other military functions.⁸ In 1945, ARAMCO chartered planes from the US Army Air Transport Command, who willingly supplied planes and crew for flights, and in return, ARAMCO construction engineers provided reciprocal services to the US Army Corps of Engineers constructing the airfield at Dhahran and an emergency landing field at Duwaid.⁹ In the early 1960s, as the US Army Corps of Engineers began its programme of developing military installations and naval bases for the Saudi military, a great deal of their work was facilitated by ARAMCO intelligence and Trans-Arabian Pipeline (TAP-Line) resources in far-flung corners of Saudi Arabia, including ARAMCO-built roads, transport equipment, and the use of TAP-Line pumping-stations.¹⁰ As part of the expansion of Jubayl naval base and the establishment of an industrial area there, the Corps planned on putting out a contract for a water desalination plant to be built; and it entered deals with ARAMCO to provide sweetened natural gas for the production of electricity needed for the construction process.¹¹

By the 1960s and in the intensive reconstruction period following the Second World War, the dollar had overtaken the sterling as the dominant currency of world economy and eventually trade in oil (Citino, 2002; Galpern, 2009). However, by 1960, US economic policymakers had become anxious about foreign holders of dollars “redeeming [their expatriated dollars] for gold from the U.S. Treasury, reducing American gold reserves and threatening the stability of the dollar. To limit the exodus of dollars, the Eisenhower administration and Congress imposed regulations on military spending overseas and encouraged the Department of Defense to use American products wherever possible” (Grathwol and Moorhus, 2009: 224-5). This change in monetary policy went hand-in-hand with the long-standing Congressional demand for US firms being the primary recipient of lucrative contracts not only at home but also abroad.

As I wrote before, some of the most acute analyses of the US military’s contracting of military functions have emerged in the last two decades (Avant, 2005; Kinsey and Patterson, 2012; Kinsey, 2009; Singer, 2003; Stanger, 2009; Verkuil, 2007). Much of this work focuses on the acceleration in granting of contracts brought about by the Logistics Civil Augmentation Program (LOGCAP) in the 1980s (Singer, 2003; for investigative work on the problematic nature of LOGCAP contracts see Briody 2004; Chatterjee, 2004, 2009). But the Corps of Engineers had a much longer history of establishing relationships with engineering, contracting and construction firms, not only in its overseas construction work in the Middle East, but also through its engagement with mega-firms involved in large public works projects in the US.

The earlier years of Corps of Engineers work in Saudi Arabia saw them drawing directly on ARAMCO or its contractors Fluor and Bechtel for many construction projects (on Bechtel see Denton, 2016; McCartney, 1988). Brown and Root, which had been involved in many construction projects for the US military in the Second World War (including shipyards) similarly won contracts from the Corps either as Brown and Root, or later as Kellogg, Brown & Root or

⁸ ARAMCO Annual Report 1944, Mulligan Papers, Box 3, Folder 43, Georgetown University Archives.

⁹ ARAMCO Annual Report, 1945, Mulligan Papers, Box 3, Folder 43, Georgetown University Archives, pp. 19-20.

¹⁰ “Memo for record, Site visit to Qaysumah, Saudi Arabia on 28 September 1964” (29 September 1964); Folder 870-5b; Series 77-92-0002; Box 29 of 35; US Army Corps of Engineer records; US National Archives.

¹¹ Various records; Folder 870-5b Hist Src File SNEP; Series 77-92-0001; Box 4 of 38; US Army Corps of Engineers Records; US National Archives.

KBR (Pratt and Castaneda, 1999). Morrison-Knudsen had been part of the same consortium (along with Bechtel) that was involved in the construction of the Hoover Dam, and many construction projects for the US in the Vietnam War. Parsons Corporation, which had built oil installation in Alaska's North Slope and which eventually built the Yanbu port, also did a great deal of business with the US Army Corps of Engineers in Saudi and elsewhere. The US Army Corps of Engineers Archives contain many curricula vitae of engineers working for these firms who had come to their private sector jobs from the Corps.¹²

While the Corps' primary contractors often subcontracted to local firms in order to acquire the necessary labour force they required, the Corps also was compelled (sometimes by law, and sometimes through informal means) to contract directly with firms owned by Saudi businessmen and coterie of the ruling family. As Grathwol and Moorhus (2009: 163) recount in their history of the Corps,

In negotiations, the Saudis insisted that a Saudi contracting company participate in the bidding for both the Dhahran terminal and the training school for the Royal Saudi Air Force in Riyadh. The Saudis made clear that they viewed these projects not as grants in aid but rather as the quid pro quo for the U.S. Air Force's continued use of the military facilities at Dhahran. They wanted to 'get their money's worth' out of the construction contracts.

The beneficiaries of such contracts are now some of the largest firms in Saudi Arabia, including the Binladen Company, which was involved in the construction of a highway under Corps contract in the Asir province as well as in contracts to build air force bases, garrisons and other secret military infrastructure there. This construction work helped the region to be more intimately incorporated territorially into Saudi Arabia and protected from the revolt of the nationalists in North Yemen (Coll, 2008: 115). Michael Field's colourful account of some of the wealthiest business families in the Peninsula (1985) points to the Alireza, Algosaiibi, Juffali, Kanoo and Olayan family firms also enjoying the benefits of such construction contracts with the Corps.

However, if the Corps of Engineers was compelled by US and Saudi political pressure to engage firms based in those countries, its process of granting contracts to non-US and non-Saudi firms shows the extent to which it acted as a significant actor in the process of capitalisation of Saudi Arabia and consolidation of global capitalism. Grathwol and Moorhus (2009: 403-4) recount how in 1975, the Corps for the first time granted a construction contract worth \$22.2 million to a South Korean firm, Sam Whan, to build a workers' camp in Jeddah. Shortly thereafter Miryung and Hyundai were also in receipt of other Corps contracts. Although the Corps contracts meant an explosion in demand for South Korean services in Saudi Arabia, the Corps had a much longer relationship with Korean construction and contracting firms. The US had engaged South Korean firms in its Vietnam War effort, and its overseas procurement contracts had provided a safe, "guaranteed market" for Korean goods and services, aiding that country's further incorporation into global capitalist circuits (Glassman and Choi, 2014: 1163). Hyundai whose business took off during the Korean War by providing services to the US military, upgraded "its engineering skills under the tutelage of the US Army Corps of Engineers" in subsequent decades (Ibid: 1168). The company's intimate relationship with the Corps meant that even as wars ended, they could be guaranteed contracts from the Corps first in Guam and later in Saudi Arabia (Ibid: 1172). By

¹² "Saudi Arabian Engineer Assistance Program: Joint Venture Proposal; background info on contractors" (1964); Folder 870-5b Background Info; Series 77-92-0002; Box 14 Of 35; US Army Corps of Engineers Records; US National Archives.

1976, Saudi Arabia was “South Korea's fourth most important overseas market” (Disney, 1977: 22). Further, between 1974 and 1980, “19.4 per cent of total contract amounts [for Korean firms] originated from either ARAMCO or the US Army Corps of Engineers” (Moon, 1986: 622).

The Corps largesse, then, not only opened “an excellent export market for US companies” (Whelan, 1981a), it also placed the Corps itself in the “statutory role of middleman in projects” (Whelan, 1981b). The Corps projects –alongside the contracts granted by ARAMCO– had aided the creation of a global circuit of labour, capital, products, services and expertise that decidedly functioned according to a grammar of liberal capitalist order.

The grammar of the capitalist geoeconomic order

Even in its work in the continental United States, the work of the US Army Corps of Engineers had been fundamental to establishing new business practices. As Theodor Porter argues in his history of accounting practices in the US, although Military Engineers “lacked administrative authority over the vast net of railroads that spread across the North American continent in the nineteenth century” they were nevertheless “mainly responsible for the forms of accounting and administration through which railroad companies became prototypes of the modern, managed corporation in America” (1995: 150). What the military engineers in particular contributed to modern accounting and management methods was the institutionalisation and routinisation of modern cost-benefit analysis with all its shortcomings and blind spots (including not accounting for social ills such as long-term ecological damage or human rights violations) and its connection to Taylorist forms of management (1995: 187). By the 1950s, the US Army Corps of Engineers had hired large cohorts of social scientists and economists to ensure that its engineering activities could be justified in the language of economic effectiveness and efficiency to those who wanted to keep it accountable.

The Corps’ work in Saudi Arabia confounded any formally defined sectoral or military/civilian or even foreign/national boundaries. For example, even after the completion of its construction programme, “the Corps continued as the advising agency to the Saudi Arabian Ordnance Corps. In addition, the Corps continued its role in disbursing funds. The Saudis placed all orders to vendors and suppliers, but the Corps paid the invoices. The arrangement, intended to be temporary when the [construction project] began, became a permanent part of the Corps’ relationship with Saudi Arabia” (Grathwol and Moorhus, 2009: 333). The US Army Corps of Engineers not only acted as an arm of the Saudi state in contracting and disbursement of payments, it also became a purchasing agent (Ibid: 358), trainer for new engineers (Ibid: 340), the initiator of engineering and accounting standards, and the stipulator of legal contracts.

The Corps’ definition of what sorts of contracts could be drawn up (not only between itself and various Saudi government agencies but also between itself and the engineering and contracting firms it engaged) also delimited the character of contracting in general for such large projects. The memoranda exchanged between Corps engineers in Saudi and abroad bristle with acronyms for legally complex forms of contractual obligation that the Corps’ legal officers would design and enforce.¹³ Beyond delineating the contours of contracting, the Corps administrative

¹³ See for example, “Letter Order Contracts”; “fixed price contracts form 1354 (Transfer and Acceptance of DoD Real Property)”; “GFE (Government Furnished Equipment)”; “O&M Contracts (Operation and Maintenance Contracts)”. “Memo from Brigadier General James N

processes introduced new modalities of management both to its contractors and to the government. These included “the provision of modern supply control procedure”; “institution of modern maintenance management procedures”; “institution of a modern and effective system of logistics management”; procurement systems; management information systems; inventory systems; “requisition, issue, turn-ins, stock records, and allied transaction and record forms”¹⁴. The new managerial process also introduced information technology tools such as the automated Network Analysis System (Grathwol and Moorhus, 2009: 495) and its Cost/Schedule Control System (CS-Squared) (Ibid: 490-3) which was to become a nub of contention between it and its contractor. The Corps provided both its contractors and Saudi government agencies with “support and advice concerning maintenance, supply, automated data processing, contract administration, financial management, training, and construction” (Ibid: 579).

In order for the Corps to construct the vast military cities it eventually did, as well as the other infrastructure projects that required access to public and private lands, the Corps had to secure the agreement of the owners of these lands. In most instances, the royal family would grant access to the Corps, both consolidating the Saud family’s hold over the land and providing the Corps with a carte blanche for the use of the space and expanding its reach beyond the bases. As one draft unpublished official Corps history claimed, the Corps’ negotiation of “off base land-leases and rights-of-entry to required lands” were “time-consuming, often frustrating, and always irritating to native populations”¹⁵. The Corps materials are sanitised but they show that these access rights could cause “irritation” because of encroaching on the seasonal movement of the Bedouin as well as possible expropriation of agricultural lands.¹⁶ The official history of the Corps in the Middle East briefly notes that “treaty provisions covering the acquisition of desert land eased the difficulties”, without reconciling this to the irritation the earlier draft history had noted, or indeed indicating which treaty covered the process of land acquisition (Grathwol and Moorhus, 2009: 39). It is also worth noting that desert lands were more likely held in common and the process of establishing a base there likely led to the parcelling and commodification (or enclosure) of that land.

Perhaps more significantly, the Corps inserted itself into the Saudi labour regimes, and in many instances either transformed these systems, or reinforced forms of labour control and

Ellis to Lt. General J.W. Morris” (22 May 1979); Folder 870-5b; Series 77-92-0002; Box 2 of 35; US Army Corps of Engineers Records; US National Archives.

¹⁴ “Mobility Modernization and Armaments Program for the Saudi Arabian Army (prepared by US Army Engineer Division)” (28 May 1966); Folder 870-5b Mobility Modernization and Armaments Program for SA (1966-1968); Series 77-92-0002; Box 11 of 35; US Army Corps of Engineers Records; US National Archives.

¹⁵ “Chapter 1, *The Crash Program 1949-1952*” p. 29; History Draft Files; Series 77-92-02; Box 1 of 35; US Army Corps of Engineers Records; US National Archives.

¹⁶ While the archival material on Saudi Arabia does not contain very much information on the processes of land acquisition, Grathwol and Moorhus (2009: 39) write about the Corps project of building Wheelus Air Force base in Libya: “In Libya, acquiring land for U.S. military facilities represented a delicate problem. Arab attitudes toward land and tenacity in holding onto it made long-term leases more palatable than outright purchases. The need to resettle tenants required land acquisition away from the bases and provision of huts and water wells for the resettled people”. The same source also recounts Moroccan worries about the Corps acquisition of land there and “whether the Americans would compensate land owners for the loss of crops” (2009: 56).

exploitation introduced by ARAMCO before it. The archival material contains a great deal on the labour regimes the Corps established or reinforced. Often, the Corps would claim that it had no hand in how the labour was treated, since it hired contractors who in turn hired local subcontractors for labour provision. This included “importation” of labour for large construction projects in order to control the cost of the projects. One account of the building of military cities stated

Our third challenge is to isolate the project from the inflation prevalent in Saudi Arabia. This is important to use in order to control costs. It is also important to our customer that our project is not the cause of increased inflation in other parts of the Kingdom. We achieve this isolation by obtaining all the materials and labor required for the job from sources which are not competitive with sources used by other projects in Saudi Arabia... We plan to import all the laborers that will be employed on this project. We estimate that approximately 20,000 personnel will be required at the peak of the construction of the city. Additionally, we must provide a complete life support system for these workers. This life support system includes all the required housing, messing, medical, recreational, and other facilities that will be required to keep our laborers happy during the time they are present at the site. The workers will have no access to other towns in Saudi Arabia and thus their wages will not be a source for fueling inflation within Saudi Arabia. At the same time they should find it relatively pleasant with all the facilities that will be provided for them.¹⁷

When it came to wages, the dramatic difference between the wages of US vs foreign workers employed by contractors to work on Corps projects is instructive. For example, the 1964 wage rates of Greek personnel contracted and imported for work in Saudi Arabia was a fraction of US personnel. While US personnel would earn the equivalent of \$6.35 hourly wage, the most highly paid Greek personnel, architects and engineers, would get paid \$2.60 and \$2.84 respectively. US administrative staff would earn \$4.35 while the Greeks were paid \$0.61 (with accountants at \$1.28).¹⁸

The process of isolating workers noted in the passage above echoed the segregation of labour forces pioneered by ARAMCO (Vitalis, 2006). As Vitalis has shown, a great many of the labour practices that have become associated with the exploitation of migrant workers in Saudi Arabia were devised in the early years of ARAMCO’s work there and were also adopted by the Corps. These included segregation of living quarters and the institution of a Jim Crow system with racialised hierarchies reinforced in health, education, leisure and housing of ARAMCO workers (and also workers on Corps projects). It is also notable that the US military more broadly (Li, 2015; Lipman 2009) and the Corps of Engineers more specifically (Friedman, 2017; Lindsay-Poland 2003) were instrumental in globally spreading a racialised hierarchy of labour perfected in Jim Crow US.

In the end, both the wages and housing provisions reinforced a hierarchized, racialized workforce whose lower wages could be justified through the layers of contracting that kept Corps project costs low. Like so much else that the Corps did, the wage rates and working

¹⁷ “Corps Experts and Saudi Arabian \$’s are growing modern cities in the desert”. *Engineer Update* 1(4), October 1977; Series 77-92-0001 Box 38 of 38; US Army Corps of Engineers Records; US National Archives.

¹⁸ “Frank E Basil Inc.: Wage Rates in US Dollars”; Saudi Arabian Engineer Assistance Program: Joint Venture Proposal; background info on contractors; Series 77-92-0002; Box 14 Of 35; US Army Corps of Engineers Records; US National Archives.

conditions were simply seen as how business was done. But in fact, the entire process, from design through implementation, reinforced a racialised capitalist modality of business and the unequal and exploitative labour system in operation in the country, and it incorporated the economic relations of the country into the broader circuits and relations of global liberal capitalism.

Conclusion

The immediate post-Second World War era saw a massive transformation in the politics and economies of Asia and Africa, as states struggled for independence from colonial rule and as US –and to a lesser extent its European allies– facilitated the capitalisation of the new states’ economies. This process of capitalisation depended primarily for its spread on the work of both transnational corporate actors and the local bourgeoisie, whether or not aligned with the Western Bloc or not. Transnational corporations were often backed by the force of former colonial and the new imperial powers. And the primary task in many of these newly capitalising economies was the establishment of physical and virtual infrastructures that would facilitate capitalist production, commodity extraction, and the circulation of goods and capital.

The role of the US military in this process is less understood. It is now a truism that wars waged and won by the US and European powers were followed by economic and commercial contracts that benefited those powers. The militaries were seen as paving the way for such business transactions. What has been far less frequently commented upon and has been far less visible is that the peacetime overseas activities of the US military and its infrastructural power were fundamental in establishing a grammar of capitalist relations which introduced new modalities of economic management and administration to the newly capitalising countries.

The most dramatic of these geoeconomic interventions has been the work of the US Army Corps of Engineers in the construction of both civilian and military communication and transportation infrastructures and forging a vast military machine in Saudi Arabia. The Corps brought with its construction projects a liberal capitalist *dispositif*: forms of regulation, contracting and sub-contracting, debt production, property acquisition, and standards of construction that provided an environment conducive to incorporation into capitalist networks and relations.

This infrastructural power of militaries within a geoeconomic sphere brings into question our understanding of how power operates globally. Neat separations and conceptual boundaries between public and private, states and corporations, domestic and foreign, or civilian and military are all challenged by the geoeconomic work of the US Army Corps of Engineers in Saudi Arabia, and elsewhere. The activities of the Corps –not just in times of war but especially in peacetime– have been adjuncts to the work of corporations in crafting the grammar of global capitalism. This grammar has incorporated racialised regimes of labour, capitalist modalities of property ownership, an assemblage of laws, regulations, engineering standards, contracts and practices, and finally and most significantly a set of physical infrastructures that have facilitated the capitalisation of global economies. This geoeconomic role is distinct precisely because of the inextricability of notions of commerce and security; the co-imbricated relationship of the Corps not only with private firms (contractors, but also the parastatal ARAMCO), but also with the Saudi state itself, and the blurring of foreign/domestic boundaries when the Corps functioned as an agent of the Saudi state.

Infrastructures and infrastructural power uniquely shed light on these blurred boundaries between heuristic binaries (public/private; state/corporation; domestic/foreign; civilian/military). Questioning these basic binary separations when studying organisations such

as the US Army Corps of Engineer, and the role it has played overseas, will help us better understand how the fundamental scaffolding of our world has been erected; and the ways these often invisible infrastructures reproduce and reinforce a liberal capitalist world order.

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Conflict of interest

None.

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