

## Remote Networks

### *Airplanes, Radios, and the Making of Communicative Distance in Lutheran New Guinea*

In 1955, Carl Spehr, the radio engineer for the Lutheran Mission in the Territory of New Guinea, was optimistic about the new network of two-way radio stations for Christian missionaries. An Australian group called the Christian Radio Missionary Fellowship (CRMF), based in Sydney, was organizing many of the Protestant missions in the Territory of New Guinea into one very large radio network that would allow missionaries to coordinate aviation needs, order supplies from their storehouses, or call in for emergency medical evacuation or advice. There was even a hope that missionaries could occasionally chat with one another more casually. According to the minutes of the 1955 annual conference of Lutheran missionaries, “Mr. Spehr expressed the hope that it may be possible to use our radio sets for routine transmission, such as discussions between missionaries, etc.”<sup>1</sup> For Spehr and the others who helped put it together, not only would this network make life safer and easier in terms of the practical difficulties of living in remote areas, but the radios might even make missionaries feel connected to one another.

By 1968, a little over a decade later, things had taken a turn for the worse. The network was well established, linking several hundred stations and serving a dozen different Protestant missions.<sup>2</sup> The missionaries were using the radios not only to facilitate aviation and request supplies, but also to chat with one another—frequently, informally, and sometimes scandalously. So much so that the new radio engineer, George Groat, devoted much of his annual report to the Lutheran conference that year to complaining about how out of control the missionaries had become on the network. He warned them:

Uncomplimentary remarks, argumentative transmissions, etc., shall not be tolerated by any stations. A Christian business-like attitude shall be the order of the day. If it can't be said in Christian love and in a Christian manner, then don't say it.

Going over into another mission's time with persistent regularity is extremely rude and un-Christian-like behaviour. We have what we have by the Grace of God . . . . .  
 . . . . . let us not abuse it.<sup>3</sup> (all ellipses in original)

By 1970, things were so bad that Groat threatened to shut down the radio operations for Lutheran stations that were still not cooperating with his requests and with administration regulations. His report includes a desperate "Please do not embarrass us."<sup>4</sup> Only fifteen years separated Spehr's hope that the missionaries might use the new radios to occasionally chat with one another and Groat's plaintive cries that his garrulous Christian servants needed to show some basic decorum and restraint.

The missionary radio network had taken years to get approved by the Australian colonial government. It took another decade to build the network up with hundreds of expensive two-way radio sets (supplemented with a huge amount of surplus material left in Papua New Guinea by the US Army at the end of World War II). And throughout its operation, the missionaries had to fight endless pressure from the administration's Department of Posts and Telegraphs to shut the network down. The question that motivates this chapter comes from the fact that after working for years to set up and then maintain the radio network, one of the most frequent things missionary leaders kept saying to their rank-and-file evangelists was "Don't use the network so much!" After pouring all that time and money into creating a complicated system that was technologically capable of both person-to-person conversation and broadcasting, why did keeping people from using it become so important?

While radios and aviation systems (which I will discuss in the first half of the chapter) are both communication technologies that are usually thought of as eradicating a sense of distance, the Lutheran missionaries who established these networks often did so in ways that exacerbated and even enforced their experiences of remoteness, isolation, and fragmentation. Solving the problem of that fragmented existence became a fundamental orienting goal of the mission. And yet, whenever people started to think that this problem was getting solved—that people, things, and talk were able to move freely around the colony—it seemed to put the autonomy and even the existence of the mission at risk.

#### DISTANCE AND COMMUNICATION

A wide range of communication historians and theorists have discussed the ways that telephony, telegraphy, and radio seemed to transform users' experiences of distance (Carey 1989, Kittler 1999, Peters 1999), to change the very sense of what distance could be. The eradication of physical distance by the telegraph seemed to be so absolute that it sparked projects trying to eradicate metaphysical distance between the living and the dead. In séances and other rituals of the emerging

spiritualist movement at the end of the nineteenth century, female mediums used “the spiritual telegraph” to contact those “on the other side.” Spirits signaled yes or no by making knocks or raps like the clicks of a telegraph, or the Ouija board helped coax spirits to spell their communications out letter by letter, as in Morse code.

But as various authors have discussed (Bolter and Grusin 1999, Peters 1999, Gershon 2010), experiences of immediacy or of the eradication of distance are notoriously unstable. David Bolter and Richard Grusin (1999) explain that experiences of immediacy are not cultivated by the communicative technology alone, but rather by the ways that users compare and contrast one medium of interaction with another. The use of a telegraph can feel immediate when compared with using the postal service to mail a letter, but it can feel highly mediated and distancing when compared with a telephone call. Making a related point, Ilana Gershon (2010) talks about how users of these media bring with them different and constantly changing media ideologies that affect how they think about what kinds of interactions should take place through what kinds of media.

John Durham Peters (1999), too, notes that immediacy or the eradication of distance is not a feature of the technology itself so much as a way that people conceptualize what communication is or should be. He emphasizes the ways that immediacy and distance are necessarily paired against one another, meaning that the same medium produces both presence and its opposite. Wherever there is a medium that promises to bridge the distance between speaking selves, the corresponding worries that it will only produce chasms instead are never far behind. This is not a story of technology so much as a story of communicative ideologies. Concerns about self and subjectivity were channeled into worries about media long before the telegraph, but the development of different communicative media since the middle of the nineteenth century has intensified the oscillation between experiences of distance and immediacy among speaking subjects. To extend Peters’s argument beyond those individual subjects, these kinds of oscillations between experiences of distance and immediacy helped produce the circulatory imaginary of the colonial space as a whole. Colonial actors saw Papua New Guinea as a space of radical distance, and yet fears that Papua New Guineans might be too accessible were never far behind (a point I will come back to in chapter 3).

In colonial Papua New Guinea, the Lutheran missions stitched together large communicative infrastructural systems that at various times promised, if not to eradicate the distance between all those isolated mission outposts, then at least to lessen it. Like the Lutheran medical aid networks that Britt Halvorson (2018) analyzes, these infrastructural formations were central spaces for defining and experiencing missionary Christianity. First with their aviation network and later with their radio network, Lutheran missionaries had moments of being able to create those communicative bridges across the mountaintops. Yet whenever that

distance seemed on the way to being eradicated, the autonomy of the mission came into question. If the interior spaces of colonial Papua New Guinea could be connected, then the rationale for the mission's relative freedom from administration oversight started to fall apart.

Australian administrators for the Territory of New Guinea were trying to do colonialism on the cheap and ended up outsourcing much of the process of colonization to Lutherans, Catholics, and Seventh-day Adventists. But these were just the three largest missions. After World War II, dozens of mission groups entered the Territory of New Guinea and participated in what the administration hoped would be a civilizing project. Required by the terms of the UN trusteeship agreement to allow different religious groups to enter the territory, the Australian administration did not initially insist that the different systems established by these missions be integrated with one another or with the territorial administration. The endlessly varying educational systems, evangelistic techniques, health care regimes, and economic aid systems were tolerable only because it seemed like the integration of the colony into a single system was part of a future that was so far off that it didn't need to be taken into consideration. In that sense, both the missions and the administration had a stake in maintaining the frame that things could not circulate in Papua New Guinea.

In other words, fragmentation and distance were colonial policy. Not in the sense of a divide-and-conquer attitude to keep Papua New Guineans from organizing—the idea of such complex political activity was almost unthinkable. Rather, fragmentation and distance were colonial policy in the sense that these were the alibis for the administration's *laissez-faire* attitude toward the missions. The administration's oversight of the missions was relatively light, in part, because of the sense that they were working in remote spaces. This meant, though, that Lutheran networks could not actually be allowed to eradicate distances in the way that many thought was the inevitable outcome of telecommunication infrastructures.

This chapter looks at Lutheran airplanes and radios as interconnected networks that created the sense of remoteness (Ardener 1987) that missionaries used to describe their work to themselves and others, to organize it into a structural hierarchy, and to relate to the colonial administration. In the first half of the chapter, I examine the development of the Lutheran aviation system, how the Lutherans talked about the project, and the ways that the aviation network helped them imagine the colony and its Christian converts as part of different spatiotemporal orders (Munn 1977, 1986). Yet the aviation network became central to the accusations against the mission as a whole and against particular German-citizen missionaries during World War II. The idea of the colony being too easily accessed, by airplane in this case, fed into Australian fears of Nazi activity in Papua New Guinea. The rationale for interning most of the members of the Lutheran missions during the war was based in part on this sense that they not only had created a state within a state, but had made the region too navigable.

The production of proximity destabilized the relationship between the mission and the administration.

The same dynamic recurred in the postwar years. The development of a Protestant missionary radio network was heralded within the Lutheran missions (the network's dominant members) as allowing an extraordinary experience of communicative proximity with other missionaries. And yet the mission and radio network leaders were aware that their autonomy from administrative regulation was possible only to the extent that proximity could never be fully realized. The founding imaginary of Papua New Guinea as a colonial space of circulatory primitivity—in which people, things, and talk could not circulate—was not eradicated by the introduction of various communicative networks. Rather, circulatory primitivity organized not only how these infrastructures were implemented, but also how the different missions related to one another and to the administration.

#### LUTHERANS IN PAPUA NEW GUINEA

In the late nineteenth century, the German Lutheran missionary Johannes Flierl was working at a mission station on the Cape York Peninsula at the northeastern tip of Australia, but he was hoping to find a way into New Guinea to work with “a totally untouched heathen people, not yet trampled on, oppressed and pushed aside by white settlers” as he thought Aboriginal Australians had been (quoted in Wagner 1986: 35). However, unlike some other missions in the Pacific that were able to begin operations before colonial governance began (see Barker 2008), the Lutherans were not able to begin work in New Guinea until after the division of New Guinea island during the Berlin conference of colonial powers in 1884. While the western half of New Guinea island had already been claimed by the Dutch, the eastern half of the island was split between the British, who took the southeastern part as British Papua, and the Germans, who took the northeastern part as Kaiser-Wilhelmsland, or German New Guinea (see map 1). After two years of waiting for permission from the German New Guinea Company, Flierl established the first mission station of the Neuendettelsau Mission Society at Simbang in 1886, not far from what was then the headquarters of the German territory at Finschhafen, both on the Huon Peninsula. The following year, a different German Lutheran group, the Rhenish Mission, established a base near Madang. The German administration gave the Lutheran mission license to missionize from Madang east to the border with British Papua, while they gave German Catholic missions the territory from Madang west to the border with Dutch New Guinea. Although these comity agreements kept denominational hostilities relatively quiet, Lutherans who worked at the edges of their mission territory constantly complained about “flock stealing” by the Catholics (Handman 2019a).

At the start of World War I, Australia took possession of German New Guinea, and in the years following the war, Australian and American Lutherans started

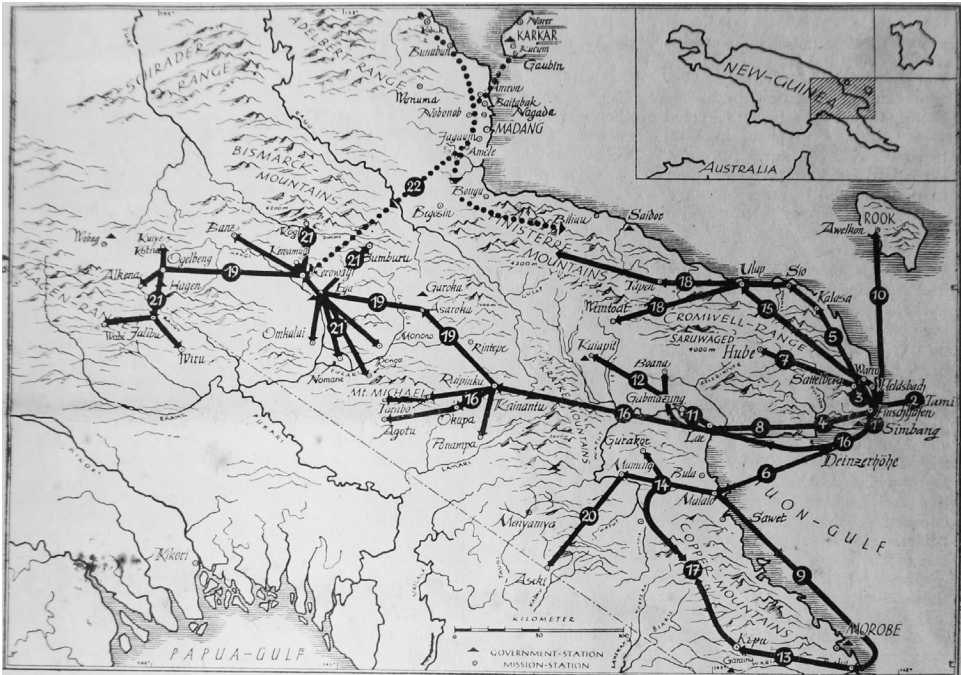
to join the missionary effort. The initial Lutheran mission stations were largely coastal outposts, on the Huon Peninsula and on nearby islands. One early exception was the Lutheran work further inland along the Waria River Valley, from its mouth at Morobe station up to Kipu and Garaina (see Handman 2015). It was not until the start of the 1930s that gold-prospecting expeditions went into the mountainous central cordillera of New Guinea and Australians realized that there was a large population living up there in vast highland valleys. And it was not until the mid-1930s that the administration allowed missions to enter this part of the country, as I will discuss below.

The Lutheran missionaries were fractured along various lines. Missionaries were members of different organizations and had different nationalities: the Neuendetelsau and Rhenish missions from Germany and the Australian and American Lutheran missions. They supported the use and promulgation of different mission *lingua francas*, including Kâte, Jabem, and Gedaged. They supported different missionary practices—advocated by Flierl or by Christian Keyßer, another German Lutheran missionary—that approached local culture in different ways. And as Hitler began to take over Europe, they supported different sides of the emerging conflict, given that some of the German Lutherans were Nazi Party members or sympathizers (for a rich history of the German Lutherans in colonial Papua New Guinea, see Winter 2012). During the war, the Lutheran missionaries were placed in internment camps, and most of the German nationals were not allowed to return after the war ended. The postwar years were dominated by increasing numbers of American Lutheran missionaries, including especially the longtime superintendent of the mission, John Kuder, who worked closely with his wife, Louise.

The Lutheran mission organization was a vast collection of ministers, teachers, doctors, printers, transportation managers, and many others, but much of the day-to-day work of the mission in the rural areas was done by Papua New Guinean men and their wives who had converted to Lutheranism. These “native evangelists” became missionaries to other communities in which the Lutheran mission was just starting to work. With a constant shortage of European missionaries to staff all the different areas that Lutherans hoped to enter, native evangelists did much of the pioneering work of establishing mission outposts in newly approached communities. The native evangelists ran and taught Lutheran primary schools, led weekly church services, and identified and prepared candidates for baptism. They were also responsible for teaching local people the church *lingua franca* used in the area.<sup>5</sup> On their twice-yearly visits, the European missionaries would check on schools, baptize and give communion to those who were official church members, and try to solve any church-related problems the native evangelists were having. But unless living near the mission station at which the European missionary lived, a local Papua New Guinean church member would rarely see the missionary, much less his wife and children.

While map 2 gives the impression of a dense Lutheran presence by 1960, especially on the Huon Peninsula, in fact the Lutheran missionaries were scattered





MAP 2. Map showing where Lutheran missionaries worked in the Territory of New Guinea. Black lines show the movements of missionaries with the Neuendettelsau Mission, starting on the Huon Peninsula and moving south and inland into the Highlands region. Dotted lines show the movements of the Rhenish (later, the American Lutheran) Mission. Numbers show a rough chronology of the Lutherans' movements. For a more detailed view of this map, see <https://sites.google.com/view/courtney-handman/home>. (*Lutheran Herald* vol. 41, no. 16, August 26, 1961; Lutheran Archives of Australia, Periodical Collection)

widely across distant stations. Even if missionaries were living at geographically proximate stations, they were isolated in their individual roles, learning different languages and responding to different cultural practices. Missionaries tried to learn the local language spoken in their region, reporting back on their ethnographic, missiological, and linguistic findings in annual meetings. Overcoming these distances became an important practical and even spiritual project of the mission.

### THE INFRASTRUCTURES OF CHRISTIAN MOVEMENT

When Johannes Flierl and his Neuendettelsau Mission compatriots started working in New Guinea, the missionaries encountered a landscape that seemed impenetrable for a number of reasons. They were starting to realize that not only was it a densely forested and mountainous tropical island, but it was linguistically extremely diverse. Immediately, problems of communication and circulation—in both the linguistic and transport senses—became overriding technical concerns.

More than that, movement itself became the dominant framing of morality and transformation. If circulation was the figure of freedom and health in modernist discourses of European progress broadly (Schivelbusch 1980), circulation was the figure of Christian freedom and progress for missionaries specifically. Lutheran missionary texts depict non-Christians as immobile, stuck in defensive geographic positions, in contrast to the missionaries' own urge for movement and evangelistic expansion.

Because it makes such a tight connection between the process of circulation and value transformation, I use Nancy Munn's (1977) "The Spatiotemporal Transformations of Gawa Canoes" as a model for analyzing how the Lutheran missionaries created value through movement and how value transformations structured different qualities of movement in space and time. The value transformation I am talking about in this case is the transformation of souls, from unsaved into saved, and the movement I am talking about is the capacity to cut across, through, or over the dense rainforest that covers New Guinea island. For many of the missionaries in the Lutheran missions, movement was itself a practice and sign of Christianity, because for them heathens were trapped in states of fear and darkness that made movement impossible. In order to go from darkened heathendom to the free movement of salvation, Lutherans created a set of Christian technologies of circulation and transportation. Just as Mary Taylor Huber (1988) talked about the ways that ships structured the nearby Catholic missions, I argue that when the Lutherans decided in the late 1920s to use aviation in their evangelism and forgo walking along mountain paths into the New Guinea highlands, they had to make those airplanes vehicles for godly bodies able to ascend, eventually, to heaven.

In a manuscript titled "The Secular Involvement," which largely covers Lutheran infrastructural improvements in the Territory of New Guinea, the equation of movement and Christianity, of movement *as* Christianity, is highlighted clearly. Prior to missionization, Papua New Guineans lived their lives governed by fear: "The very first missionaries who came to New Guinea could not do much in improving the bush tracks. The people were not interested to communicate with outsiders. They were fearful of enemies from every side. In the mountain areas people built their villages on ridges which were hard to reach and easy to defend."<sup>6</sup>

The missionaries were deeply mistaken about the movements of local people in precolonial and colonial eras. Papua New Guinea has long been a site of intense circulation of people and goods in long-distance exchange networks (for a small sample of classic texts on this topic, see Strathern 1971, Munn 1986, Swadling 1996, Tuzin 1997, Malinowski 2002 [1922]). Entire communities were in some cases highly mobile (Hallpike 1977), while in others men were consistently engaged in long-distance travel for hunting (Healey 1990). By not recognizing the kind of precolonial mobility that Papua New Guinean people engaged in, Lutherans thought of movement across the territory as a novel sign of growing Christian faith. After conversion, the impenetrable jungle opens up into communicative pathways:



The new-won freedom from fear had encouraged these young christians [*sic*] to build “roads on which the ‘miti’ [‘Gospel’ in Kâte] could travel” as they expressed it. As time went on similar developments could be noticed in other areas. As the Gospel took possession of the minds of the people their old fears and hatreds disappeared. No longer felt they imprisoned in their tribal area. Now they began to move about.<sup>7</sup>

Not only was movement equated with Christian salvation, but the speed and quality of movement seemed to matter too. From the Lutheran missionary perspective, there was a quickening pulse of Christian life that went along with an expanded road network:

Everywhere the missionaries encouraged the building of roads or at least paths suitable for travelling by horse. Along the coast local canoes could be used. But when the work spread inland it meant building suitable lines of communication. With the introduction of steel such as axes, knives and shovels work went ahead at great speed. As the influence of Christianity grew, the desire of the people to connect up with the pulsating life of the outside world grew at the same time.<sup>8</sup>

The intense concentration on infrastructure stemmed from the Lutherans’ ongoing problems with transportation and circulation in what they thought of as a rugged and isolating territory. As large as the Lutheran Missions were, the missionaries themselves more often thought of them as forming discrete pockets of Christian influence rather than as a unified region of evenly spread Lutheranism. Each missionary was an island, an outpost of colonial Christianity that lacked the communicative linkages that various media—roads or radios or languages—could offer.

#### AVIATION FOR SOULS

The attention to the qualities of movement increased when the mission started using airplanes in 1935. A number of different qualities of travel, and the subsequent conversions that were attributed to that travel, became overt topics of discussion for missionaries and other colonial actors. Of greatest importance was the fact that airplanes were obviously quicker than horses, canoes, boats, or walking humans. The radical change in travel times that the airplanes afforded made it possible for the mission to expand into the recently opened highlands. Without the use of airplanes, a missionary and dozens of local people working as carriers would need three weeks to walk from the north coast town of Lae to the highlands. With the use of an airplane, they could make the same trip—bringing even more cargo—in about an hour.<sup>9</sup> The Lutherans were at the forefront of creating a novel form of modernist circulation in the remote highland areas.

A second characteristic of airplane travel, in addition to speed, was the sense of lightness, both as the opposite of heaviness and as the opposite of darkness. Airplanes used in Lutheran evangelism flew above the steep mountain walls and

rainforests. Not only were the planes associated with the sun-filled heavens, but also, importantly, they were above the muck of the rainforest roads that had been so painstakingly built over the years: "The time was ripe to leave the muddy and leech infested mountain paths and to use wings."<sup>10</sup> Slow, muddy paths were transformed into fast, sunlit airplanes capable of creating more and better Christians.

The original pioneer Lutheran missionary to Papua New Guinea, Johannes Flierl, first brought up the possibility of using airplanes in evangelism with his assembled missionaries during their annual conference in 1928. Flierl emphasized the speed and smoothness of air travel. More than that, the very idea of air travel seemed to play with time, turning an old man young again:

The reverend pioneer of our mission, Senior J[ohannes] Flierl, had one evening set apart for the discussion of his proposal that the time was ripe for the installation of a mission aeroplane. How young he seemed that evening, how easily his mind accommodated itself to the age of modern technical progress and its terms! It was very humorous, when he described to us the great ease of travel in the air, where there were no spoon-drains and no watertables,<sup>11</sup> where the traffic police could not watch you, and where no dogs could run into your wheels, and where you need not be in constant fear of a pedestrian appearing around the corner. But we soon learnt that our old leader was very serious and was quite convinced of the necessity of an aeroplane for the proper development of our work in New Guinea.<sup>12</sup>

Flierl was making an argument for aviation as a mode of transportation free of any kind of restriction, whether geological (the spoon-drains and water tables), governmental (the traffic police), or social (the dogs and children).

Flierl's imagination of aviation was deeply mistaken, of course. Management and understanding of geology, civil administration, and social relations are all required for regular air traffic. Once the mission started depending on its airplane, new stations were built in areas adjacent to government airstrips or on level enough sections of land on which airstrips could be constructed.<sup>13</sup> Missionaries had to ask congregations to help clear and level ground for airstrips. They had to constantly maintain, and the Department of Civil Aviation had to constantly inspect, the airstrips in order to ensure proper drainage for their continuing "aerodrome" licenses. Nevertheless, it is clear from this account that Flierl spoke of aviation as a space of great freedom of movement, almost entirely untethered from the ground and the earthly concerns that one has to take notice of while moving upon it. It took seven years from this initial inspiration from Sr. Flierl to get to the first "aeroplane" delivered on February 19, 1935: an all-metal Junkers F 13 christened the *Papua* and flown by a World War I German ace, Fritz Loose.<sup>14</sup>

Airplanes transformed the space-time of evangelism in ways that seem not to have been true of canoes, boats, axes, knives, or shovels. Even in a place that was derided for not being in the Iron Age, it was air travel more than steel axes that created a set of questions about the temporality of Christian evangelism in a colonial context. The extent to which aviation and missionization are celebrated parts of Papua New Guinea's history is evident from a series of stamps that were



FIGURE 2. The Lutherans' Junkers F 13 airplane is memorialized on a 1972 postage stamp, one in a series of four stamps commemorating the fiftieth anniversary of aviation in Papua New Guinea. (Alamy)

produced by the Department of Posts and Telegraphs, one of which memorializes the historic role of the *Papua* (see figure 2). One reason that airplanes, and the *Papua* in particular, play such an outsized role in colonial narratives has to do with the fact that this was a novel form of transportation for the European missionaries as well as for the local people. Although airplanes had been used in World War I as a military technology, civil aviation was still in its infancy when Flierl first proposed using an airplane for evangelism.

Lutherans were able to change their concept of what the mission could be when they started using airplanes in their work.<sup>15</sup> This became particularly important as the Lutherans in the early 1930s were starting a fierce competition with the Roman Catholic and Seventh-day Adventist missions for converts in the highlands of Papua New Guinea, an area that white colonizers had only recently encountered and that seemed to have a population of perhaps half a million. Eventually termed the "gold rush for souls," the competition among different missions in the 1930s for access to the highland populations was intense (see Handman 2019a). In the earlier-missionized coastal areas of Papua New Guinea, colonial administrators had helped define missionary spheres of influence—rough boundaries dividing up colonial spaces among various missions. However, the colonial administration had decided to change tactics when they opened up the highlands for missionaries. They refused to create spheres of influence, and in fact hoped to spark missionary competition. The goal was to pacify and civilize the highlanders as quickly as possible. Using a kind of market logic, the colonial administration hoped that close competition rather than regional monopolies would spur the missions to work at a more rapid

pace. Since the missions provided many of the services that are usually associated with states—schools, medical outposts, economic opportunities—the pace of mission work was considered especially important to any plans for “civilization.”

Although administrators, planters, and mineral prospectors at the time laughed at the technological one-upmanship and literal sprints to new territories involved in the Lutheran-Catholic competition for the highlands, the missions were playing by the administration's rules when they engaged in this heated race for congregants. And both missions took the challenge seriously.<sup>16</sup> For the Lutherans, the race to the highlands was a crucial part of their capacity to reimagine their mission on a much wider scale: not just a regional mission for the Huon Peninsula, the Lutherans could envision extending across the Territory of New Guinea and keeping pace with the Catholics. And while Flierl pitched the aviation program to his fellow missionaries in terms of light, fast freedom of movement, former missionaries then in Germany were encouraging Flierl to start using airplanes because of the rumor that Catholics would soon start doing so. In an annual report for 1927, Flierl writes, “I received two letters from Bro. Keysser, written at the beginning of August, with the news that an airline company was being formed for all Catholic missions in the world, including New Guinea which would place aircraft at the disposal of the Mission. . . . Keysser complained in his letter that ‘always and everywhere the Catholics are ahead of the Protestants.’”<sup>17</sup> The Board of Foreign Missions of the American Lutheran Church also considered the Catholic competition the crucial reason for supporting the purchase of a plane: “From various sources, we are told that the Catholics are going to missionize with planes in [Papua New Guinea]. That would give them a big lead over us.”<sup>18</sup>

#### THE INFRASTRUCTURAL NETWORKS OF LUTHERAN MISSIONS

The use of airplanes in the Lutheran missions' work meant they needed to add another layer to their already vast and complex transportation-communication network. In particular, the advent of “aviation for souls” required the purchase of what were then called *teleradios*.<sup>19</sup> These were two-way radios, able to both receive and send transmissions, akin to extremely large walkie-talkies. Initially they were powered by someone—usually a Papua New Guinean servant—pedaling a bicycle-like generator device. The Papua New Guinea administration installed *teleradio* sets in regional centers starting in 1933 (Sinclair 1984: 94). By 1936, colonial officers were using the “portable” hundred-pound sets in their work in the remote parts of Papua New Guinea, while businessmen at far-flung plantations used radios to connect to the nearest town.

Newspaper reports from the time describe the revolution brought on by these radios as they reduced the feeling of isolation and increased a sense of measurable distance from somewhere, at least from somewhere that was within

the four-hundred-mile range of the radio. Contemporary accounts emphasize the ways that teleradios allowed people in remote spaces to be located at a particular spot, rather than just “in the wilds.” Newspaper articles detail the many ways that people in need were able to be located by ship or by airplane because they had a teleradio set: injured people could be picked up and patrols in remote Papua New Guinea could radio in for more supplies.<sup>20</sup> Teleradios meant that one was not simply lost.

In 1935, it was still quite novel to have radios in airplanes, and civil aviation in Australia and Papua New Guinea was just starting to use them regularly. Australian newspapers reported on the great progress made in 1937: *almost* every major “aerodrome” in the capital cities now had a radio, and all passenger-carrying planes did. In 1937, after the *Papua* started flying regular runs into the highlands, the Lutheran Mission was granted licenses for two teleradio transceiver sets, one at the Lae-area airstrip where the *Papua* was housed and one at the original Finschhafen headquarters of the mission. An unpublished manuscript notes that “the daily transmissions would include the flight plans of the Mission aeroplane ‘Papua.’ All missionaries concerned, for instance in the highlands, would listen in case their station was concerned.” The highland missionaries could only receive, not transmit, messages. “Twice a week positions were given of the aeroplanes of Carpenters Airline which flew from Australia to Rabaul. . . . The radio service was greatly appreciated by all people concerned, the missionaries as well as other persons profiting from it.”<sup>21</sup>

Locating oneself—as well as the planes—was an important part of how the radios transformed the space and time in which missionization took place. Missionaries listening in for flight schedules could align their watches and clocks to standard time, since the Lutherans would broadcast from Lae or Finschhafen at specific times of day.<sup>22</sup> Planes traveling overhead were not just somewhere in space, but locatable in relation to the ground through radio transmissions broadcasting their position. Flierl thought of airplanes as allowing one a radical freedom of movement, yet the infrastructural innovation of radio-enabled airplanes was to allow the planes to be located in regimentable time and navigable space, rather than just in a vast, unbroken expanse.

In his memoir, missionary Wilhelm Bergmann writes about the weeks when the *Papua* was just starting to be used. His very businesslike account of the novel transportation system is noteworthy for its attention to this sense of locatability. Bergmann seems to have been most impressed by the speed with which mission business could be conducted, given that his memories of the plane are largely prose itineraries:

On the 26th of March we flew back to Kajabit. Since the weather was so nice, the pilot said we could once again look to fly inland. . . . The next day we left. We had loaded a lot of fuel. It was wonderful weather. Until shortly before the Elimbalim there wasn't a cloud in the sky. We flew over and landed in Mogei. We first flew over Ogelbeng

and dropped off a letter. We soon got word from Ogelbeng that [Missionaries] Vicedom and Horrold were in Ega. [Missionary] Löhe came to Mogeï. We went to Ogelbeng. The airfield seems to be quite good, even dry. (Bergmann n.d.: 60)

His memories of the plane are of the speedy movement across dates, times, and places. Rather than strictly focusing on the phenomenological experience of speed as such (cf. Schivelbusch 1980), Bergmann memorializes his ability to get the mission's business done at a novel pace.

Bergmann delights in his capacity to locate himself and the plane in relation to the ground. This was not always guaranteed. James Sinclair (1978: 34–35) describes the first planes trying to land at the Wau airfield near the gold-mining operations; miners who had walked the tracks up to Wau many times could not orient themselves when in the air. It took the first pilot several attempts to locate the Wau airfield after it was constructed, since no aerial maps or routes existed yet. But even with heavy cloud cover, Bergmann boasts of his orientation in the plane. During one early, cloudy flight on the *Papua* he ended up guiding pilot Loose, then still quite new to New Guinea: "I told the pilot that he could fly down to the valley. He said a few times: Is that certain? I said yes. He was totally dependent on me because he did not know the area" (Bergmann n.d.: 56).

Being able to locate someone not just "in the wilds" but at a particular place and time at a destination airstrip or supply drop site also meant that one could communicate with those who were so located. That is, airplanes during the early days of Papua New Guinea civil aviation were as much elements in the transmission of talk as they were elements in the transmission of people and goods. The airplanes were extremely expensive postal services linking people across thousands of miles: "Previously it took three months for letters to arrive from home, for in some cases missionaries, their wives and children were thousands of miles apart. Now, however, an aeroplane left the ship [on which the mail was carried from Germany, the United States, or Australia] and mails arrived at their destination two and a half hours later. The missionary was able to reply immediately, as the 'plane waited for mails.'"<sup>23</sup>

Airplanes and radios combined to create an infrastructural space-time, in which particular persons and machines could be located at particular places and moments. Medical emergencies or a critical lack of provisions could be handled swiftly. Relatives could communicate with one another at a much quicker pace. The business of missionization was thus able to move more smoothly and quickly than it had in the past. The missionaries stationed in the highlands were no longer just "in the wilds" and out of reach, but part of a communication-transportation network linking the disparate corners of the mission as a whole. The aviation network, with its incipient radio control, started to transform the sense of circulatory primitivity into one in which people, things, and talk could in fact travel with relative ease. The distances were starting to shrink for Bergmann and the others who could now experience travel in a new way. This sense



of immanence and immediacy only became stronger when missionaries tried to bring the *Papua* into the space-time of salvation.

### CREATING CHRISTIAN SPACES

The Australia-based leader of the Lutheran Mission, Otto Theile, titled his speech about the quest for a mission airplane “A Miracle before Our Eyes,” placing the work of the aviation program firmly within the sacred work of the mission, particularly given the opening up of the highlands to mission work. He said,

At that time the question of further extension of our mission into the far inland among the newly discovered tribes . . . was agitating our minds incessantly. . . . We were aware that it would mean much treasure and many men to do effectually what we were setting our hands to do, we were especially quite alive to the great difficulties of transport. But there were the open doors, there were the opportunities! From the highlands of the inland we heard a call: “come over and help us” and within our hearts we heard the command of the Master “Go and preach the gospel!”<sup>24</sup>

Aviation for souls was not just an improvement in the communication network, and not just an increase in the speed with which those many masses of highlands souls could be encountered. The plane filled missionaries, and supposedly even Papua New Guinean Christians, with deep emotion and heartfelt offerings that Theile describes in operatic terms: “Missionaries and natives sacrificed of their possession to try and make it possible to acquire a plane. It is deeply touching to see on the list, how missionaries sacrificed a whole year’s salary and it is pathetic to hear how the villagers at home and the Christian laborers on the plantations and on the goldfield brought all the cash they had in order to help along the cause.” The extent to which the airplane was considered a sacred project is also evident from the fact that the archive of the Lutheran Church in Papua New Guinea has retained a file with some of the original receipts noting the individual contributions that the missionaries made to help purchase the plane. Even though the mission had other major donation drives related to raising funds for earlier modes of transportation (e.g., ships), receipts of this sort were not usually archived.<sup>25</sup>

There was also a sense that the aviation program was able to create a particular kind of converted person—someone who was truly able to move about, not just across the rainforest landscape of Papua New Guinea but above it, surpassing it. In other words there was a sense in which God was all the more present in an evangelistic project that was able to literally transcend the dirt and earth. Having an airplane would help create that ultimate movement to heaven, as the missionary R. R. Hanselmann puts it in an extraordinary plea for funds to the Auxiliary Society of the American Lutheran Church’s Board of Foreign Missions:

Aeroplane, workshop, machinery, pilots, mechanics, landing places, another one after the first one crashes, radio sending and receiving sets, electricians—all will mean many worries, many prayers, and much money. We don’t need all this if we stay out

of the interior, but as certain as the Lord wants us to bring the Gospel message to those in an area as yet untouched by anything of civilization and Christianity, so sure it is that He has His people who will help to solve the transport problems, may they cost what they will. And especially, since the area is apparently the last primitive corner in our universe (making mission work a serious business, since the Gospel is to be brought to all ends of the world and THEN COME THE END), it seems that God wishes to give every member of our Lutheran Church an opportunity to do mission work as it has never been done before.<sup>26</sup>

The successful combination of these different spatiotemporal formations brought about an important event in history that was to foreshadow an ultimate end of history: “The Lutheran mission was, as far as it is known, the first mission in the world to use aviation as a tool in spreading the gospel. The *Papua* had made history.”<sup>27</sup>

The Lutheran missions linked speed, lightness, and heavens together in a way that was immediately recognizable to missionaries and mission supporters long used to stories of muck and mud. Once the Roman Catholic and Seventh-day Adventist threat in the highlands appears, the mission raised funds for the *Papua* even though it was roughly equivalent to the entire yearly operating budget of the mission at the time. The Lutheran Mission’s use of airplanes was a way to structure its missiological project. As Huber (1988) has discussed in regard to the use of boats in the early years of the neighboring Catholic missions, the space and time in which missionization took place was organized by the introduction of the *Papua*. Even though the mission often tried to downplay its large institutional and infrastructural footprint as simply a “secular concern,” the mission project itself cannot be understood outside of these forms, where speed and lightness were characteristics not only of modes of travel, but of modes of Christian evangelism.

#### THE MENACE IN THE SKY

But the question of speed and lightness—the capacity to fly over the land in an instant—also made aviation for souls suspect. In a story that will be repeated throughout the chapters of this book, whenever Papua New Guinea seemed to be too accessible, the administration started to worry that they would lose control of the territory. That is, the sense that Papua New Guinea’s interior was inaccessible was so baked into the discourses about the colony that relative accessibility often came with suspicions about illicit access. In the case of the Lutheran aviation system, those suspicions came in two distinct flavors.

The first was a general suspicion in the colonial press about the seemingly tight connection between God and technological progress that the *Papua* represented. What happens to God when he is made accessible by machine? For one thing, other objects connected with those same machines may be conflated with the mission project. This fear is made quite explicit in a 1942 cover image from the *Pacific Island Monthly* magazine during World War II captioned “Menace in the Sky” (figure 3).

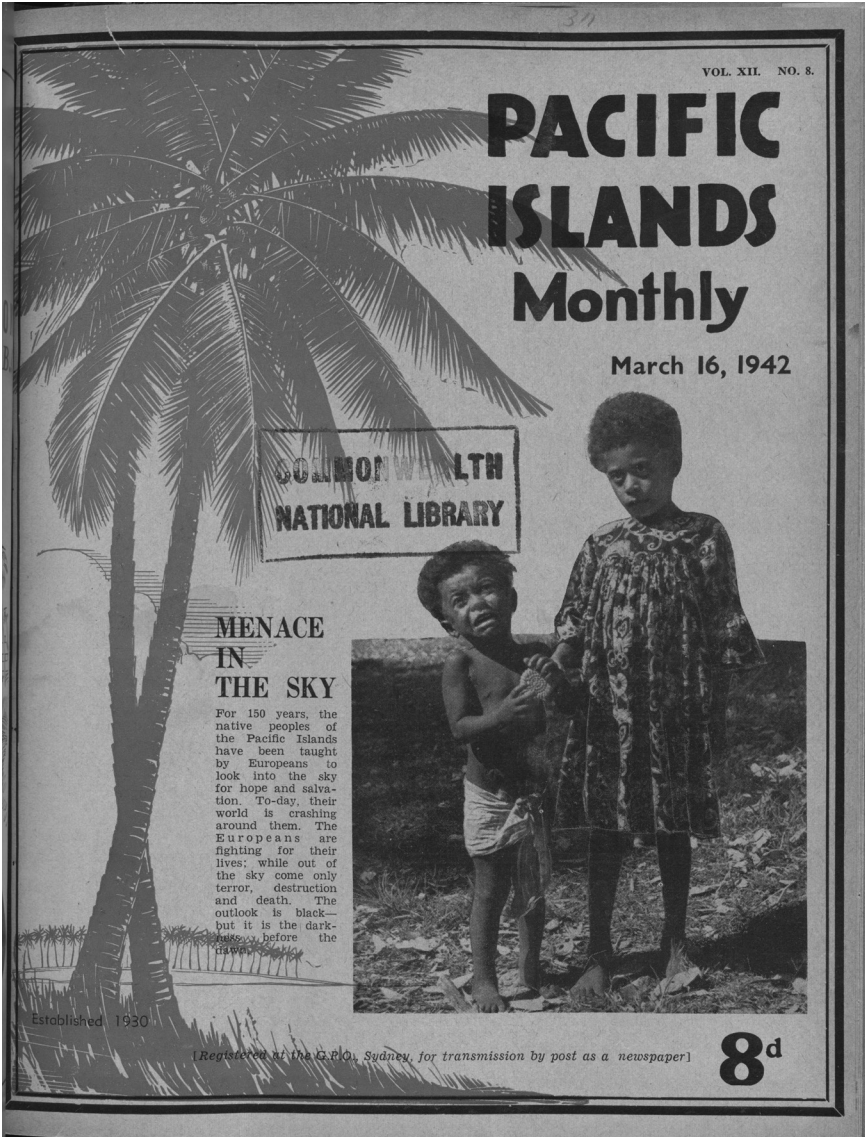


FIGURE 3. Cover of *Pacific Islands Monthly* linking God and airplanes. (*Pacific Islands Monthly* vol. 12, no. 8, National Library of Australia, nla.obj-310385031)

The menace in the sky—Japanese bombs being dropped on Papua New Guinea and other Pacific territories—seems particularly menacing from the perspective of Europeans because they imagine Pacific Islanders to have connected sky, God, and airplane. The text on the cover reads: “For 150 years, the native peoples of the Pacific Islands have been taught by Europeans to look into the sky for hope and

salvation. To-day, their world is crashing around them. The Europeans are fighting for their lives: while out of the sky come only terror, destruction and death. The outlook is black—but it is the darkness before the dawn.”<sup>28</sup> Note that airplanes had been around only since the 1920s. The 150 years referred to here is the 150-year history of missionary operations in the Pacific. The cover image and text present a direct conflation of the space and time of God with the space and time of the Allied and Axis bombers.<sup>29</sup>

As the time grew closer and closer to the outbreak of the war in Europe, the Lutheran airplane played a crucial role in a second series of accusations against the Lutheran missionaries. Rumors swirled that German Lutherans not only were Nazi Party members, but were teaching local people to salute Hitler and, if necessary, defend the Fatherland. The infrastructure of the aviation program now seemed to constitute the ingredients of a propaganda machine much speculated on in Australian newspapers: “The Lutherans had a secret radio transmitter, a miniature factory for production of swastika flags and armbands, and always maintained excellent aerodromes.”<sup>30</sup> As long as Papua New Guinea remained remote and inaccessible, worries about illicit access could be kept under control. But the success the Lutherans had had in developing a communicative infrastructure became part of the concern that Lutherans were too autonomous, too easily made into a larger circulatory network of wartime materiel and propaganda. The Lutherans’ ability to bring in trade goods by airplane likewise became the basis of rumors: “Among the presents sent out to the natives to win their sympathy were cheap trade mirrors with a picture of Hitler on the back.”<sup>31</sup> One Australian brigadier-general was quoted as saying that the Lutherans had five hundred airplanes ready for use in the war, not just the lonely *Papua*.<sup>32</sup> Papua New Guinea aviation expert Ian Grabowsky knew that the Lutherans had only one plane, but nonetheless he worried that with the right pilot and payload it might be used to bomb all the Australian planes in Papua New Guinea “in half an hour” (Sinclair 1978: 222).

As Christine Winter (2012) discusses in detail, several of the former and then-current German nationals working as Lutheran missionaries in Papua New Guinea were active and involved Nazi Party members. In that sense, the Australian fears about the missionaries spreading pro-Nazi sentiment were not outlandish, even if the specific rumors listed here were not true. And as Peter Fritzsche (1992) argues, aviation was a central part of the German nationalist imagination in the decades leading up to the war. However, my point here is that these fears were in many places talked about in terms of the circulatory potential of the Lutheran communicative networks.

In the end, the *Papua* had an even stranger role to play, taking part in neither a heavenly haul of souls nor a Nazi attack on Australia. When war in Europe was declared in 1939, the two German laymen employees who at that time piloted and took care of the *Papua* took off for the highlands in hopes of escaping over the border into Dutch New Guinea. At one point, during a refueling stop, an Australian

colonial officer held them and tried to get them to swear an oath of neutrality, which they refused to do. Realizing that the men had just onboarded enough fuel to make it over the border, the Australian had them sign instead an oath saying that they would not use their fuel to escape. The men signed the oath, flew to another Lutheran station, dumped out the fuel about which the oath had been made, filled the engine's tanks with new fuel, and made a desperate flight over the border to Merauke in Dutch New Guinea.<sup>33</sup> From there they traveled by boat to Japan, crossed into the Soviet Union, rode the Trans-Siberian Railway into Germany, and joined the Luftwaffe (Sinclair 1978: 222). The *Papua* was never recovered, and the Lutheran aviation program had to start from scratch when, after the war, American and Australian Lutherans tried to reconstitute the vast mission program.

Although missionary modes of circulation often center on Bible translation, this did not exhaust Lutheran missionary concerns with circulation, where properties of speed, of lightness, or of movement itself were as crucial a project as Bible translation.<sup>34</sup> This Christian model of circulation emphasizes the movement of “the gospel message” as a project in which the qualities of movement take on moral properties. Here I have attended to the infrastructural networks across which texts like Bibles or letters appear and the ways in which the Lutherans themselves conceptualized the spatiotemporal movement of texts, people, and objects along such paths.

Colonial actors focused on Papua New Guinea as a space in which movement was almost impossible, requiring the extraordinary intervention of novel technologies to transform the space and the people residing in it. Aviation and radios worked together to open up the territory to Lutheran intervention and a potential Christian transformation. But given the extent to which colonial actors saw Papua New Guinea as a space of circulatory primitivity, the easy movements of the Lutherans soon came under suspicion. Secular observers at the time thought of the use of airplanes by missions as the height of greed—missionaries flying over the land consuming souls as if in a Christian gold rush. One of the main lessons that the postwar Lutheran organization seemed to learn was that making themselves appear too accessible also left them open to accusations of greed, treason, and immorality. As I argue below, this is most apparent in the contradictory ways that the Lutherans used the extensive postwar radio network they developed in conjunction with the CRMF.

#### RADIO NETWORKS AND THE CULTIVATION OF REMOTENESS

If the prewar technological innovation of the aviation program and radio network was that people could be locatable “in the wilds,” the postwar problem when reestablishing the aviation program and (especially) the radio network was that people needed to maintain their remoteness. There were multiple reasons for this, and I focus on two of them in the remainder of this chapter. On the one hand, missionaries criticized themselves when they seemed to be overly connected to

one another. Implicitly, and sometimes explicitly, they asked why people would come all the way to colonial Papua New Guinea if not to get out into remote territories. On the other hand, colonial administrators expressed deep skepticism of missionaries who were too connected. Even though there was no longer a war-time paranoia of Nazi influence coming into rural Papua New Guinea, there was a concern that a too-connected mission would make it too much like a state within a state. The administration subsidized the missions to run things like education systems because it was too expensive and difficult for the administration to do it on their own. If Papua New Guinea could be so connected, then at least part of the administrators' rationale for taking this laissez-faire attitude toward mission education systems was erased.

During World War II, when the civil administration was taken over by the military, surviving Lutheran missionaries were evacuated to (or incarcerated in) internment camps. Many of the Lutheran mission stations were destroyed and, as I noted above, their licenses for radios and for use of the *Papua* were rescinded.<sup>35</sup> Given the large number of German citizens among the Lutheran missionaries prior to the war, the ability for the mission to be reestablished afterward was very much in doubt. With postwar restrictions on German organizations and people, the structure of the various Lutheran missions had to change. First, though, they had to see if the mission would be allowed to operate at all. Arriving back in Papua New Guinea in 1945, American Lutheran Dr. John Kuder and his colleague Dr. Theodore Fricke were tasked with trying to convince the military administration that the Lutherans should be allowed back in. With the stipulation that many of the German missionaries would be barred from reentry, the administration finally relented and allowed the Lutheran missions to begin operations again. Dr. Fricke sent an ecstatic telegram to the Lutheran Mission Board in the United States: DOORS OPEN SEND MEN.<sup>36</sup>

Prior to the war, there were several different Lutheran missionary organizations working in Papua New Guinea: the Neuendettelsau and Rhenish missionary societies from Germany, as well as missionary arms of both the Australian and American Lutheran Churches. In the postwar era, these distinct groups were consolidated under the single name Lutheran Mission New Guinea. This new composite group was placed in the hands of John Kuder, who remained the superintendent of the mission until 1969 and who also served as the first bishop (1956–73) as the mission transitioned into being the Evangelical Lutheran Church of Papua New Guinea.

The rebuilding process was long and difficult. The north coast of Papua New Guinea had been occupied by Japan and by the US Army. Many of the Lutheran buildings, roads, and other forms of physical infrastructure from before the war were destroyed during the fighting. However, the army left so much equipment in its wake that jeeps, radios, tents, and other supplies were sold to missions and other returning colonials for pennies. Well into the 1950s, the Lutheran Mission's



radio engineer used army surplus material from the war as a source of spare parts for radio repairs.

In December 1949, the Lutherans requested a new radio license as part of their effort to rebuild their massive organization. In 1950, they made contact with the CRMF, which wanted to create a private radio network for several Protestant mission groups in Papua New Guinea. In 1952, the CRMF applied for radio transmitter licenses to connect remote mission stations, a majority of which would be Lutheran stations at the beginning. After considerable resistance from the administration, the CRMF private radio network was licensed in 1954. It remained an independent private network until the 1970s, when the administration eventually insisted on all CRMF radios moving onto the administration network.

#### TWO-WAY RADIO NETWORKS: PRIVACY AND CIRCULATION

So what was a two-way radio network? How did people connect to one another? What sorts of communication and communicative routines did the technology afford speakers? Without having transcripts of conversations, I am limited in my discussion to the ways in which the radios themselves allowed for different kinds of interactions and how users talked about their communicative routines. As it turns out, the missionary radio network was at once private—almost secretive—and intensely open, with speakers on the network unable to limit the reach of their voices. In this section, I examine the modes of privacy and channel construction that the network operators created through the regulated circulation of crystals and schedules. I will look at the ways that users dealt with the network's threatening openness, a capacity to verge on broadcasting, in the following section. Although I do not think that the Lutheran Mission's leadership was overtly thinking in these terms, the postwar problem of communications was a matter of trying not to make the space of the mission too accessible, as if the lesson learned from the *Papua* was that there was something dangerous to the mission's future if the space of Lutheran activities became too easy to navigate.

The colonial missionary radio network had a set of features that worked together to produce a fragile form of circulation, one that often appeared to be on the verge of collapse and one that users of the network were constantly fretting over. First, creating discrete linkages or nodes in the network required the restricted circulation of material objects. In particular, access to the missionary network depended on the circulation of piezoelectric radio crystals and radio schedules that set the boundaries of membership. The network was a private network to the extent that its communicative nodes could be kept limited. Second, the missionaries who used the network were constantly trying to keep the network from spilling out into the domain of broadcast communication and an

ungovernable number of social relations. Once the radio network was in operation and communicative links existed among missionaries, the network operators worked endlessly to limit both the amount of talk on the network and the number of potential listeners by appealing to missionaries' own sensibilities of their roles as pioneering evangelists in a rugged and remote terrain. Valiant men of God did not sit around broadcasting their complaints or passively listen in on others'. Third, using the network required that users make a set of category distinctions that were necessary if the missionary network was going to remain autonomous from adjacent administration networks. Simply speaking into a radio transmitter wasn't enough to be a part of the network. One had to speak in the proper way and on the proper topics—avoiding, in particular, any talk “of a commercial nature”—or else the network could get dissolved by administration bureaucracy. Each of these features—restricted circulation of material, constant attention to the potential collapse into broadcast forms, and categorization of speech—points to the ways in which the colonial missionary radio network in Papua New Guinea was the ideological object of users' reflexive understanding about the kinds of communicative linkages they were creating.

As mentioned above, two-way radio networks worked more or less like walkie-talkies. A number of people all tuned in to the same frequency. Only one person could send a message at a time, while everyone tuned in to that frequency could receive the message simultaneously. For a complicated network like the CRMF missionary one, with over three hundred stations connected at its height in the late 1960s, it was necessary to have control stations that managed radio traffic, given the one-after-another turn taking that the system demanded.<sup>37</sup> Being part of a two-way radio network meant that one tuned in to a specific frequency used by everyone else on the network and “worked into” (i.e., one's radio traffic was controlled by) a base station specific to that network.

In order to transmit messages on the network's frequency, one had to have a specific crystal cut in such a way that it resonated at the appropriate frequency. The thickness of the crystal wafer determined the frequency at which it resonated. Once machined and calibrated, the crystal wafers were housed in boxes that were plugged directly into the radios. In the 1950s, most teleradio transmitters had space for two to six different crystals to be inserted, and one had to toggle a switch to send electricity through whichever crystal and frequency one wanted to use. Each radio network would be assigned one or two frequencies. In order to operate on a network, both sending and receiving transmissions, one had to be sent the proper crystal or crystals for that network's frequencies. In the missionary radio network files, radio engineer Carl Spehr often mentions having just “sent a crystal” to missionary stations as soon as the colonial administration had approved their license. While the administration radio engineers at Port Moresby likely had crystals for all frequencies that they licensed within Papua New Guinea,

remote government stations across the territory would not necessarily have had access to transmit on the private missionary network frequencies. The missionary radio network was, to that extent, at a remove from the administration's representatives in the field. Thus, it was the controlled circulation of crystals that made the network private.<sup>38</sup> Without the regulation of crystals there was no regulation of the limits of the network.

Control of the network as a limited, private channel of communication also depended on the constant verbal approval of a base station, which controlled radio traffic of each outstation trying to transmit on the network. Because the missionary radio network was so large and included so many different mission stations, the network I am talking about had three different control or base stations that handled traffic for outstations within their respective areas: Madang and Lae (the Lutheran controlled stations) and Rugli (the main CRMF station in the highlands near Mt. Hagen that managed traffic for all other missions on the network). Base stations worked together to produce another material object—the radio schedule, or “sked”—which was mimeographed and sent to each mission station as the arbiter of lawful communication times (figure 4).<sup>39</sup>

Each mission had several different times throughout the day when only it could use one or the other frequency. The first sked time of the day for each mission was the general call-up, when traffic for the day was organized. For example, in 1966 the Lutheran Mission's general call-up happened from 0715 to 0745 hours on the 5895 frequency, one of the two frequencies used by the CRMF radios. The two Lutheran base stations at Lae and Madang would give general information and notices to their outstations, and all outstations were supposed to listen in at their radios during this time. A missionary at Lutheran headquarters in Lae or Madang would then hail each outstation one by one, asking the missionaries at each station if they had any questions or requests for later sked times (“Boana—do you have any traffic? Malolo—do you have any traffic?”). The missionaries at the hailed outstation were required to respond. They could either say “no traffic” or request to speak either with a specific person or department at mission headquarters or with a different outstation. The base station at Lae or Madang would take down all these requests, and then parcel out appointments during the remaining Lutheran sked times for each station to speak to whomever they needed to be in touch with. There were some blank spaces in the CRMF sked, particularly in the evening, when people could use the network on an ad hoc basis. The Lutherans seem to have monopolized these times to such an extent that the other missions usually did not have a chance to use them.

In addition to the base stations that controlled radio traffic, the administration in Port Moresby monitored, or at least had the capacity to monitor, all traffic. For this reason, users of the network had to speak in English. In the case of radios used by some of the Papua New Guinean crew members of the mission ships, Tok

MISS.	3196	TIME	5895	MISS.	MISS.	3196	TIME	5895	MISS.
	SKED		SKED.			SKED		SKED.	
		0600					1430		EWIBM
		0615					1445		
SSEM		0630				NAZ	1500		S
CMML		0645					1515		O
AMAF		0700				LMNG	1530		T
BAP		0715		LMNG			1545		A
NGLM		0730		LMNG		ANG	1600		UFM
UFM		0745		METH		ANG	1615		UFM
COC		0800		UFM		SSEM	1630		ANG
COC		0815		UFM		SSEM	1645		ANG
BAP		0830		APOS		LMNG	1700		LMS
METH		0845		EWIBM		LMNG	1715		NGGM
ANG		0900		LMNG		CMML	1730		APOS
LMNG		0915		ANG		CMML	1745		APOS
WM		0930		ANG		BAP	1800		CRMF
NAZ		0945		UFM		METH	1815		
		1000		S		METH	1830		
		1015		O		AOG	1845		
AOG		1030		T		NAZ	1900		
AOG		1045		A		LMNG	1915		
SIL		1100		CRMF		LMNG	1930		
		1115		CRMF		LMNG	1945		
CMML		1130		LMNG		LMS	2000		
CMML		1145		NGLM		ANG	2015		
CMML		1200		UFM			2030		
CMML		1215		UFM			2045		
NGLM		1230		LMS			2100		
NGGM		1245		LMS			2115		
COC		1300		LMS			2130		
COC		1315		LMS			2145		
LMS		1330		ANG			2200		
APOS		1345		ANG			2215		
		1400		UFM			2230		
		1415		CLTC			2245		

FIGURE 4. A "sked" showing when different mission stations had scheduled times to use the radio network. The Lutheran Mission's times are marked LMNG (Lutheran Mission New Guinea, as it was officially known in the postwar years). Archives of the Evangelical Lutheran Church of Papua New Guinea. (Photo by author)

Pisin was allowed by special license. Vernacular languages were not allowed on the radio network. This means that aside from maritime licenses, all users of the network were assumed to be white Europeans.

#### CONNECTING THE ISOLATED, BUT ONLY SO MUCH

As newspaper reports about radio users “in the wilds” suggest, the rationale for the private radio network was the extreme isolation of mission stations and the white European missionaries living at them. Demonstrating the isolation of the mission stations was one of the most important burdens of the CRMF application for their private radio network. As part of the 1954 application for the network, the Lutherans put together a list of their European-staffed mission stations with comments about how many white women and children were present and how remote the station was. For example:

KALASA:

Missionary in Charge: Rev. F. Wagner.

Family: Wife

Comments: Isolated station between Ulap and Finsch[hafen]. Station several hours walking distance from coast. Sets [*sic*] up on top of a series of rocky terraces.

MUMENG:

Missionary in Charge: Rev. G. Horrold

Family: Wife; 1 girl-9 years

Comments: Isolated mission station. 1 ½–2 hours walk to government station.

OMKALAI:

Missionary in Charge: Rev. Brandt (on furlough);

Family: Wife, 1 girl-8 years, 3 boys-6, 3, 2 years.

Comments: Isolated highlands station. Not accessible by plane or vehicle.<sup>40</sup>

Correspondence between the CRMF director and the Lutheran Mission president shows the two men debating which stories of isolation, difficult communications, and medical emergencies would be most effective as part of the 1954 application packet.<sup>41</sup> The application materials depict a highly functioning, albeit atomized, mission organization that only needed the capacity to talk to different stations: “The missions have the doctors and the hospitals, but lack the communications for them to serve even their own children.”<sup>42</sup> In other words, there were concentrated spaces of colonial Christianity but each was almost autonomous, an individual space of pioneering evangelism in a rugged, difficult-to-travel terrain. Notably, almost all of these stories about medical near-misses included in the network application involve European missionaries and their families, not the Papua New Guinean population. That is, the remoteness and isolation emphasized here is white remoteness.

However much the application for the network depended on the demonstration of social and geographic remoteness, the actual experiences of using the radio network once it was running seemed to constantly create too many social connections. Most apparent from the Lutheran archive is the fact that the Lutheran missionaries quickly started hogging all of the radio time to talk to base stations or to other outstations. At regular intervals, Lutheran radio engineers had to send out the kind of pleading messages to the Lutheran Mission staff discussed at the beginning of this chapter: please stop running overtime into other sked slots and stop using up all of the unscheduled times, since by doing so they were keeping the other missions that were part of the network from being able to communicate.<sup>43</sup> In his 1968 report to the assembled members of the Lutheran Mission at their yearly conference, radio engineer George Groat gave the network users a good dressing-down for talking out of turn, using the network for improper kinds of communication, and not using the appropriate radio jargon: “over and out” is nonsense, given that “over” assumes that you are awaiting a response but “out” means that you are *not* awaiting a response. You should say “off and clear” instead. He tried to enforce the use of a particular register for radio interactions: “Ask control for clearance before going ahead with your traffic. Think your communication out clearly before sked time. Don’t ramble on. Abbreviate wherever you can for easier copying by the recipient of your traffic.”<sup>44</sup> He was frustrated that he had made these same pleading announcements for years to no avail. The Lutheran missionaries had gone from being isolated Christian evangelists to chatty Cathys who couldn’t stop talking with one another in anarchic disorder.

In some radio networks at the time, a certain amount of free-form chatter was routinized and grudgingly tolerated by the colonial administration. Sinclair (1984: 193) briefly discusses the network used in the Papuan islands region by planters, missionaries, and government officials in which everyone agreed that 4:30 to 6:30 p.m. would be an “unofficial small-talk radio schedule” known as the “Rum Sessions.” The Department of Posts and Telegraphs in Moresby monitored the sessions as part of its regular monitoring of all networks. “So long as the proprieties were observed, however, the Department was loath to intervene. The rules of the game were well understood by all: no profane or indecent language could be used, and no purely commercial messages exchanged, for this would deprive [the Department of Posts and Telegraphs] of lawful revenue. Then someone broke the rules,” and in 1959 the administration ordered that the Rum Sessions had to end. The Papuan islands network that hosted the Rum Sessions had only twenty-five radio sets; the CRMF network had over three hundred in 1968. This kind of free-form Rum Sessions chit-chat was impossible, yet the Lutherans at least kept trying to do it.

And while access to transmitting on the network was tightly controlled by the circulation of crystals, one could hear any sked one wanted. If hydroelectric power



or long-lasting batteries were available, missionaries could listen in on a potentially endless supply of news or gossip or information about the medical maladies or airplane travel of various missionaries. Users of the network were not supposed to listen in except during their general call-ups in the morning and when they had a sked, but they were of course aware of the fact that within their private network there was very little privacy. In a letter to the Lutheran Mission superintendent, the head of CRMF, Claude D'Evelynes, writes: "If you wish to discuss any of these matters with me over the air we could make a sked for 5 a.m. on 3196 and be fairly sure of privacy."<sup>45</sup> In other words, you could try to schedule an appointment to talk in the middle of the night, but that would at best cut down on people listening in, not avoid it altogether.<sup>46</sup>

Although the network was based on a sense of white colonial isolation that needed to be overcome, it quickly started to generate too many moments of contact. The isolated nodes of the network were still supposed to be isolated. That is, you cannot be a missionary if you are just idly chatting, gossiping, or eavesdropping on the radio all day. Missionary self-conceptions as romantic and pioneering evangelists did not include that much chit-chat. The culture of colonialism more broadly is one of isolation, and talking about one's experiences of remoteness is part of the colonial project (Ardener 1987). Technological limitations, romanticized self-conceptions, and religious conversion all contributed to the ideological and practical work done to make the missionary radio network capable of managing but not eradicating those feelings of isolation. More generally, the network could keep its shape as a private missionary network only if it could keep from becoming a broadcast station.

#### MERGING INTO OTHER NETWORKS

A major limiting condition on the licenses that the administration granted to the mission network had the effect of blurring the boundaries between the private and the administration networks. It was common at this time to separate commercial from noncommercial messages on wireless networks. The missionary network licenses were granted with the restriction that any discussions of commercial or business interests would result in fees payable to the Department of Posts and Telegraphs in Port Moresby, one shilling per three-minute conversation (in 2024, this is approximately equivalent to a charge of five US dollars every three minutes). That is, even if the mission network was private, it was to be run as if it were part of the Posts and Telegraphs department of the colonial administration whenever "business" was discussed.

The administration assumed that most traffic would be chargeable (i.e., commercial) except for those limited sets of "conversations relating to the safety of life and property and the spiritual welfare of persons." For the administration,

noncommercial traffic should only include things like “medical consultations, urgent medical supplies, whereabouts of personnel in cases where questions of safety are involved, aircraft movements and vital weather information in emergency.”

Yet the CRMF director assumed that all traffic should be free except for the limited sets of conversations about trade stores or the sale of mission plantation copra (coconut). Food for missions could be “health and safety,” while supplies for mission schools could be “spiritual welfare.” Even Carl Spehr thought the CRMF director’s position was extreme, summing up his thoughts in a handwritten postscript to his boss: “I am sure that the Post-Master General and Rugli [i.e., CRMF] do not agree on the interpretation of ‘Spiritual Welfare.’ Rugli claims it means ‘all mission matter’; the Post-Master General claims it means what it says.”<sup>47</sup>

The member missions of the CRMF wanted to negotiate a five-pound flat rate to pay to the administration each year, in essence sidestepping the whole question of how to disentangle business from spirit in day-to-day affairs. But the CRMF director was adamant that any fees were a ridiculous intrusion on the autonomy of the network and an unfair burden on the Christian missions. Thus began a never-to-be-resolved debate about what exactly constituted commercial traffic on the missionary network. In his history of telecommunications in Papua New Guinea, Sinclair (1984: 194) says of the CRMF mission network that “there is no doubt that a lot of traffic was passed that should, by any reasonable criteria, have gone to P and T [Posts and Telegraphs], so contributing much-needed revenue to the national telecommunications system.” For the almost state-like Lutheran Mission, which ran plantations, trade stores, hospitals, schools, and supply houses, “commercial matters” as opposed to spiritual or safety matters were difficult to distinguish. Missionaries kept logbooks that tried to bureaucratically police the domain of the commercial, but nobody really knew how to log most calls.

In effect, this ambivalence about the boundary between spiritual and commercial radio traffic on the network meant that it was impossible to fully separate the mission and administration networks. The demand to log any calls of a commercial nature meant that the private mission network became, at moments, a subsidiary of the administration network. The isolation from the administration that was the initial rationale for the mission network was subverted by actually using it, which was perhaps the goal of the administration.<sup>48</sup> But it was a goal that the missionaries resisted. They wanted to be independent of the administration even as they depended on it for support and subsidies.

The autonomy of the network therefore depended on the categorization of talk: what was a commercial exchange and what wasn’t? The network could stay independent only so long as it kept track of the distinction. In addition to the regulation of speech through crystals and skeds, and the limitations on the amount of speech in the desire to manage but not eradicate isolation, the network was able to be a network only to the extent that users paid constant attention to the impossible

line between the commercial and spiritual in their everyday talk of planes and weather and trade stores and conversions.

### THE LIMITS OF A NETWORK

These different kinds of limitations—or forms of channeling—not only produce a network with defined, if always collapsing, boundaries and linking nodes. They also produce a certain kind of social space: a geographic and racial imaginary that distinguished the speech on the network from the world outside it.

Pockets of mission activity were linked to one another through a network that depended legally on their continued extreme isolation from other white, English speakers. Yet the Lutheran speakers on the network were continually chided about their abuse of the radio skeds and their endless talk and social connectivity. Likewise, the need to log all traffic of a commercial nature meant that speakers were constantly monitoring their relation to an adjacent network of administration personnel and practices, but doing so in ways that guarded their separation from the administration. The network of isolated, white, colonial speakers produced a porousness and superfluity of social connections that had to be constrained. The network needed to manage and control colonial isolation, not banish it.

The circulatory primitivity of the Territory of New Guinea was exacerbated rather than overcome by the Lutheran Mission's extensive communicative and transportation networks. Given the administrators' concerns that they were too large and powerful in their domain of influence, the Lutherans had to minimize their own footprint. In the run-up to World War II, rumors of Nazi factories and fighter squadrons hidden in the jungles kept the administration suspicious of German national missionaries (and the aviation program came to an abrupt halt when the Lutheran lay aviation engineers ran off with their only plane). The assumption of communicative freedom that seemed to open up with aviation into and out of the highlands during the "gold rush for souls" came to a halt, and that freedom was more circumscribed in the postwar years. In order not to repeat the same prewar dynamics, the administration had to try to keep tight control over the radio network and the Lutherans had to try to insist they still needed it because of their remote outstations. The communicative technologies of Papua New Guinea were opening up, yet the structural tensions between the administration and the mission meant that communications needed to be kept curtailed.

Even as telecommunications have dramatically improved in recent years with the introduction of mobile phone access in rural Papua New Guinea (see Foster and Horst 2018, Foster 2024), the sense that communication systems have to be used sparingly and respectfully remains part of the memories of missionary life. The Bible translation organization known as SIL International developed its own radio network and worked with the Mission Aviation Fellowship to create a

network of planes and helicopters to transport their translators. Unlike many of the garrulous Lutherans who were constantly chastised in annual meetings for talking too much, the SIL translators seem to have largely been able to keep their radio use to a minimum. However, the translator who worked in the Waria Valley, where I did research in the first decade of this century, was an exception. Ernie Richert was known as a larger-than-life character. The story that both Waria Valley people and other SIL translators consistently told about him was that he treated the aviation network not as a sacred resource capable of occasionally mitigating remoteness, but instead like a taxi. He would call up on the radio network in the morning and demand to have a plane come pick him up that same day. This was unheard of, yet he apparently did it on more than one occasion. And it was still one of the first things people told me about him almost fifty years later. He did not use the aviation system in a way that maintained a feeling of remoteness at all, and as the Lutherans discovered before him, that made one an object of scorn and some suspicion.

Because Papua New Guinea had both many mountains and many languages, it created a space in which it was almost impossible to build economies of scale: even if the mountains could be conquered, the languages were still there, requiring more and more missionaries on the scene who valorized local-language Bible translation to engage with the local communities—more and more missionaries who then had to be connected by radio. But if circulation actually had become simple, then all of a sudden the administrators might have wanted to take over the secular aspects of their work. That is, the non-integration of the many denominational mission organizations was acceptable only to the extent that the Territory of New Guinea continued to suffer under circulatory primitivity. Lutherans needed to organize communicative networks to eradicate distance among their colonial outposts, but were at risk of losing their colonial autonomy the moment distances actually seemed surmountable.

When it came to languages, too, remoteness was an artifact of Lutheran work rather than a natural outcome of conditions on the ground. In the following chapter, I look at how the circulation of men and languages through Lutheran plantations seemed, for a long time, to create not connections, but religious and subjective boundaries.