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Review/Reseña

Seth Garfield. *In Search of the Amazon: Brazil, the United States, and the Nature of a Region*. Durham: Duke University Press, 2013.

Rubber's Reprise and the Origins of Amazonian Development

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In many accounts, Brazil's 1964 coup marks the beginning of a concerted effort to transform the Amazon. Imagining the country's vast but sparsely populated interior as critical to the nation's future, military leaders built roads, deployed science, and offered generous subsidies to develop the region. These policies generated a speculative and violent land boom, encouraged wide-scale deforestation, and solidified Amazonia's place within Brazilian consciousness. Seth Garfield, however, pushes back by several decades the origins of this transformation. In a fascinating bi-national history, he shows how the Amazon's rehabilitation from problem to promise congealed as the United States enlisted Brazil's support in an urgent drive to boost rubber production during WWII. Although the flurry

of activity was brief and only marginally successful, the consequences of the (sometimes competing) efforts to remake Amazonia were far-reaching. The Vargas regime, Garfield argues, “seized on geopolitical turnabouts to leverage foreign capital and technology transfers, establishing the infrastructural and ideological foundations for subsequent state projects in the Amazon” (211).

By the 1930s, in the words of Harvey Firestone, rubber had become “indispensible to modern life” (56). While tires consumed most of the world’s production, rubber was critical to everything from conveyor belts and milking machines to radios and typewriters. Part of what allowed rubber to seep into the pores of industrial society was one of the classic tales of biological espionage. By smuggling 70,000 rubber tree seeds out of the Brazilian Amazon, Henry Wickham enabled the British and other Europeans to establish rubber plantations in their Asian colonies. Growing rubber was much more productive than collecting it from the forest, allowing output to soar while prices plunged. In 1910, 90 percent of the world’s rubber was “wild,” the vast majority harvested in the Brazilian Amazon. A decade later, plantations supplied 90 percent and Amazonian rubber had nearly disappeared from global markets.

While Brazil obviously suffered from this dramatic reversal—encouraging early but ineffective state efforts to overhaul the collection and sale of rubber—it also had important consequences for the US. As Southeast Asia became the world’s principal rubber-producing region, US influence over this strategic resource waned. In the 1920s, therefore, Congress began drawing up plans to stockpile rubber and encourage the development of rubber plantations closer to home, sending representatives to scour the Amazon basin, as well as Central America and the Philippines, for promising sites. (Parallel to these efforts, Henry Ford set his sights on the Amazon, eventually building the doomed Fordlandia, and Firestone acquired a million acres in Liberia.) The Great Depression, however, changed priorities from maintaining strategic reserves to price stabilization and economic recovery. The rubber industry, which had been suffering from a profitability crisis since the Depression of 1920-21, resisted pressure

to take up the government's slack and by 1940 its inventories had shrunk considerably.

With the onset of war and the beginnings of a global scramble for rubber, Congress again earmarked \$500 million to promote plantations in Latin America. Boosters believed in the power of American science and ingenuity to transform the Amazon—and make the Americas self-sufficient in rubber—through high-yielding, disease-resistant trees, environmental amelioration, and transportation improvements. They also reframed the Amazon's potential (and patrimony) along Turnerian lines: "The conquest of South America's wilderness would do for the Western Hemisphere what the conquest of the West did for the United States," wrote geographer E.P. Hanson (69).

But time was of the essence, especially after the Japanese occupied Southeast Asia in early 1942, causing the US to lose 98 percent of its rubber supply. Since rubber plantations took too long to develop, and wild rubber could not meet the country's needs, the only solution was to subsidize the development of a synthetic rubber industry. It would take several years to ramp up synthetic production, however, and high-quality natural rubber was still required for critical applications, such as airplane tires. As a result, the US needed to quickly boost its supply of wild rubber and the Brazilian Amazon, even though it provided less than one percent of global output, was the most promising candidate.

To rapidly increase the output of Amazonian rubber, the US invested \$60 million to revamp the industry. A portion of these funds subsidized the migration of new rubber tappers to the Amazon. Reaching the rubber trails was often an arduous journey as inefficient overland routes, used after German submarine attacks closed shipping lanes along Brazil's northern coast, combined with long delays in overcrowded, government camps. Nonetheless, by 1945 some 55,000 people had taken part in "the largest state-subsidized domestic transfer of free labor in [Brazil's] history" (127). Most came from the Brazilian Northeast, especially the state of Ceará, which, in addition to historic ties to the Amazon, had been suffering from several years of drought and rising levels of inequality. Simultaneously, the US backed Brazilian campaigns to "sanitize" the

Amazon. By attacking malaria (with drugs, bed nets, and DDT) and by helping to build a network of hospitals and rural clinics, as well as train health workers and sanitation engineers, the US hoped to reduce the lost productivity of enfeebled workers and recast the region's image as safe rather than pestilential. It also attempted to overhaul the rubber commodity chain. To streamline the export of rubber, the US introduced amphibious aircraft and new boats. Officials even dreamed of building a canal to the Orinoco River. Additionally, the US supported the efforts of the Vargas regime to empower rubber workers by encouraging more equitable and transparent tapping contracts and by providing tappers with subsidized food and supplies in order to undermine debt relations and the power of traditional bosses. Propaganda campaigns to enlist workers in the rubber program tapped a patriotic nerve—"Rub him out with rubber" proclaimed one poster depicting a tire running over Hitler—and illustrated the efforts to "modernize" rubber harvesting. While such publicity may not have convinced people to migrate—many of the posters likely ended up as wallpaper—tappers recognized their important contribution to the war effort as "soldiers" in the "battle for rubber" (110).

On its own terms, the rubber program was not very successful: output from the Amazon increased by less than 40 percent and it cost, given the substantial investments, three times more than supplies coming out of India and Sri Lanka. While the logistics of working in such a remote region were challenging, the rubber program also faced varied forms of resistance. Rubber bosses resented efforts by the Brazilian state, in cahoots with the US, to undermine the traditional commodity chain and socio-economic relations. Since they derived much of their income from high markups on supplies advanced to tappers, many took advantage of new sources of state credit to replenish their inventories rather than open new rubber trails. Many bosses were also reluctant to contract newcomers since they were less productive than experienced workers; or they shunted migrants to less productive trails in order to contain any damage that the newcomers might inflict upon their rubber trees. Such strategies frustrated US and Brazilian efforts to increase output. Additionally, many of the recruits never made it to the rubber trails. Up to a third of them may have

died, mostly from disease. Many others chose alternative livelihoods. Along the Rio Tapajós, 60 percent of the migrants ended up farming or employed on public works projects; only 20 percent gathered rubber.

The production of rubber was also constrained by ideological divisions in the US. Progressives, epitomized by Vice-President Henry Wallace, saw the rubber program as an opportunity to remake the Amazon into a tropical version of the US. As head of the Board of Economic Warfare, charged with procuring raw materials abroad, Wallace was willing to pay high prices in order to improve local standards of living and wanted to use US influence to transform inefficient debt peons into productive citizens. Wallace's vision of a New Deal for the Americas was anathema to conservatives, represented by Houston democrat and Secretary of Commerce, Jesse Jones. Wallace and Jones sparred publically. Jones argued that the rubber program was irresponsible and counterproductive. Given the proclivity of tappers stop working once their immediate needs were met, higher prices would reduce rubber output. Furthermore, the supposed culturally insensitive social engineering fomented by the likes of Wallace would radicalize workers rather than increase production. Jones won the dispute, limiting the purview of the Board of Economic Warfare to purchase rubber and helping to push Wallace off the 1945 presidential ticket. With the shift in power, the US government began dismantling its rubber program—now deemed a “third rate musical comedy”—in 1943 (173): plans for a network of airports around the Amazon were reduced to the Manaus airfield; fantasies of a Orinoco canal were scrapped; subsidized food and supplies for rubber tappers vanished; and the US liquidated its commitment with the Brazilian government to subsidize the migration of workers to Amazonian rubber trails. As its commitments dwindled, the growth of Amazonian rubber output slowed, giving new life to notions of tropical intractability.

Efforts to transform the Amazon and its rubber industry did not just emanate from the US, however. Garfield's wide-ranging, bi-national analysis emphasizes the way that US designs interacted with the related projects of a diverse cast of Brazilian actors. As import-substitution industrialization gathered steam, Brazilian industrialists and technocratic

state planners began to see the Amazon as a potential source of cheap resources. Amazonian elites also called upon the federal government to develop the region by integrating it more closely with the rest of the nation, although they stressed the region's particularities in a quest to maintain local autonomy and their own privileges. The Brazilian military called for state-directed colonization projects to counter perceived threats to national sovereignty and championed territorial settlement as central to Brazilian development. So-called "sanitarians" challenged northern notions of environmental determinism by demonstrating how advances in tropical medicine could render the Amazon safer and more productive. Modernist writers turned the Amazon into the spiritual heart of the nation. Geographers, plant scientists, engineers, and others also intervened in varying ways.

Although driven by tensions, these efforts to recast the Amazon came together in the late 1930s under the auspices of Getúlio Vargas' Estado Novo and its "March to the West." Having pledged to "remake nature and society in the Amazon," Vargas nationalized the deficient transportation network, and attempted to improve health conditions, subsidize the migration of workers, and rationalize regional production systems (21). The state's capacity to transform the region was limited, however, which is why Vargas responded favorably to the US campaign and its resources. (US efforts to sever Brazil's ties to Germany and further access its resources also included loans worth several hundred million dollars for military equipment, resource and infrastructure development, and to pay off outstanding debts.) Officials from both countries believed in the transformative power of science and the state. Referring to the Amazon, Vargas proclaimed: "What Nature offers is a magnificent gift that demands care and cultivation by the hand of man" (21). But Vargas was no dupe. Instead of viewing the rubber program through an imperialist lens, Garfield underscores how the Vargas regime took advantage of US policy to promote its own agenda. While some Americans wanted to import laborers from Asia, arguing that even highly "vitaminized" locals lacked the required drive, the Brazilian government insisted on settling the Amazon with Brazilians (102). Despite the US desire to subsidize only the transportation

costs of male workers, the Vargas regime encouraged the migration of entire families. More than simply increasing the output of rubber, the Brazilian government wanted to settle the Amazon and draw it into the national fold. Rubber was a means to this end.

By placing the rubber campaign on this broader canvas, Garfield shows how its effects went far beyond questions of output. Although some of the rubber recruits eventually returned home, others settled permanently in the Amazon. The combination of wartime patriotism and the state's willingness to intervene on behalf of rubber tappers helped forge a greater sense of citizenship and a new conception of the state as social mediator. With US assistance, the Brazilian government also vastly expanded public health programs in the Amazon. The Instituto Evandro Chagas became a center of tropical medicine; local clinics trained cadres of health and sanitation workers; and the government oversaw the widespread application of DDT, which, along with the introduction of synthetic anti-malarial medicine, dramatically cut the incidence of malaria by the 1970s. Increased state contact through these health programs also "strengthened identification of backlands populations with the nation-state" (208). Likewise, the large increase in wartime credit for the rubber industry, the product of a joint venture by US and Brazilian state capital, eventually became the Banco da Amazônia, the region's principal lending institution. And as US intervention diminished, the Brazilian state stepped in. In 1943 it established the Fundação Brasil Central to build transportation infrastructure in Amazonia and the 1946 constitution mandated that at least three percent of the federal budget be spent on developing the Amazon. Although such policies remained incipient in the 1940s, Garfield claims that, "In fundamental ways, the Vargas regime laid the groundwork for the military government's public policies in the Amazon" two decades later (210).

Despite the book's expansive title, much of the text focuses on the origins, implementation, and effects of the rubber campaign in the early 1940s. The narrative ranges beyond such narrow bounds, however. By skillfully addressing a host of pertinent issues—changing discourses of tropical nature and peoples, the blinkers of high modernism, debt peonage,

the social history of drought and migration, the reach of Brazil's incipient welfare state, and US policy in Latin America, to name a few—Garfield speaks to a wide audience. Examining the rubber campaign from multiple perspectives also allows him to avoid an overly US- (or state-) centric history. The US effort to boost rubber production in the Amazon was not a unilateral endeavor; instead, it needs to be understood within the context of Brazilian interests and initiatives. And it focuses Garfield's attention on the synergies as well as tensions at different scales—especially between and within the US and Brazilian states—thus eschewing a simplistic North-South emplotment. Additionally, Garfield invests rubber tappers with a good deal of agency, devoting an entire chapter to the patterns of migration between Ceará and the Amazon.

Such wide-ranging interests sometimes limits how far Garfield can drill down. He provides a good introduction to the political ecology of rubber tapping, but readers will have to look elsewhere for a thorough analysis. He is much better on the politics of rubber in the US than within the *Estado Novo*. In fact, Vargas' *March to the West* is treated rather perfunctorily. While Garfield makes a convincing case for the centrality of the wartime experience to subsequent transformations of the Amazon, these connections remain provocations to be explored by others. Curiously, despite being omnipresent, the Amazon itself rarely comes into focus. On a more specific note, I wonder, given the discourses of citizenship that circulated elsewhere in Latin America, even in remote regions, prior to WWII, whether there might be a deeper history to the “new-found understanding of [rubber tappers'] rights as workers and citizens” that emerged under the Vargas regime (204). I also found the epilogue, which cursorily examines some of the effects of Amazonian development since the 1970s, including efforts by rubber tappers (now minimally connected to the wartime campaign) to defend their livelihood by redefining themselves as traditional and conservation-minded, to be the least satisfying part of an otherwise rich and compelling story. Scholars interested in US-Latin American relations, state-sponsored development, the promises and pitfalls of extractive economies, discourses of tropical nature, environmental and

rural history, and, of course, rubber will all find *In Search of the Amazon* to be a rewarding read.