# The Continuity of Matrilineal Systems Within a Market Economy

#### YONARIZA

The disintegration of matrilineal societies in the last century has been closely linked to their integration into the market economy. This trend suggests that matrilineal systems or the lineage system organized through the female line will soon vanish as subsistence economies yield to expanding markets. The new prosperity generated by market-oriented production allows the men to become equal members of the women-centered society. Gender roles and rights in matrilineal societies are altered and ultimately this way of life is abolished. The case of Silayang, Minangkabau in West Sumatra provides an exception. Its matrilineal society has persisted despite the dominant presence of Islam, a pillar of patriarchy; the Dutch occupation; and its departure from pure subsistence agriculture via rubber export. Silayang is proof that a matrilineal system will not only survive but also thrive within a market economy, and that economic change does not necessarily bring about social disintegration.

### Introduction

It has been generally understood that any influx of economic change engenders the disintegration of matrilineal systems, a lineage system organized through the female line, since economic change weakens the traditional economy within which such systems exist.<sup>1</sup> Scholars argue that a matrilineal system within a market-oriented economy faces the threat of discontinuity or imminent collapse.

Drawn from his intensive study on the disintegration of 15 matrilineal descent societies throughout the world in the last century, Gough deduced that contact with western industrial nations via market economy is primarily the reason for the disintegration of a matrilineal system.<sup>2</sup> This does not undermine the role of the spread of major religions such as Islam and Christianity but the advent of the market economy is considered to have a more pervasive effect on the continuity of matrilineal system. Present-day market economies entail involvement in cash crop farming, wage work and migration. Consequently, the descent group gradually disintegrates and is replaced by elementary family which emerges as the key kinship group with respect to residence, economic cooperation, legal responsibility and socialization. With this as the backdrop, it can be said

therefore that the continued existence of the matrilineal system is not assured under a market economy.

This paper argues that some matrilineal systems can survive within a market economy. Among the Minangkabau in West Sumatra, the matrilineal system has proven itself capable of withstanding modernization. This society has gone through several transitions both internally and externally. These transitions include the adoption of Islam, a pillar of the patrilineal system, and the Dutch colonial occupation. More interestingly, members of this society are also known for their migration throughout the country.<sup>3</sup> Despite its exposure to different cultures, Minangkabau has maintained its traditions intact. Gura, in fact, still considers Minangkabau as the largest contemporary matrilineal society in the world.<sup>4</sup>

This is not the first study on the Minangkabau matrilineal descent group. There is a relatively rich body of literature already devoted to understanding the said tribe. Kato drew some analysis on Minangkabau's matrilineal system and migration. Another study by Manan, an Indonesian scholar, tried to investigate the continuity of the tribe's matrilineal elite. Oki made a study on the social changes in West Sumatran villages, another name for the Minangkabau area, particularly those brought about by Dutch colonial rule between 1908 and 1945.<sup>5</sup> Gura made a research on women's access to lands.<sup>6</sup>

### The Matrilineal System of Nagari Silayang

Nagari Silayang is found in the central East Rao area of Rao Mapat Tunggul sub-district, Pasaman District in West Sumatra. One of 530 *nagaris* (community) in the Minangkabau area, Silayang has a hilly terrain and is surrounded by mountains which serve as its natural border. The Silayang river flows from south east to north west of the valley and settlements have been established on its banks. Eighty percent of the nagari's 169-sq.km. land area is still covered by forest.

Silayang became accessible when a connecting road from the trans-Sumatra highway was built in 1903. Prior to this, it could only be reached by foot. Its socio-economic and demographic situations are characterized by a medium population density (16/sq.km.), low educational attainment among the inhabitants, minimal infrastructure, poor health services and lack of adequate farming technology. Shifting cultivation and rubber

production are the main sources of livelihood. Islam has been the dominant religion for the past four centuries.

In general, there are four characteristics of the Minangkabau matrilineal system.<sup>7</sup> First, descent group formations are organized according to the female line, thus, all children belong to the mothers' clan. Second, a lineage possesses communally-owned properties such as agricultural land, ancestral treasures, and miscellaneous titles. Third, the residential patterns is uxorial, meaning the husband resides in his wife's kin house after marriage.<sup>8</sup> And fourth, authority within a lineage is in the hands of the *mamak* (eldest son), and not in the father.<sup>9</sup> The way of life in the matrilineal system is governed by *adat* or tradition.

### Matrilineal Social Organization and Political System

Traditionally, Nagari Silayang is organized into clans, hamlets, lineages and families, each of which is a unit of matrilineal groupings.<sup>10</sup> Five clans are spread out across 16 hamlets. Originally, a hamlet is inhabited by members of the same clan. Over time, people from different

clans settle in a single hamlet. A hamlet may also contain one to seven *barih* (lineage). The first lineage that settled is the unit in power because it inherited the *adat* title of hamlet chief. The lower stratum in the social organization is called *rumah*, which is socio-politically an extended family. Chiefs of the nagari, clans and hamlets form the nagari council. They are the traditional matrilineal elites.<sup>11</sup>

The social organization of clan, hamlet, lineage and *rumah* is reflected in the structure of the political system in the community. Silayang follows the political tradition of Datuk Katimangungan, a Minangkabau *adat* founder who upholds an autocratic and hierarchical system where a paramount leader is able to make the

In general, there are four characteristics of the Minangkabau matrilineal system. First, descent group formations are organized according to the female line, thus, all children belong to the mothers' clan. Second, a lineage communally-owned possesses properties such as agricultural land, ancestral treasures, and miscellaneous titles. Third, the residential patterns is uxorial, meaning the husband resides in his wife's kin house after marriage. And fourth, authority within a lineage is in the hands of the mamak (eldest son), and not in the father.

final decision on nagari matters. The traditional nagari is led by the *datuk baser*, the paramount leader and a descendant of the nagari founder. He is assisted by the *sutan jenal*, the treasurer and Bangkahulu, the wise man. He is expected to consult the core members of the nagari council before making a decision.

A clan, in turn, is headed by the *penghula*, and a hamlet is headed by the *datuk kampuang*. The position of a hamlet leader is headed matrilineally by a descendant of the hamlet's first settler. He runs the affairs concerning the *adat* and represents the hamlet in the council. He has an assistant or deputy head who also holds an *adat* title. A lineage is headed by a *mamak barib*. Under him is the *mamak rumah* who represents the extended family.

Aside from the traditional *adat* leaders, the other traditional structure in Nagari is composed of religious leaders. The *imam besar* leads all religious affairs at nagari level while the *imam kampung* takes care of similar affairs at the hamlet level. Both positions are ascribed matrilineally and monopolized by the descendants of the first settler of either the nagari or the hamlet. These leaders also enforce resources (land, forest and water) management through the adat, and exert political control over the area's resources, its land use and tenurial system.

### Matrilineal Land Tenure System

A land tenure system refers to the rightful holding of a piece of land by a person or group.<sup>12</sup> It gives access to and control over the land which is granted by custom or law.<sup>13</sup> Traditional classification of land in Nagari is based on its status, referred to who has control over the land. It does not follow that those who control the land also owns it. The lands in Nagari is classified into four types; the *ulayat nagari* (nagari domain), the *ulayat kampung* (hamlet domain), the *ulayat nagum* (lineage land) and privately controlled lands. The first three types share the characteristics of communal matrilineal lands. Unfortunately, no data on land sizes are available for each type as the Dutch and Indonesians failed to develop effective land registration. The Minangkabau people, for example, are clearly aware of land boundaries but are not concerned with their measurements.<sup>14</sup>

On the whole, land status in Silayang is regarded as *ulayat* nagari which is under the control of the *datuk besar*, the *ulayat* holder. His control over the nagari land is recognized by the people within and outside the nagari, and is manifested in the power he exercises in deciding matters pertaining to, among others, land tenure and land use.

During the nagari's formative years, however, parts of the nagari land were allotted to different groups of people in different hamlets. Each of these parts became a hamlet territory based on the agreement that the hamlet residents submit themselves to the power of the *datuk besar* as the *ulayat* holder. In this case, the *datuk besar* has delegated control over the lands to hamlet leaders who govern the land within the hamlet, although they themselves are controlled by the former.

Ulayat kalum as lineage lands is under the control of mamak barih (representative of the lineage). In turn, a family also controls part of ulayat kalum as privately controlled land.

A specific land status determines access to the land and permission from the *datuk besar* is needed to cultivate nagari land. The same is also true for hamlet land. The hamlet leader should be consulted to open a forest area within his territory for cultivation purposes. To cultivate lineage land, permission is likewise asked from the *mamak barih*.

### The Silayang Economy

Agriculture, specifically the practice of shifting cultivation and rubber cultivation are the main sources of livelihood.

### Shifting cultivation

The term *ladang*, as used by shifting cultivators in Silayang, refers to a farming system where plots are cleared by slashing and burning. Plots rather than crops are rotated. It is a traditional method of farming which has been practiced since the time the nagari was first inhabited. Plots are fallowed after one year of cultivation owing to a decrease in soil fertility and the uncontrollable growth of weeds.

Following UNESCO's typology, shifting cultivators in Silayang can be classified either as established or pioneer swiddeners. Established However, ... involvement with the market economy has yet to result in the disintegration of the matrilineal system. The matrilineal system has been able to accommodate economic change without affecting traditional land arrangements, women's status, the inheritance system, land tenure system and marriage patterns. These are the pillars of the matrilineal system and the deterioration thereof will result in the disintegration of the system.

swiddeners are shifting cultivators who live at lower elevations, preferring to farm the gentle slope and plateaus within one definite territory for long periods, in this case, the nagari or within a hamlet. In contrast, pioneer swiddeners are relatively mobile and clear substantial portions of forests each year.

Among the established swiddeners, plot rotation is done to continue the cultivation process without external inputs like fertilizer. Every year the plot is fallowed in order to restore its natural vegetation and fertility.<sup>15</sup> Traditionally, upland rice and other subsistence crops, like vegetables, corn, wheat, pumpkin, chili, cassava and sticky rice were

important *ladang* crops. Recently, however, some annual cash crops like peanut, chili, and *nilam* have been integrated into the shifting cultivation system and the market economy. Thus the shifting cultivation system practiced on communal land is also able to accommodate a market economy.

As a traditional method of farming system, *ladang* is very much ruled by *adat* and is performed with ceremony and ritual. Its farming cycle begins with a nagari council meeting. Following the Arabic calendar, the traditional nagari council holds a meeting once a year, within a month after harvesting upland rice of the previous cultivation year. This is attended by all hamlet leaders. The meeting is called and chaired by the *Datuk Besar*, who is the paramount *adat* leader of the nagari in his "palace." (The original palace is long gone.) In the meeting, the leaders discuss and evaluate the socio-economic and cultural situation of the previous year.

A usual item in the meeting is a decision on planting time i.e., the earliest time of the year when shifting cultivators are allowed to sow. A good planting time serves to minimize the risk of pest and disease. It also guides cultivators in determining when to start clearing the land. In most

instances, the earliest planting time is during *Muharam*, or first month of the Arabic calendar. Those who sow earlier than scheduled are subjected to *adat* sanction, or *hutang adat* (which literally means debt).

Decisions made in a nagari meeting are conveyed to the members through their respective hamlet leaders. A hamlet meeting takes place in the hamlet hall or in its praying house soon after the nagari meeting. Its agenda is similar to those of nagari meeting, but focus is on hamlet matters. The meeting is attended by hamlet members as well as other informal leaders, like religious leaders and lineage chiefs. After the meeting, the shifting cultivators prepare themselves for land clearing by first selecting which land is to be cleared.

The selection of the appropriate *ladang* field or *banjar*, depends on its land status. On the hamlet land, a *banjar* is selected by a hamlet leader who directs members to cultivate the appropriate *banjar*. For lineage land, which is under the control of lineage chief, the selection of *banjar* depends on the conditions set by a specific lineage. However, the hamlet leader still controls the planting schedule set in nagari meeting. If not enough cultivators from one lineage are available, shifting cultivators from different lineages, or even from different hamlets, may be invited to join a banjar to reduce farming risks.

On the selected banjar, hamlet members mark the boundaries for their shifting cultivation plot, the law of "first come first served" operates so that those marked first usually get to select the best plot in terms of soil fertility, water availability, and the slope.

Farming is done in the same manner elsewhere. It starts with land clearing. Once a plot is cleaned, seeds are planted using a dibble stick. Sowing must be completed in one day to allow the rice to sprout and mature at the same time. This usually requires the help of other cultivators. Through reciprocity, the culture of mutual help called *golong*-*golong* evolved. This involves some 10 to 50 farmers working together on the same plot. The owner of the particular plot being cultivated is responsible for the snacks and drinks while the meals are prepared by the participating cultivators themselves.

Seven local upland rice varieties, which mature in six months, are found in the cultivation site. Other crops grown simultaneously with rice are corn, vegetables, chili pepper, sorghum and peanut. Weeding is done by women using a small hoe called *tajak*. The duration and frequency of weeding vary according to the type of forest selected for cultivation. A *ladang* in *rimbo* (newly-opened forest) has less weeds but a *ladang* in the sosok (very short fallow) needs to be weeded three times before it can be of use. Harvesting is done using the *ani-ani*, a small palm-held reaping knife. Rice is then threshed (by foot) by men and winnowed by women. The cutting of rice stalks is done by women and children. The rice stalks are then collected and stored.

To date, there has been a marked decrease in upland rice production which fails to cover half a year's consumption requirement. This is because there has been no technological improvement in the *ladang* system. Such decline has caused the people to rely on the external market for their rice supply and engage in cash-crop farming.

### **Rubber Production**

Over time, communal land with subsistence-oriented shifting cultivation gave way to a sedentary farming system devoted to perennial cash crops, in this particular case, rubber (Hevea Braziliensis), that serve the world market. Rubber is the natural choice since it requires virtually no care and readily conforms to the farmers' circumstances.<sup>16</sup> It even has market stability in terms of demand and value. It is no surprise then that farmers are more interested in growing rubber than any other crop. Rubber cultivation covers 2,070 has. or 94 percent of the total area planted to cash crops. The rest is devoted to cinnamon, coffee and coconut.

Rubber was first introduced by the Dutch in the beginning of the century but it was only in the last three decades when cultivation and production became widespread. Unlike the shifting cultivation system, which is a community affair, rubber cultivation is an individual enterprise. Nowadays, households in Nagari Silayang have an average of 1.22 has. planted to rubber. However, rubber trees in Silayang are characterized by low productivity and poor maintenance. Production varies from 1.5 to 20 kilos per household per day with an average of about 8.66 kgs. per day. With this rate, rubber production posts a contribution of almost 41 percent to household incomes. Rubber collectors, serving as key marketing agents, are found in the village. Farmers sell their latex to these collectors

who, in turn, sell the rubber in central market in Rao sub district. From Rao, the rubber is sold to the processors in Padang, Medan in north Sumatra, or to Pakanbaru in Riau province. Rubber is then exported from these ports.

By producing rubber, the community has integrated itself with the market economy. This involved the conversion of shifting cultivation lands into rubber plantations. In 1972, the total area used in the nagari for cultivation was 310 has. This number rose to 2,970 has. by 1995, a tenfold increase. To date, 48 out of a total 158 shifting cultivation fields have been converted for rubber cultivation. This reallocation of land use represents, in part, a decline in the role of shifting cultivation as a means of production.

### Silayang and the Market Economy

Considering the changes in the Minangkabau economy, it is therefore deemed important to understand how these have affected the traditional matrilineal system.

According to Gough, there are several ways the integration into an expanding market economy could bring about the breakdown of the matrilineal system. Cash-crop farming can generate wealth above subsistence. The individual wages and cumulative wealth of the men run counter to the traditional hierarchy of political status. Also, the migration changes matrilocal residence among the migrants. As a wage earner, the father acquires new rights over his children, resulting in the patrilineal inheritance and patrilocal resident that replace matrilineal ones.<sup>17</sup> The change in dwelling group pattern results in the decline of the solidarity of

the maximal lineage and an overall decline in the observance of exogamy of the clan and of traditional sub-clan activities.<sup>18</sup>

However, as the Silayang case shows, involvement with the market economy has yet to result in the disintegration of the matrilineal system as Gough suggested. The matrilineal system has been able to accommodate economic change without affecting traditional land arrangements, ■ The matrilineal system provides distinct advantages for women. They enjoy high social status in the family because they are heirs of the property, including land planted to rubber. women's status, the inheritance system, land tenure system and marriage patterns. These are the pillars of the matrilineal system and the deterioration thereof will result in the disintegration of the system.

The lineage lands, which in the past were used solely for shifting cultivation, accommodated economic change by simply introducing rubber seedlings to the communal shifting cultivation lands, a side task during weeding upland rice. Growing tree crops on communal land prolongs access to the plot until the duration of a tree's life. However, the land status remains communal land. This can be seen in such cases as selling a plot planted to rubber.

In Silayang, a plot planted to rubber can be sold but the procedures of the sale is regulated by custom. Given first priority are lineage members, then hamlet members, and lastly, nagari members. No sale is allowed to non-community members. Before selling a plot, a family should defend themselves before the matrilineal elite by means of reason. If the argument is acceptable the sale is allowed. This shows that in general the lands are still controlled by the traditional elite such as *mamak barih, penghulu,* or the *datuk kampung*.

The matrilineal system provides distinct advantages for women. They enjoy high social status in the family because they are heirs of the property, including land planted to rubber. Among Minangkabau, inheritable

Despite its involvement in market economy, Silayang's economy is still land based. Since the economy is land based and the land is still matrilineally inherited, the matrilineal system therefore persists. This, contrary to general understanding, allows the matrilineal system to remain stable amid economic change. land or property falls into two categories, pusako tinggi and pusako randah. Pusako tinggi is land inherited by a sister's children (kemanakan) through the female line, while pusako randah is land inherited by one's own children (preferably female). Pusako tinggi are usually plots of ancestral land while pusako randah are lands obtained either by purchase or by clearing. After two generations, however, the obtained land becomes ancestral land and is inherited by a sister's children. A child (usually female) can also obtain a portion of the father's ancestral land as hibah (gift) after consulting all concerned parties.

A new plot planted to rubber can be regarded as obtained property if legitimate children, male or female, can inherit it. A son of the second generation can only pass the yield of this plot for his children during his lifetime. When he dies, his children no longer have access to the yield except through *hibah*. In turn, the third generation considers the land and the trees as ancestral property which only female children can inherit. This finding seems to run counter to the observation that economic change in Minangkabau has allowed sons to inherit whole personal property.<sup>19</sup>

Marriage patterns in Silayang, like other Minangkabau communities, still follow the rule of clan exogamy and nagari endogamy, with clan endogamy strictly prohibited <sup>20</sup> and nagari exogamy neither prohibited nor preferred. This pattern still prevails among 70 percent of the families practicing nagari endogamy with clan exogamy. The rest practice nagari exogamy, either as a bride (10 percent) or groom (15 percent). Moreover, none of the families has a husband and wife who are both nagari outsiders. Uxorilocality follows this marriage pattern. The husband stays in his wife's house, cultivating the land of his wife and tapping wife-inherited rubber. And, as a very basic aspect of matrilineal descent group system in nagari Silayang, the children belong to their mothers' clan.

### Why the Matrilineal System Endures

The assumption that the matrilineal system is likely to weaken when the community opens itself to the larger market economy loses its hold when juxtaposed with what is happening among the Minangkabau people. What the previous section has shown is the possibility that a traditional institution can remain intact despite undergoing economic transformation. To understand such a phenomenon it is important to ask how this traditional institution survived through the years.

As earlier mentioned, 86 percent of the nagari is still covered by forest that can accommodate population growth. Therefore, the opening of farming areas and shifting cultivation will continue. Under this system matrilineal authority will persist. For as long as there is still land for matrilineal *adat*, there will be room for matrilineal systems to thrive.

Despite its involvement in market economy, Silayang's economy is still land based. Since the economy is land based and the land is still matrilineally inherited, the matrilineal system therefore persists. This, contrary to general understanding, allows the matrilineal system to remain stable amid economic change.

Also the Dutch colonial government's weak control over Minangkabau land and the high proportion of emigrants reduced, to some extent, the pressure of social change.<sup>21</sup> It was also suggested that there was a strong notion of ethnic identity among the tribes. Minangkabauneses believe that they are a distinct ethnic group and this pride helped to perpetuate the matrilineal system. The extent of protecting this identity is likewise visible in the way the tribe limits or restricts land transactions with outsiders.<sup>22</sup>

A lesson learned from the Minangkabau case is that sociological generalizations are not sufficient to explain cross-cultural social phenomenon and are at a disadvantage in the sense that they fail to account for the exceptions. Aside from focusing on what changes occurred in social life due to external influences, it is also important to see what remains unchanged. This is a challenge for young scholars in the Southeast Asian region. \*

## Endnotes

- 1 Kathleen Gough, "Descent Groups of Settled and Mobile Cultivators," *in Matrilineal Kinship*, Edited by David M. Schneider and Kathleen Gough (Berkeley: University of California Press, 1962).
- 2 Gough
- 3 Tsuyoshi Kato, *Matriliny and Migration: Evolving Minangkabau Traditions in Indonesia* (Ithaca: Cornell University Press, 1987).
- 4 Susane, Women's Access to Land in a Matrilineal Society: The Minangkabau of West Sumatra (New Delhi, 1987).
- 5 Akira Oki, Social Change in the West Sumatran Village: 1908-1945, Dissertation, Australian National University at Canbera, 1977.
- 6 Gura
- 7 Kato
- 8 Marvin Harris, *Cultural Anthropology (2nd ed.)* (New York: Harper and Row Publishers, Inc., 1987).
- 9 Kato
- 10 Kato
- 11 Imran Manan, A Traditional Elite in Continuity and Change: The Chiefs of the Matrilineal Lineages of the Minangkabau of West Sumatra, Indonesia, Ph.D. Dissertation, University of Illinois at Urbana-Champaign, 1984.
- 12 Charlotte-Seymor Smith, Macmillan Dictionary of Anthropology (Basingstoke: The Macmillan Press Ltd., 1986).
- 13 Coen Reijntjes; Bertus Haverkort; and Ann Waters Bayer, *Farming for the Future*. Leusden: Macmillan, 1992.
- 14 Manan
- 15 Geert Balzer et. al., *Shifting Cultivation in West Pasaman Sumatra* (Berlin: Centre for Advanced Training in Agricultural Development, Institute of Socio-economics of Agriculture Development Technical, University of Berlin, 1987).
- 16 Carol J. Colfer, Dan W. Gill and Fahmuddin Agus, "An Indigenous Agriculture Model from West Sumatra: A Source of Scientific Insight," *Agricultural Systems*, 1988.
- 17 Gough
- 18 Fortes
- 19 Gough
- 20 Kato
- 21 Oki
- 22 Kato

### References

- Balzer, Geert et al. Shifting Cultivation in West Pasaman Sumatra. Berlin: Centre for Advanced Training in Agricultural Development, Institute of Socio-economics of Agriculture Development Technical University of Berlin, 1987.
- Colfer, Carol J. Pierce; Gill, Dan W.; Agus, Fahmuddin. "An Indigenous Agriculture Model from West Sumatra: A Source of Scientific Insight." Agricultural Systems 26 (1988) pp.191-209.
- Gough, Kathleen. "Descent Groups of Settled and Mobile Cultivators." *Matrilineal Kinship.* Edited by David M. Schneider and Kathleen Gough. Berkeley: University of California Press, 1962.
- \_\_\_\_\_\_. "The Modern Disintegration of Matrilineal Descent Groups." *In Matrilineal Kinship.* Edited by David M. Schneider and Kathleen Gough. Berkeley: University of California Press, 1962.
- Gura, Susane. Women's Access to Land in a Matrilineal Society, The Minangkabu of West Sumatra. New Delhi, 1987 (Mimeograph).
- Hamka. "Adat Minangkabau dan Harta Pusakanya" (Minangkabau's adat and its property relation). Menggali Hukum Tanah dan Hukum Waris Minangkabau (an appreciation of land law and inheritance rule in Minangkabau). Edited by Mochtar Naim. Padang: Center for Minangkabau Studies, 1968.
- Harris, Marvin. Cultural Anthropology (2nd ed.). New York: Harper and Row, Publishers, Inc., 1987.
- Kato, Tsuyoshi. Matriliny and Migration: Evolving Minangkabau Traditions in Indonesia. Ithaca: Cornell University Press, 1987.
- Manan, Imran. A Traditional Elite in Continuity and Change: The Chiefs of the Matrilineal Lineages of the Minangkabau of West Sumatra, Indonesia. Ph.D. Dissertation, University of Illinois at Urbana-Champaign, 1984.
- Maretin, J.V. Disappearance of Matriclan Survivals in Minangkabau Family and Marriage Relations. Bijdragen tot de Taal Land en Volkenkunde (117) (1961) pp.168-195.
- Oki, Akira. Social Change in the West Sumatran Village: 1908-1945. Dissertation, Australian National University at Canbera, 1977.
- Osmet. Village Reorganization and Irrigation Management: A Study of Two Irrigation Systems in Kecamatan Tilatang Kamang, Kabupaten Agam, West Sumatra, Indonesia. MS Thesis, Ateneo de Manila University, 1992.
- Poewe, Karla O. Matrilineal Ideology Male-Female Dynamics in Luapula, Zambia. San Francisco: Academic Press, 1981.
- Reijntjes, Coen; Haverkort, Bertus; and Bayer, Ann Waters. *Farming for the Future*. Leusden: Macmillan, 1992.
- Schneider, David M. "The Distinctive Features of Matrilineal Descent Groups." Matrilineal Kinship. Edited by David M. Schneider and Kathleen Gough. Berkeley: University of California Press, 1962.
- Setyamidjaja, Djoehana. Karet, Budidaya dan Pengolahan (Rubber, Production and Processing). Yogyakarta: Penerbit Kanisius, 1993.
- Smith, Charlotte-Seymor. Macmillan Dictionary of Anthropology. Basingstoke: The Macmillan Press Ltd., 1986.
- UNESCO. *Swidden Cultivation in Asia.* Bangkok: Unesco Regional Office for Education in Asia and The Pacific, 1983.
- Westenenk, L. C. De Minangkabausche Nagari (Indonesian version). Translated by Mahyudin Saleh, S.H. Padang: Penerbitan dan Bursa Buku Fakultas Hukum dan Pengabdian Masyarakat Universitas Andalas, 1981.