LOCAL CULTURES AND THE "NEW ASIA"

The State, Culture, and Capitalism in Southeast Asia

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CHAPTER 6

TELEPHONY AT THE LIMITS OF STATE CONTROL: "DISCOURSE NETWORKS" IN INDONESIA

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With the advent of the gramophone and the telephone toward the end of the last century, it finally became possible for the human voice to endure through time and to travel across long distances, circulating in ways hitherto reserved only for ghostly and other supernatural communications. In the Dutch East Indies (DEI), the first steps in this transformation took place at the height of the colonial modern period, which was also the period during which various nationalisms were starting to take shape. Like the printing press before them, these mass media provided new networks through which discourses moved, and provided new objects for reflection on life in the DEI at that time.[1]

This chapter examines the genealogy of telephony in the DEI. This genealogy, I argue, has many different strands. Some of these strands are paths that come to an abrupt end, some of them are paths that continue on as "minor" histories, and others that continue on only as fantasies of what might had been had socio-political forces and technical developments converged and been articulated differently.[2] The account I provide is not exhaustive but is meant to show that even the history of a technology like the telephone — an artefact whose meaning seems obvious and closed — can be read in quite different ways.[3] Indeed,

there is no reason that telephony need always be understood as an agent of modernization, globalization, capitalism and the like. Under particular conditions, for example, telephony has been used to constitute *local* rather than national or global identities — and this despite the fact that the major history of telephony seems to tend towards political and economic centralization, flexible forms of capital accumulation and a celebration of national or global communities.

Arguing that Indonesian telephony has minor histories challenges the notion that the modernity (and the international capitalism it was connected with) that arrived in the archipelago around the turn of the century was a singular modernity. By emphasizing the uniqueness of Indonesian telephony, as opposed to telegraphy, post and radio (and by emphasizing variations within the "discourse network"[4] of "telephony" itself), I will show that Indonesia's modernity had many possible strands. These strands are apparent in the variety of meanings that were attached to the telephone, in the different directions that the telephone network developed and in the different types of community telephony gave rise to.

In regard to the last point, I suggest that Benedict Anderson's (1991) method of analysing print capitalism's role in shaping the "imagined community" of the nation may also be applied to other types of community-making rooted in different discourse networks. In the case of telephony, the forms of identity that emerged early on were quickly transformed by state monopolization of the network and by its subjection to capitalist principles. So strong were those constraints that it became impossible to imagine a "local" identity based on telephonic discourse networks. Recently, however, telephony has recovered some of its locality and even provided the grounds for fantasies about imagined telephonic communities.

This chapter will show that the state has an important role to play in establishing the conditions for the possibilities of the expression of identities. Specifically, it will demonstrate how state controls over the organization and use of communication technologies have constrained the expression of local identities. The chapter will also indicate, however, that state domination was never complete: local identities and minor histories continue to matter.

1870: The Great Post Road and the World Telegraph Net

In the years prior to the introduction of telephony in the DEI, the two most important forms of point-to-point long-distance communication were the postal service and telegraphy. While postal services of various types had been around in the Indies for centuries, the modern postal service had its beginnings in the early nineteenth century with the construction of the Great Post Road (*Groot Postweg)* in Java. The road was built by order of Governor General Daendels; it stretched across Java from Anyer in the west to Panarukan in the east. Building the road was a tremendous project, mobilizing tens of thousands of forced-labourers along its 1,000-kilometre length. It was built for military reasons, providing means for sending orders and reports between commanders and troops with a minimum of delay and for quickly moving troops across the island to defend against coastal incursions by rival colonial powers. That the road was primarily built for purposes of streamlining defence and government administration was indicated by the fact that the first segment of the road to be built was that which connected Batavia (Jakarta), seat of colonial government, and Buitenzorg (Bogor), the site of the Governor General's residence.

What was it about this road that distinguished it from the complex networks of paths and roads that had serviced travellers and letter carriers until that time, marking the beginning of modern communications in the archipelago? It was not only that it was a state project, but that it established a new type of space where the criterion of functionality was speed. Speed of travel along the road was increased by making it as straight as possible, by replacing ferry crossings with bridges, and by providing posts — every six *paal* (approximately 6 kilometres) in coastal areas and five *paal* in mountainous areas — at which those travelling on government business could change horses, eliminating the need to rest one's horses. The system reduced travel time across Java from more than forty days to just six days (Directorate-General of Posts and Telecommunications 1982*a*, p. 54).

As a result of this emphasis on speed, the space of the Great Post Road was no longr subordinated to place and the limits on speed imposed by locality and distance. In transcending locality it sometimes had the

capacity to alter the character of the places it passed through. One example of this was the capital of Bandoeng regency in the Priangan region of western Java. As myth has it, Daendels ordered the town of Bandoeng moved 14 kilometres to the north so that it would be located on the Great Post Road (Barker 1999, p. 79). Whereas the former location has been selected according to calculations based on geomancy — which sought to find the most auspicious location based on considerations about the specific characteristics of the sacred landscape — the new location was determined by the requirements of a trans-local speed. In the DEI, as in many parts of the world, this trans-local speed emerged first under highly controlled conditions imposed by the state.

Telegraphy was first introduced in 1856, 21 years after its invention and 17 years before it was introduced in the neighbouring Philippines. According to one colonial observer, telegraphy was viewed as "nothing but an extension and acceleration of the postal intercourse" (Hovig [1929*b*], p. 22). Indeed, telegraphy followed the pattern of development established by the Great Post Road. It too tended towards increasing detachment and abstraction from the landscape and towards monopolization by the state. Thus, whereas initially the network of telegraph wires was attached to living *kapok* trees, the trees were gradually replaced by standardized poles; and since these lines were expected to traverse long distances with a minimum of cable and clearing work, they tended to follow the other great lines already cut into the Javanese landscape: the Post Road and the emerging railway network. The similarities did not end there. Both in its construction and its network evolution telegraphy followed the pattern established by the Great Post Road. Thus, the first connection in the telegraph network was built under the supervision of military engineers using forced labour (Nasruddin 1997, pp. 30–31), linking Batavia to Buitenzorg. The colonial government emphasized its goals of establishing high-speed communication networks that linked together all the nodes in its administrative apparatus.

Telegraphy in the colonial period also constituted a new infrastructure to facilitate the extraction of the colony's resources. For example, attempts were made as early as 1859 to lay a submarine cable between Batavia and Muntok, Bangka, the site of a huge tin mine whose revenues equalled

5 per cent of the colony's total annual budget (Hovig [1929*a*], p. 123). This line was also to connect the Indies to Holland via a submarine cable to Singapore with a branch that extended to Palembang, potentially linking Java, Sumatra and Bangka to Great Britain's global telegraph network. However, the cable snapped several times and never became entirely operational. It was only in 1870 that a permanent connection was established in Singapore. This was therefore the year in which the Indies were first integrated into the world telegraph net. With this integration, the use of the telegraph for carrying news, stock prices and personal messages began to develop in earnest.

Thus, just as "Daendels previously required a post-road for the quick and reliable conveyance of letters to rule Java effectively so as to bring it to its present prosperity, ... the Government [too] in a later stage of this development require[d] the telegraph for the same purpose" (ibid., p. 122). The state viewed the new communication systems of international capitalism as strategic enough to warrant government control. Thus, in 1862, when the government took steps to fully rationalize the postal service according to emerging international standards (by replacing a "tipping system" with stamps, by standardizing postage rates, and by integrating rural postal services into the main services), it also declared an official monopoly over the postal service. Several years later, in 1875, the administration of post and telegraphy were finally combined under the *Post en Telegraaf Dienst*, a division of the Department of Public Works. The modernity envisioned by the government was clear: state-controlled, large-scale networks that had high levels of standardization and were dually integrated into the world communications net and the international capitalist system.

1900: Hidden Forces

In partial contrast to the histories of the postal services, the first two decades of telephone development took place largely through the initiative of private enterprises working under concessions granted by the government.[5] In this respect, the DEI followed the pattern found in France, Italy, and the United Kingdom (and not the United States, Japan, or Germany): an early disaggregation of control over telephony from control over postal services and telegraphy. One effect of this was that

the development of the telephone network in these early years differed markedly from its predecessor, the telegraph. Whereas the telegraph had emerged primarily as a mode of long-distance communication, the telephone emerged primarily as an instrument of local communication within districts and towns. The first telephone link in the Indies was indicative of this fact. It was built in 1883, and linked together Weltevreden, Batavia, and Tanjung Priok, the residential district, business-quarter and harbour of the Indies' largest commercial town (ibid., p. 124). Other local networks quickly emerged throughout Java and other islands such that by 1905 there were thirty-eight private telephone companies, each operating its own local network.

What were these local networks like? The case of Bandung is probably typical. Its first telephone company, the Preanger Telefoon Mij., was established in 1895 by K.A.R. Bosscha, a well-known tea plantation owner.[6] It had 157 subscribers, most of whom were able to keep up with events in Bandung, or during their weekend stays in the city, to keep track of what was happening on the plantations (Kunto n.d., p. 3). Alongside this private network for subscribers, the Post and Telegraph Services (PT) also developed its own network for administrative purposes. For the PT, the telephone was seen largely as an extension of the telegraph which, however, was much less expensive to install and also much easier to use (as it did not require knowledge of Morse code). Initially, therefore, the PT used the telephone merely to supplement those telegraph services in small towns for which the building of a telegraph office would have been too expensive" (Hovig [1929*a*], p. 124). This network grew to the point that by the beginning of the century all the districts within the *kabupaten* of Bandung had a switchboard of at least 15 lines, and all could be reached from the municipality (Kunto [1929], p. 4). The PT referred to these offices not as telephone offices, but as "telegraph branch-offices"; and telephone operators were trained in writing down "'spoken' telegrams" (Hovig [1929*a*], p. 125).

What we see is an opposition between two approaches to integrating the new technology into prevailing discourse networks. The first approach was to treat telephony as a subsidiary technology of telegraphy. This was the approach followed by the government, which administered the colony primarily through the medium of print. For state officials and those

accustomed to working in the postal and telegraph services, the oral discourse allowed by the telephone was merely a supplement for the printed word transmitted by telegraph, a supplement that was necessary given the lack of technical capabilities in remote areas and the high costs of training telegraphy personnel. The second approach was to use the technology to wire together one's local social and business network. This approach meant putting telephones in offices and in sitting rooms or on the back verandas of people's homes.

While the former approach to telephony did not disturb the hierarchy of existing discourse networks, the latter approach did as is apparent in Louis Couperus's famous 1900 novel, *The Hidden Force*.[7] The telephone appears as an aside. It has no particular plot function and does not work as an important symbol. Yet it is precisely the gratuitousness of a passage describing the telephone that makes it interesting. The tone used is one of dismissive disgust; it begins with a description of Eva's first impressions of Batavia:

> Eva did not find Batavia the ideal city of Eurasian civilisation that she had pictured in eastern Java. In this great centre of worry about money, of desire for money, every trace of spontaneity had vanished and life dozed off into an everlasting seclusion in the office or at home. People never saw each other except at receptions, any other conversations took place over the telephone.
>
> The abuse of the telephone for domestic purposes killed the intimacy among friends. People no longer saw one another, they no longer had any need to dress and send for the carriage, because they chatted over the telephone, in sarong and kabaai, in pyjamas, almost without stirring a limb. The telephone was close at hand and it rang constantly on the back veranda. People called each other for nothing, or just for the fun of it. Young Mrs De Hartemann had an intimate friend, a young woman who she had never seen, but whom she talked daily, for half an hour at a time. She sat down when she talked, so it did not tire her. ... She did the same with other friends; she visited then by telephone. (Couperus 1985, p. 220)

The telephone could be said to either extend or replace the culture of oral, face-to-face encounters. As Couperus terms it, people liked to "visit" each other by telephone rather than by carriage. This new articulation of discourse networks represents a disturbance of colonial life, epitomizing a new kind of isolation: it allows for sociability without movement. What Couperus portrays, therefore, is not the explosion of movement and

traffic that one normally associates with this modern period of trains, steamships, newspapers and the like, but a kind of retreat into the safe confines of the home. As Rudolf Mrazek has argued in his analyses of the period, the technologies that inaugurated an "age in motion" (Shiraishi 1990) for Indonesians, appear also to have inaugurated a kind of escapist hyper-stasis for the colonial Dutch.[8]

It is noteworthy that for Couperus the emergence of this colonial hyper-stasis is closely associated with women. Women stop dressing up, they stop circulating in the marketplace and the intimacy of friendships is therefore disrupted. The passage cited above continues thus:

> In Labuwangi Eva had not been used to this endless jangling and ringing, which killed all conversation, which on the back veranda revealed only half of a dialogue — the answer being inaudible from anyone sitting away from the instrument — in the form of an incessant, one-sided jabbering. It got on her nerves and drove her to her room. And, amid the boredom of this life, full of care and inward brooding for the husband and penetrated by the chatter of the wife's telephone conversations, Eva would be surprised to hear suddenly of a special excitement: a fancy fair or rehearsals for an amateur opera performance. (Couperus 1985, pp. 220–21)

The "abuse of the telephone for domestic purposes"[9] would therefore seem to have two aspects. Not only does the telephone induce physical isolation, it allows for the opening up of a discourse network among wives that involves speech that is audible but incomprehensible. It is a kind of noise that dislocates the proper form of discourse that would normally take place on the back veranda, one which could be overheard and spatially located. One might speculate that this new discourse network most threatens the old network when it allows women to develop friendships without even having met each other in person — when it allows for the beginnings of an imagined community that, in Couperus's fictional depiction, short-circuits the controls of repressive, patriarchal families.[10]

Thus, the early period of DEI telephony shows a certain openness, both in terms of the pattern of network development and administration and the manner in which telephonic discourse was positioned in relation to other discourse networks. It did not tend towards long-distance communication over grand networks but towards very local communication. In many towns and regions, it was possible to know all

the people on one's network, since there might be only a few dozen lines. And even if one did not know everyone on one's network, one would certainly know who it was that owned and administered it. We might surmise, therefore, that telephony in this period would have given rise not to global or national identities (both of which emerged first through print), but to a new sense of local community identity. Unlike the newspaper, radio or telegraph, telephony did not immediately give rise to an imagined community of anonymous users.

Nonetheless, the sense of community provoked by the telephone was not what it had been in the past for it was a community based in "electric speech" (Ronell 1989) rather than in face-to-face encounters. It thus had greater elasticity since it was less constrained by the materiality of the body, weather, distance and so forth. One consequence of this was that the disciplines normally brought to bear on public and domestic spheres (by way of overhearing and seeing, for example) became far less effective in controlling communication. Indeed, as we have seen above, the capacity of telephonic discourse to bypass mechanisms of social control (proper hours of sociability, proper dress code, public conversation) gave rise to a fear that telephony could extend the sphere of women's sociability beyond its spatial confines and open up a discursive channel that escaped surveillance and discipline.

1930: Holland's Colonial Call

In 1930 the Dutch government published a thick book entitled *Holland's Colonial Call* (Hovig 1929*b*). Aimed at defending the Dutch administration of its colonies against critique, the papers in the volume present a celebration of the civilizing and progressive effects of Dutch Ethical Policy in the domain of what is termed "traffic" or "conveyance". The papers, one introduction states, are for the "motherland" (ibid., p. vii). They show the world that "the future development of the Indies can safely be entrusted to the Dutch government" (ibid., p. viii). The section of this book that deals with telephony is highly enthusiastic about telephony's role in this "development":

> In the large towns and even in the most of the smaller places on Java it is just as natural to receive one's letters and papers punctually once or more times a day, to walk to the letter-box or to the telegraph-house, to take the telephone and order something from your supplier for the guests you are expecting, to ring up your friends, relatives, or business relations at a distance of some hundreds of kilometres, as it is in Western Europe. This is done without any further thought. (Ibid., p. 118)

Later, the text continues:

> To realize in full that the post is a mighty factor in the pioneer's work, that is ever and unweariedly going on in tropical Holland, one must have been far away in the interior. ... One must have experienced this [isolation] to know what a difference it makes when ... the first post office is opened, with a telephone line, ... how it suddenly seems as if everything looks brighter, as if the world is no longer such a long way off. ... From that moment one can see such a place make progress day by day. With the arrival of the post the problem of the roads automatically pushed into the foreground and as soon as the roads have been improved motorcars appear on the scene. A lasting Native and Chinese middle-class of tradesmen and brokers comes into existence, gradually there comes a "passar" (periodical market), also a "passangsahan" (sort of hotel). A new village has come into existence, an outpost, a fresh support from where the Western civilization can again develop itself. (Ibid., pp. 119–20)

The story told of the telephone here is almost opposite from that found in *The Hidden Force*. Telephones do not cause isolation but bring people together, they are a source of civilization and Westernization, and thus of modernity itself. Through technological modernization, the colonial state opens up the local sphere to international circulations, and in so doing, re-defines the terms in which the "local" can be expressed.

In the thirty years since *The Hidden Force* was published, the archipelago's telephone network had undergone profound transformations. In 1906, shortly after a private company was established that aimed to link together some of the existing local Javanese telephone nets with long-distance connections, the government stepped in and asserted a monopoly over all telecommunications. The PT was turned into the PTT (Post, Telegraf, en Telefoon Dienst), a government corporation with authority over all three services. The government also took the additional step of replacing the subscription-based pricing system used by the private companies with a time-based pricing system. The short period of the telephone functioning as a simple link between colonial homes and between businesses therefore came to an end. Increasingly,

the networks followed the pattern already established for the postal and telegraph services, shifting away from local developments to long-distance connections.

An important enabling factor for the shift toward long-distance was experiments in radio transmission, both in the Indies and in Europe. First with high frequency waves, and later with short waves, these experiments proved capable of linking together increasingly distant stations. According to Cornelis Disco (1990), many of these innovations occurred through experiments made under the aegis of trying to establish a "direct link" (here meaning telegraphy) between the DEI and Holland. The reasoning for such an effort — something which, according to Disco, "no one had ever tried to [do]" or was even planning to do — was primarily strategic: to reduce dependence on British-owned international telegraphic lines (Disco 1990, p. 27). Capitalism has its nationalistic dimension.

However, for those in the Indies, the "direct link" with Holland via radio was something more than just an insurance policy against future wars; it was an intimate line to the "motherland".[11] As one contributor to *Holland's Colonial Call* explained:

> The Dutchman in the tropics often thinks of his home-country.
>
> In day time, when working under the scorching sun, or during the sultry evenings, seated on the gallery of his house, on the terrace of the club, or even in the cinema, his mind will sometimes suddenly picture some typical small Dutch town, a landscape with a narrow channel, a windmill, some cows at pasture, with the gray clouds above, or a shopping-street brightly illuminated. ...
>
> [O]ne thinks longingly of the home-country, and sometimes even real homesickness takes its place. How one wishes to be in Holland if only for a few moments, to mix with one's own countrymen, to feel again one with Holland.
>
> But although hankering after the unattainable, one learns to accept the inevitable.
>
> When radio development brought new possibilities, direct communication between Holland and the Dutch East-Indies again became the centre of all hope and the desire for a "living" contact with Holland, with the civilization of the mother-country, became more and more intense. (Hovig 1929*b*, p. 36)

Indeed, the DEI radio engineer, De Groot, was so determined to establish the connection that he had already been transmitting telegraph messages

to Holland for a year before his counterparts in Holland built a station capable of even receiving the signals (Disco 1990, p. 32).

De Groot's messages were still in Morse code and thus not really telephonic. The first "radio-telephonic" link was established by Philips, with its short-wave transmitters. The first broadcasts picked up were of gramophone music and announcements of the broadcast. A representative of the Philips company describes the response:

> [N]ot before the Indian mail arrived, four weeks later did Eindhoven fully realise the emotion of those in the East Indies, upon suddenly hearing for the first time a voice from the mother-country. Not softly or distorted — no, the announcements were clearly heard by means of the headphone, informing the listener that the Philips Radio Laboratory at Eindhoven was broadcasting. The tremendous distance — 12000 km — which separated the listeners in the tropics from Holland, no longer existed and perfectly clear sounded the voice of the announcer....
>
> A wave of emotion swept over the Dutch in the Indies and everyone now wanted to hear this voice from the mother-country, this mysterious voice from Eindhoven which bridged oceans to speak to the sons of Holland in the distance Indies. ...
>
> The voice of Holland was heard in the town, on the plantation, even at the isolated outstations, where many a man, sitting near his receiver, overcome by emotion, was head in hand. Staring into space. These were moments, memories of which, like a precious possession, rest in the treasure-houses joy when contact with the home-country was established was wonderful to behold. ... ([Author not named] [1929], pp. 138–39)

The "colonial mother's" voice arrives at last for her homesick sons in the Indies. Who was this mother? It was not just any mother but the mother-country, the state mother.[12] Indeed, shortly after these tests proved successful, an official inauguration of the link was held in which Queen Wilhemina and Princess Juliana spoke. The Queen began her address by announcing herself as the "first Dutch sovereign to be able to speak directly to her colonial subjects" (Disco 1990, p. 54). And so began the history of the short-wave broadcasting to the colonies. It was a history not only about isolating oneself from the "native" population and from war (see Mrazek 1995), but about discovering an imagined community of new Dutch compatriots. The passage above continues with a description of radio listeners that recalls Anderson's description of

newspaper readers in *Imagined Communities*.[13]

> The lucky owner of a receiving set, suitable for ultra-short-wave reception, became a local celebrity, a positive nucleus, attracting the electrons of the Dutch colony. Suddenly he saw himself the centre of a large number of friends and acquaintances, many of which he met for the very first time, not even knowing their names. ([Author not named] [1929], p. 139)

However, the Dutch and their emerging diaspora nationalism had no future in the Indies, so we cannot know the extent to which the nostalgia and imagined community of radio were merely a fetishized escape from the "reality" of daily life in the Indies and to what extent they were a "real" alternative to Indonesian nationalism.

As regards telephony in the sense that we understand it today — as point-to-point duplex communications — the Indies had to wait more than two years. In 1929 the government PTT inaugurated its first two-way direct telephonic link between Holland and the Indies. The inaugural call in 1929 was made by the Queen Mother, who reportedly "chatt[ed] amicably" with the wife of the Governor General of the DEI (Disco 1990, p. 54). After this call, stations were gradually opened in the major Indies cities that were capable of carrying the public's radio-telephonic calls to Holland.

By the time *Holland's Colonial Call* was published, the channels of European women's chatter had largely been incorporated into discourse networks under state control. In the domain of broadcast radio, a masculinist nationalism had been provoked that could be entirely assimilated to the demands of the colonial state, for it united its subjects — its "sons" — under the Queen of the "mother-country". This monopolistic control extended, in a slightly less extreme fashion, to telephone lines. Not only had all the local networks been incorporated into a government-owned long-distance net, but the ultimate transmitters and receptors in this new discourse network were celebrated symbolically, in the inauguration ceremony, as the Queen Mother and the Governor General's wife.[14] Thus, the telephone discourse network had been brought under state control both administratively and symbolically.

While telephonic transmissions never experienced the kind of strict government controls that broadcasts did, they remained a kind of "back room" of state power, a discourse network where the women behind the

figures of state power could "chat". Such chat was different from that described in *The Hidden Force* in two important ways. First, it was no longer restricted to a particular locale but spread across oceans. Second, it was now subject to strict economic disciplines. Time-based fees ensured that only the well-to-do could afford to engage in the type of aimless chat that Couperus had such distaste for; and somewhat insidiously, they ensured that even "aimless chat" could be turned to state profit.

1976: Automatization

One might presume that by the late-1970s telephony would have been successfully "black boxed" (see Bijker et al. 1987, pp. 5, 14–15; Rip and Kemp 1998, p. 329): fixed in meaning and lacking in variation, making it difficult to imagine other telephonic genealogies and futures — and indeed, in terms of the foundations of the telephonic discourse network, nothing much had changed since the late-colonial period.

Although postal services had been placed under a different authority from that of telecommunications and a special company for international telecommunications had been established, state companies still monopolized all the services.[15] Culturally too, there had been few changes. Throughout both the Soekarno and Soeharto periods, each new telephone network and switching device was inaugurated with a heavily ritualized conversation between government officials. Thus, for example, Soekarno was ceremonially photographed in 1950 "making a telephone call to the Indian Government on the opening of radio telephony between Indonesia and India" (Directorate-General of Posts and Communications 1982*b*, p. 154) and Soeharto in 1976 making a "trunk call to the governors of Aceh and Irian Jaya" (Directorate-General of Posts and Telecommunications 1982*c*, p. 183). Furthermore, the ideological emphasis on disciplining users to respect the need for economical and functional uses of the telephone continued. For example, telephone books from the 1950s provided lessons on how to use the telephone correctly (both technically and in terms of conversational etiquette), and more recently the state provider began using stickers for telephones that encouraged people to "talk only as much as necessary" (*bicara seperlunya*).

In terms of its technology, the telephone network had become even

more closed and centralized than it had been in the colonial era. This was primarily the result of automatization. While the first steps had been started during the colonial period (some distribution and switching was automatized), the introduction of fully automatic exchanges only began in earnest during post-war reconstruction. Automatization proceeded in a centralized manner, with manual exchanges being replaced according to the government hierarchy; thus Jakarta and Bandung were automatized first, followed by all the provincial capital cities, followed by rural districts on Java, and finally by the remaining non-urban districts outside of Java. It was a slow and costly process that received great attention from the government bureaucracy. In keeping with the logic of New Order cleansing operations, relevant people of a region would be mobilized to *"membebaskan"* (free) the region of so-called *engkol* (crank) phones. Once the operation was completed, a ceremony would be held at which a government official would declare the region *"bebas engkol"* (crank-free). on some of those occasions, the President himself was the one to make the declaration. By 1976, these efforts had ensured that the number of subscribers with automatic connections finally outnumbered those with manual connections.

The "closedness" of the automatized network came from the fact that it reduced the intervention of humans in network operation by eliminating the need for switchboard operators. With the demise of the operator, the system lost a significant trace of its locality. After all, the intermediary that linked two speakers together was no longer associated with a familiar voice and accent; rather, connections were provided by an invisible machine. Furthermore, with the loss of a human intermediary, the telephone discourse network became far more anonymous. Subscribers could receive calls that were both unaccounted and could not be traced to a recognizable location or numeric address (only in 2000 would the operator's ability to identify callers be automated and passed on to subscribers). Both these aspects closed off the telephonic discursive space from other oral discourse networks.

In addition to increasing the "closedness" of telephony, automatization also increased its centralization, as evidenced both in switching and in power supply. Early switchboards could handle only a few dozen connections at a time and therefore could be geographically dispersed.

However, with automatization (and later digitization) the capacity of exchanges increased to thousands of connections, making it possible for a single "central" to service the population of an entire town or part of a city. In the domain of power supply, automatization reinforced a trend already underway to replace the so-called "local battery" system with the "central battery" system. In the local battery telephone system, the telephone had to be cranked to generate a current. This current announced to the switchboard operator that the caller was requesting a connection. The operator would then ask who the caller wanted to reach and make the necessary manual connection. With the central battery system (which was available in later models of manual exchanges and was universal in automatic exchanges), the current originating at the central and travelling over the telephone line was enough to power the caller's telephone handset too. This eliminated the need for a local power supply, making the network as a whole more susceptible to centralization. In sum, while automatization may have been a great technological advance from the standpoint of the speed and scale of interconnections, it also had the important effect of hard-wiring centralized control into the network. In conjunction with the elimination of human operators, this centralization served to deepen the late-colonial trend of pushing locality — in both its human and spatial sense — out of the network.

While the push to transcend locality in favour of deterritorialized central control continued unabated after the war, there were nonetheless significant changes in the character of the trans-local identity that telephonic progress was being associated with. One can trace, for example, how the celebration of Dutch nationalism and the connection to the mother-country gave way, after the war, to Soekarno's internationalism. Thus, under Soekarno, Indonesia's radio-telephonic links to foreign countries expanded tremendously and the possibilities of satellite use were explored. This expansion was guided by the ideology that telephony provided a link not so much between the motherland and her colonial sons between the brotherhood of nations (most famously celebrated in the Bandung Conference).[16]

More recently, under former President Soeharto, this ideology was discarded in favour of a state-nationalist ideology in which telecommunications would support the spread of a so-called *wawasan*

Nusantara, or "archipelagic world-view". Promoted by both military leaders and telecommunications engineers, this ideology argued that telecommunications should serve the interests of defending national unity.[17] In keeping with this ideology, Soeharto's rule saw the completion of two huge nationalist telecommunications projects. First, the construction of a microwave backbone from Sumatra to Papua (consisting of the Trans-Sumatra Microwave link, the Java-Bali Microwave link and the Eastern Indonesia Microwace link) known as *sistelkomnas*, an acronym for "national telecommunications system". Second, the launching of Palapa, the developing world's first domestic telecommunications satellite.[18] Both these projects emphasized that telephony and other telecommunications technologies should be used to eliminate sentiments of ethnic and regional solidarity in order to strengthen the integrity of a heavily centralized nation-state.

1982/2000: Interkom and Telephonic Imagination

It is against the backdrop of automatization and national communication projects — but with a memory of a more locally oriented Indies telephony — that one can begin to understand the significance of two events: the appearance of Sori Siregar's novel entitled *Telephone* (1982) and the advent — in the same year — of what is known as "Interkom".

Siregar's novel tells the story of Daud, a bookstore clerk who cannot resist his desire to make crank calls on unsuspecting people, passing on false news about the deaths of their loved ones and other traumatic events. Daud sees himself as a "pioneer of using the telephone for aimless needs", someone whose crank calls "liberate the telephone from its functionality" (Siregar 1982, p. 59). As Daud begins to come to terms with his vice, he dreams of setting up an institute that will allow people with problems to "form a unity whose members do not recognize one another". "It would be enough to have just a telephone number," he figures. The problem with this, however, is that "this makes it possible to know the identity of the members" since their name and address can be found in the telephone book (ibid., p. 50). To maintain anonymity it therefore would be necessary for the institute to have a switchboard and an operator that could link together members without revealing their phone numbers to one another. And this is where the problem begins, for as Daud reflects,

"to make the institute an operator [of a network] will clearly not be permissible to the directorate ot directorate general of telecommunications" (ibid., p. 51).

It is strange to think of an imagined community based entirely on a shared need for aimlessness and namelessness.[19] Yet this is precisely what Siregar's protagonist thought the telephone might call forth if only it could be liberated from its "functionality" and government control. In terms of my analysis above, it is as if Siregar's protagonist wants to liberate telephony from its major history. To do so means not only eliminating the government monopoly but opening up the channels of desire to the possibility of aimlessness. Thus, the aimlessness of "chat" that we saw in *The Hidden Force* is recovered; however, unlike Couperus's protagonist, who would dismiss such aimlessness, Daud celebrates it. It would appear, therefore, that Siregar's novel takes a stand against the numerous attempts by the state to channel such desires (to the mother country, the brotherhood of nations, and so forth) or to dismiss them as "abuse" or escapism. In doing so it keeps alive in virtual form the possibility an alternative telephonic genealogy: a discourse network carrying desires with no particular object — that is, a telephony without communication.

The strongest case against Sirengar's identification of the policing of aimless desires with the power of the state can be found in a local and "real" minor history: the history of Interkom. Interkom began in the early 1980s as a fad. It reportedly grew out of walkie-talkie use, that great 1970's phenomenon that provided a less expensive alternative to the other great fad of the era: CB radio. Dissatisfaction with the limited capabilities of walkie-talkies and the high costs of batteries led to a whole host of innovations that eventually became known as Interkom. In its present form in Bandung, West Java, Interkom is a cable-based technology that works much like a "souped-up" telephone party-line: it allows for a dozen or more people to communicate on a single line and possesses audio quality that approaches that of a cheap Sony walkman. Users build the network themselves using their own money. Anyone who wants to link up merely has to buy the necessary cable and make or buy an Interkom device (usually a gutted amplifier which has been rebuilt using individual components).

Historically, the cables that constitute Interkom first emerged as

inter-household links and gradually grew into what users refer to as "locals" *(lokal)* that linked together several different households in a neighbourhood. This is when the fad more or less ended, and it is this configuration that most educated and middle-class people still associate with Interkom. However, although Interkom lost most of its middle-class followers (many of whom now use the Internet), it continued to develop and expand throughout the late 1980s and 1990s. In this sense, it can be seen as a counterpoint to larger economic developments, as this was also the time that Indonesia was moving from an oil-based economy to one more reliant on non-oil exports, private sector investment and international integration.

Nowadays, if one looks closely at the trees, telephone poles and electricity poles in many of Bandung's *kampung* (poor residential quarters), what one sees is coloured wires stretched between them and passing into houses. The city's *kampung*, street-side noodle stalls, and cigarette kiosks are wired with Interkom. However, unlike in the 1980s, the locals now have been linked together into inter-local networks. Some of the lines in Interkom stretch for several kilometres, linking together disparate parts of the city. Moreover, since many of Interkom's users have more than one *jalur* or line, it is actually possible to communicate with people on other "lines" that are dozens of kilometres away by asking someone who has both lines to temporarily splice them together using nails and alligator clips (a kind of switchboard).

From the standpoint of the history of telephony, what is remarkable about Interkom is that it is completely *liar* (wild, or illegal). It represents an oral telecommunications network that developed almost completely outside state control, one that was not subjected to capitalist disciplines, and one that carried little baggage about being a beacon of modernity. As the country's educated elite discussed the problem of the poor being left out of the future information economy, the poor have built for themselves a communication network which in terms of user costs and ease of usage far superior to the Internet.

In terms of its organization, Interkom is therefore not far from the dream of telephony found in Siregar's novel. In discursive terms too, it provides something approaching the anonymous space of pure voice and non-functionality that Daud fantasized about. Not only is the vast majority of airtime used for joking, gossip, and sexual banter (with only a few interruptions from such serious topics as notifications about illnesses and deaths or discussion about problems with the network), but people develop reputations based purely on the sound of their voice.

However, even a brief investigation of Interkom shows that this discourse network is far more contained and safe than what Siregar wrote about. For although Interkom is not regulated by the state, it is local enough to allow for self-policing. Such policing takes place in a number of ways. Occasionally, for example, members of one line will join together to unplug someone who is considered disruptive. Under these circumstances, they will physically trace the user by following the wires and figuring out who it might be. In a more friendly vein, members of a line will sometimes organize outings and shared meals where they can meet one another "on land" and put "land names" and bodies to the "air names" and voices they already know. This has the effect of taking the anonymity out of Interkom, reducing the pure orality of the network to a face-to-face oral community. Finally, there is the form of policing that uses gentle reminders. For instance, the general advice that users give to newcomers is not to spend too much time on-line or to neglect their work. As one user explained to me: "Interkom is a hobby, so don't let it disturb your work or your family life."[20] Such advice clearly indicates that Interkom "ought to be" subordinated to more "real" face-to-face interactions — desires part of a minor history that manages to resist the totalizing dreams of capitalism.

Conclusion

In sum, while Interkom does constitute an imagined community of aimless desires it is a community that consistently polices itself for disruptive behaviour, admonishes uncontrolled desires (for example Interkom addiction), and subordinates its discourse to other discourse networks. Although it represents a clear departure from the major history of telephony — in that its exchanges are not monopolized by the state and its costs are fixed so that "unnecessary" chatter is possible — it does not achieve the fantasy of telephony found in Siregar's novel. If we were to express the contrast in broader terms, we might say the following: the path to modernity Interkom follows is neither *state-modern* nor

revolutionary-modern but *local-modern*. For although Interkom may have succeeded in "liberating the telephone from its functionality", it did not facilitate the creation of a truly anonymous community of unconstrained desires. In the future, the fantasy of such a community may therefore have to attach itself to another, more anarchic discourse network than telephony and its variant. The Internet perhaps?

NOTES

1. There have already been several excellent studies describing the particular characteristics of the discourse networks opened up by the printing press. Benedict Anderson (1991) showed how the introduction of the printing press provided a new cosmopolitan discursive space in which nationalist identities could take shape against the backdrop of colonial-instituted ethnic identities. Siegel (1997) took this idea further, showing that this cosmopolitan discursive space — which he defines as *lingua franca* — was already internationalist before it was nationalist. Indeed, he shows that for many early writers in Melayu, the *lingua franca* provided a space in which anyone, any language, could appear and do so without fear of recognition. It was only later that the effects of print capitalism and government repression introduced identity-policing into this space.
2. I am using the Deleuzean distinction between minor and major (that is, minoritarian and majoritarian) histories. The minoritarians has only a ghostly existence and are virtual histories.
3. Despite its importance, the history of the telephone in Indonesia has yet to be studied in detail. There are very few regionally focused studies of non-print communications technologies in general. Two studies that have dealt briefly with telephony are Rudolf Mrazek's "Let Us All Become Radio Mechanics" (1995) and Cornelis Disco's (1990) thesis on early twentieth-century Dutch engineering culture. Mrazek's study is part of his research on the coming of modernity to the archipelago; he shows how colonial radio — both in terms of its content and its organization — came to articulate the Dutch dream of a plural society and to provide the Dutch with a technological escape from an increasingly unwelcoming Indies "reality". For Mrazek, the telephone is a predecessor technology to radio. It is a modern device that relies on cables to function. These cables are initially bare and hung from trees, but are later given casings, buried or strung from poles designed to resist bad weather and moisture. This movement towards a world immune from disturbances is carried to its extreme with radio. The rush to radio by the Dutch was part of a broader attempt to create a safe, isolated world in which they could escape realities such as the encroachments of nature, the effects of war and vandalism by unruly colonized subjects. In this context, the telephone appears as a step on the road to a colonial modernity rooted in escapist fantasies. Cornelis Disco, in contrast, provides a rich account of the social construction of the first wireless connection between Holland and the DEI. He focuses in particular on the role of engineers, whose public debates provided a means for mobilizing "know-how" and resources to establish this connection, and examines the direct radio link that Dutch and Indies engineers built between Holland and the Indies in the 1920s (which was used first for telegraphy, and later for broadcast and telephony). Telephony is just one of the uses to which this radio link is put. Disco is not so much concerned with the general social and cultural significance of the link for Indies society but with the debates and conflicts that emerged in constructing this link and how they helped to shape the organization and culture of Dutch engineering.
4. The term "discourse networks" is taken from Kittler (1990).
5. The contrast between telephony on the one hand, and telegraphy and the post on the other, may be overdrawn. It is likely that a detailed examination of the genealogies of post and of telegraphy would also reveal minor histories contrasting with the major histories presented here.
6. The Bosschas were one of eight large plantations families around Bandung. K.A.R. Bosscha owned the Malabar tea plantation in Panglengan, a region that would later be home to De Groot's famous international radio transmitter. He sponsored the construction of the largest telescope in Southeast Asia above Bandung on the road to Lembang in 1923 and helped to found the first technical school in the Indies (now Institut Teknologi Bandung). He also sponsored the Annual Fairs (*Jaarbeurs*) in Bandung, where the latest in telephone and electric technologies were given prominent positions.
7. Published seventeen years after telephony was first introduced in the DEI, the novel provided an early critique of Dutch colonialism. It described a Dutch colonial modernity in denial of the "hidden forces" of "native" magic and traditionalism.
8. Mrazek (1995) shows how this movement led to the formation of a colonial modern project which sought stasis, fixity, and remote control. Elsewhere, I have argued that this Dutch escapism came increasingly to be coupled with a fetishization of surveillance technologies as tools of social control (Barker 1999).
9. This literacy theme also mattered in the USA, where the telephone was viewed by its propagators as an instrument that ought to be used for transmitting information of economic value, and its appropriate place was therefore in the office. Conversations ought to be short and to the point, in the manner of telegraphy. What disturbed American phone company officials in these early days were the use of the telephone by rural housewives, who used the telephone for socializing, which they viewed as clogging up the switchboards, preventing more important information from being transmitted. Capitalist technology could be deployed for other cultural possibilities.
10. This is more or less what happened — at least in fantasy — when Indonesia's

celebrated nationalist, Kartini, established postal intercourse with her friends in Europe. In a passage cited by Mrazek (p. 1), Kartini writes: "It would seem as though an invisible telephone cable ran from here to Lali Djiwa and back again." For Kartini, writing and talking were interchangeable, both enabling the establishment of intimate community outside the confines of family. The idea of a long cord running from Holland all the way to the north coast of Java was especially liberating for Kartini, who was *dipingit*, confined to her home until her arranged marriage.

11. According to one observer, "it was the case that in Indie everyone from high to low, had a greater fear of and felt much more directly affected by the threatened telegraph blockade and the concomitant isolation this would impose, than in the Netherlands, where it was not a question of their own isolation ..." (Anonymous, "De radioverbinding Indie-Nederland", *De Ingenieur* 43, p. 850 [cited in Disco 1990, p. 39]).
12. Avital Ronell (1989) has provided an unusual analysis of the relation between the state, telephony, and Oedipal desire in the West. Her analysis inspires many of the ideas that run through this paper.
13. "The significance of the mass economy — Hegel observed that newspapers serve modern man as a substitute for morning prayers — is paradoxical. It is performed in silent privacy, the lair of the skull. Yet each communicant is well aware that the ceremony he performs is being replicated simultaneously by thousands (or millions) of others of whose existence he is confident, yet of whose identity he has not the slightest notion. ... What more vivid figure for the secular, historically clocked, imagined community can be envisioned?" (Anderson 1991, p. 35)
14. A photograph of the Queen making the short-wave call is included in the book immediately following the title page. One might say, in fact, that it was this call from the Queen that elicited the articles in the book, all of which were written by former and acting government functionaries in the DEI.
15. In 1961 the PTT was renamed Perusahaan Nasional Pos dan Telekomunikasi. In 1965 it was split into two state-owned companies: PN Pos dan Giro and PN Telekomunikasi. As it gained financial independence from the government (allowing it to take on private debt) and became profit-oriented, its status and name changed again to Perumtel in 1970 and to Telkom in 1991 (Telkom 1994, p. 1). In 1980 the administration of domestic and international telecommunications were separated; the former continued to be handled by Telkom, the latter by Indosat.
16. The idea of the brotherhood of nations may have been an extension of the ideology of a brotherhood of revolutionaries that Benedict Anderson (1972) has argued predominated during the war. In that intermediary period, PTT workers were very active in the independence struggle, clandestinely passing on information they received from abroad and from other regions and even engaging in battles against the Japanese and Dutch. On the revolutionary period and telecommunications, see Amar (1963), who tells the story of events among PTT revolutionaries in Bandung. Also see the rich biographies of PTT revolutionaries across the nation collected by the Directorate-General of Posts and Telecommunications.

17. As Willy Moenandir, Telkom's director from 1973 to 1988, wrote in his essay about telecommunications and national development and *wawasan Nusantara* (n.d., pp. 3–4, 18): "One of the basic patterns of national development is that of 'Wawasan Nusantara', literally 'concept of Archipelago'. This visualizes the establishment of Indonesian islands as a single country with unity in politics, unity in socio-cultural conditions, unity in economic life and unity in defence and security. Unity in politics encompasses the national territory as a unified whole for the nation to live in; the unified nation despite its being composed of diverse ethnic groups, speaking diverse regional tongues and having diverse religions; the unified intent to achieve the national ideal; the credence of Panca Sila (the five principles) is the one and only state's and nation's philosophical ideology; and the validity of a single national law. ... We believe that materialism of the 'Concept of Archipelago' could not be worked out so easily without suitable telecommunications means."
18. On the relation between Palapa and *wawasan Nusantara*, see Barker and Simon (forthcoming).
19. One might speculate that it has to do with the disembodied voice. While the voice has the power to call forth desires, in the case of the telephone it stops short of providing a clear object on which the desires can be fixed.
20. Interview with "Arwis", 13 February 2000. The recognition that telephony-as-Interkom is classifiable as a "hobby" should not have the effect of making it uninteresting as a topic of further study. Rather, it should have the reverse effect, namely, to heighten our awareness of the importance of hobbyists and amateurs in the history of telephony and other communication devices. Both Mrazek (1995) and Disco (1990) mention the importance of radio amateurs in the colonial period (the former in the context of the popularity of an amateur radio journal, the latter in the context of explaining whose experiments caused the shift from long wave to short wave for long-distance signalling), for example. Unfortunately, neither investigates the culture of these amateurs further. Certainly for later technologies, like television and internet, the early role of amateurs and hobbyists is absolutely central to their emergence.

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