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BOOK REVIEW

Hugh R. Slotten, *Beyond Sputnik and the Space Race: The Origins of Global Satellite Communications*

Baltimore: Johns Hopkins University Press, 2022. Pp. 256. ISBN 978-1-4214-4122-1. $55.00 (hardcover).

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Telecommunications satellites in geosynchronous orbit nearly 36,000 kilometres above the Earth's surface have fundamentally reshaped the sharing of information. They have enabled live intercontinental broadcasts, transmitted thousands of television channels across the globe, enabled global financial transactions and expanded broadband to the world's remotest areas. But historians of science and technology have produced relatively little on satellite communications, ceding the field largely to media studies or business scholars.

This insightful book explores the origins of global satellite communications through two institutions that shaped their structure, priorities and nature during the Cold War – Comsat and Intelsat. Slotten's crisp narrative foregrounds the US government's efforts to establish ground rules for satellite telecommunications in the early 1960s, in a bid to cement US global leadership. This imperative was underpinned by deep contradictions: the United States paid lip service to truly global satellite communications to underscore American largesse toward developing nations while also seeking to keep actual influence and power firmly in US hands.

The book begins with late 1950s attempts to set US policy for new communications satellite technology and concludes with the creation of Intelsat, the first global satellite communications service provider in 1964. Widespread discussions in the 1950s about possible uses of communications satellites were dominated by national-security imperatives. The formation of NASA in 1958 highlighted a need to set federal policy for the development and use of communications satellites. Some within NASA, though not all, believed that private industry should lead. Another point of debate was the fight over allocation of frequencies for use by future communications satellites, a battle that unfolded in the halls of the International Telecommunications Union (ITU), which had for decades been a forum for arbitrating conflicting claims over parts of the electromagnetic spectrum.

To revise the ITU's frequency allocations for satellite service, the United States spearheaded an international meeting, the 1959 World Administrative Radio Conference. Few countries attending had active space programmes. As Slotten notes, the United States 'had a difficult time convincing other countries to give up use of scarce frequencies in congested bands' (p. 48). Slotten's claim that the conference showcased developing countries' power within the UN is perhaps overstated given that the non-aligned movement had

already become a force in international affairs. In broad strokes, however, communications satellites drew the global South into international legal regimes in fundamentally new ways.

The Kennedy administration passed the Communications Satellite Act in 1962, which created the Communications Satellite Corporation (Comsat). Effectively a public–private partnership between the US government and American aerospace corporations, Comsat had legal authority to represent American interests in negotiating a global satellite communications system. The torturous path to this decision was characterized by lack of unanimity. Concerns over balancing national security and civilian space, public funding and private interests, and established undersea cable technology and the promise of satellite communications all marked this phase, as the administration sought to assert itself as a force for good in the battle between capitalism and communism. The Extraordinary Administrative Radio Conference finally allocated frequences for the satellite market in 1963. Comsat, under Joseph Charyk, played an important role. Charyk had just finished a stint as founding director of the super-secret National Reconnaissance Office – surprisingly, Slotten makes no mention of this – so Comsat's alignment with national security was all but guaranteed. Charyk populated Comsat with corporate actors from the military–industrial complex who believed in a strong position for Comsat vis-à-vis the global telecommunications market.

Comsat's most important mandate was to reserve a large swath of frequencies for its own use. ITU member states, largely from the global South, resisted. US officials, in public and in private, undertook extensive 'missionary work' (p. 135) to influence other countries to vote against their interests. American actors also downplayed US military ambitions, emphasizing the peaceful nature of any international satellite communications system. In the end, the result of the conference was the allocation of a large block of frequencies to support a commercial global system that would ostensibly benefit all, but that effectively ensured the opportunity for American interests – both civilian and military – to flourish.

Slotten concludes with a fascinating chapter on the formation of Intelsat in August 1964. Once again, the United States imposed its vision. US delegates paid lip service to global satellite communications for all, but few countries outside Western Europe were invited to these negotiations. For the first time, Western European countries organized to counter American domination, some not wanting Intelsat to displace their undersea cable networks, others resisting a US-dominated system in favour of their own regional networks. In the end, under US pressure, Intelsat was formed not with one vote per member (like the UN), but with influence proportional to investment. The United States, through Comsat, claimed 61 per cent ownership, and Western Europe 30.5 per cent. The United States, Slotten notes, 'effectively used its economic weight and technological dominance for political gain' (p. 172).

Slotten is perhaps too generous toward American intentions to create global communications satellites – in his words, to 'win over the hearts and minds of citizens in non-Western countries' (p. 181). It is also possible to read the same events as part of a cynical game of offering morsels to postcolonial states in hopes of the bigger prize of legal regimes that would ensure decades of American hegemony in global satellite communications. He also overplays how receptive actors from the global South were to such overtures. Perhaps some were, but many also vigorously resisted, as was manifest in the Bogotá Declaration of 1976 where several postcolonial states (Brazil, Colombia, Congo, Ecuador, Indonesia, Kenya, Uganda, Zaire) argued that each nation's territories extended to geostationary orbit, thus voiding the allocations that allowed a system such as Intelsat to work.

Quibbles aside, this is an extremely valuable work on the transformations of global communications, based on deep archival research. It draws together the seemingly disparate realms of international legal regimes, space technology and empire building into a powerful story of the creation of one of the most important large-scale technological systems of the Cold War.

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