

Javanese Wisdom, Mennonite Faith, and the Green Revolution: The Farmers of Margorejo

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Religion and Environmental History in Java

In 1874 Sollewijn Gelpke gave a report to the Dutch-Indie colonial government about the importance of knowledge of belief, myth, and Javanese religiosity in order to understand agricultural conditions in Java.¹ He concluded that there was inseparable connection between religion and farming activities in Java. From the colonial perspective, the rice cultivation problem in Java was caused by the lack of knowledge regarding farming techniques and the traditional beliefs which influenced agricultural. This close connectivity between religiosity and nature warns us to consider seriously the religious aspects in the study of environmental history in Java.

Environmental history itself could be described as an attempt to elucidate the interaction between humans and nature in the past that is, the way human societies have affected their environment and vice versa.² Of Donald Worster's ideas on environmental histo-

ry,³ the more prominent aspects in environmental history in Java or Indonesia relate to the very concept of nature⁴ and to socioeconomic interaction within the environment.⁵ Those themes were dominant in *Paper Landscapes: Explorations in the Environmental History of Indonesia*,⁶ a work which explored themes of agriculture, forest, demography, land use, and sustainability. But until recently, research focused on religiosity in environmental history in Indonesia, specifically in Java, is still sparse. Not only is it missing in Indonesia, but Joachim Radkau is also surprised that “religion and environmentalism” as a subject of research has made little headway, even though religious roots in the environmental movement are evident.⁷

This dearth of scholarship for Java is ironic because for Javanese people nature and religiosity are inseparable. Clifford Greetz’s Javanese-based definition of religion, as “a system of symbols which acts to establish powerful, pervasive, and long-lasting moods and motivations in men,”⁸ means that religion is a system of beliefs, values, and interpretations of reality that has become embedded in society.⁹ The importance of religion in the life of Javanese people is also presented by Niels Mulders, who has said that religion for the Javanese is “the conviction of the essential unity of all Existence,” one that “makes life itself a religious experience.” He adds that “in this conception it is not possible to separate the religious from the non-religious, the natural from the supernatural, the here and now from the beyond and timeless.”¹⁰ Therefore it is not possible to explore environmental history in Javanese society without considering the religiosity of society.

The inseparability of religion in Javanese culture resulted from the long history of cultural interaction which came and gradually embedded Javanese culture and religiosity. Denis Lombard, in his phenomenal work, *Nusa Jawa: Silang Budaya* (Le Carrefour Javanais) describes the dynamic history of Java as interacting with and being shaped by three “streams” of the sociocultural, namely the Indian (or Hindu) stream, the Islamic and Chinese streams within the Asian trade network, and finally, the Western stream, via the Dutch colonial authority.¹¹ Although these cultural streams could be divided chronologically, in the reality, over more than a two hundred-year period they intersected with each other and, in creative ways, produced a unique model of culture and society in Java.¹² In this interaction there was continuity as well as discontinuity, adaptation but also rejection, and sometimes creatively syncretic. This dynamic resulted in various models of religiosity in Java, even within the same religions.

Clifford Geertz's *Religion of Java* devises three models of religiosity in Java, each linked to a particular social structure, namely *abangan* (linking Islam and Javanese culture) practiced at the village level, *Santri* (puritan Islam) identified with traders within the market, and *priyayi*, identified with the urban or by the bureaucrat. Two models of religiosity are also found in Christianity in Java. In his work, Lawrence Yoder explores two forms and expressions of Christianity in Central Java; one is the "Dutch" form of Christianity, which rejected local culture, and other is the "Javanese" or syncretic Christianity, which adapted Javanese culture and world view.¹³

All religious varieties in Javanese culture affect people in their interaction with nature and the environment. This process of interaction is reciprocal: on the one side, the form of people's religiosity will influence their attitude and action to their environment, but on the other, changes in the environment, due to nature, technology, or modernity, for example, also influence people's religiosity. This paper focuses on the Margorejo Mennonite farming community in Northern Central Java. Even though they live as a homogeneous community of Mennonite farmers, among its inhabitants history has introduced a variety of religious models and views on the environment.¹⁴

The Margorejo Mennonite farming community has changed over time, both in farming practices and in beliefs or values connected to farming activities. Originally these values were rooted in traditional Javanese farming culture, that is, in local wisdom and beliefs. Later they were influenced by the Dutch Mennonite theology introduced by Pieter Antoni (P.A.) Jansz who rejected local wisdom and beliefs because he saw them as contradicting true Christian belief. By the end of 1960s they experienced another radical change, this time during the Green Revolution advanced by President Suharto who wanted to increase farming productivity through mechanization and chemicalization. Thus, Margorejo's agriculture, changed dramatically from the nineteenth century, when traditional Javanese practices and beliefs held sway, through to the introduction of Dutch Mennonite theology, and then in its encounter with modernity in the form of the Green Revolution. My paper will conclude by arguing that the process of change that occurred in this farm community occurred creatively, through a dialectical process and not always in a linear or predictable way.

This article is based on interviews with twenty farmers in Margorejo in 2013 and 2014. All of the interviewees live in Margorejo and are members of the Gereja Injili di Tanah Jawa¹⁵ (GITJ), a

Javanese Mennonite church in Margorejo.¹⁶ These interviews are the primary resource in this research because of a lack of documentary or agricultural archives in Margorejo. The main information about the history of Margorejo is based on Yoder and Sukoco's book on the history of the GITJ and a report of a meeting by the Mennonite Mission Board in Amsterdam which discusses the decision to open a Christian village of Margorejo.

Description of Margorejo

Margorejo is a small farming hamlet which is a part of the larger Tegalombo village. It is located in Tayu district, Pati regency, in the northern part of Java, on the edge of the Java Sea. The population of Margorejo consists mostly of farmers. Most are Christians who identify with the local Mennonite GITJ denomination; in 2010 they numbered about 675 families. The agricultural area in Margorejo is about seven hundred to eight hundred hectares (or just under two thousand acres). Not all farmers in Margorejo own farming land. Those who do not own land rent land and cultivate other people's land through a system of profit sharing. Agriculture in Margorejo has always depended on rain and thus there are three types of farm land in Margorejo: the dry, the mid-range, and wet land areas. In the dry area, people plant rice once a year, usually in November, and harvest it in March. After that they plant secondary plants, such as cassavas, beans, watermelons and cucumbers. on the mid-range land they plant rice twice a year, while the wet land can be planted with rice as many as three times a year.

Historically, Margorejo was a mission farm founded by P.A. Jansz, the son of Pieter Jansz, the *Doopsgezinde* missionary from the Netherlands, in the 1880s. The mission method of P.A. Jansz was to create a Christian village and encourage local Javanese to convert to Christianity and then provide for them a Christian milieu in which to live.¹⁷ In 1881 P.A. Jansz requested a permit from the Dutch government to rent two hundred *bau* (or one hundred forty hectares) for a period of seventy-five years and a year later the permit was issued.¹⁸ Jansz named the land "Margorejo", meaning, the "prosperous way." After the end of the seventy-five-year lease agreement in 1957, the land was returned to the Indonesian government. But the people were still allowed to cultivate the land as usual, even though they could not own it. In 1960 the Indonesian Government issued a Land Reform Law with policies regulating the division of farming land, the aim of which was to distribute the

land equally for the people. This also affected Margorejo farmers for they could now apply to own land, as every family could have an estimated three hundred to five hundred square meters, or between one third to one half of a hectare.¹⁹

Belief and Practice of Traditional Javanese Farmer in the Nineteenth Century

Traditional Javanese farmers lived in village communities that held strongly to traditional values and beliefs about life, including ideas on farming. The agricultural context was shaped by the mythologies they believed. The famous myth that set the context of life for the farmers in Java in the nineteenth century was the myth of *Dewi Sri*, the goddess of rice who gives blessings to the community.²⁰ According to the story, the rice in the wet areas came from the incarnation of *Dewi Sri*; rice in the dry land area came from *Retna Dumilah*. The story underscored the central importance of rice, the plant of life that provided a connection between the human and the divine, for Javanese people.²¹ Javanese farmers therefore usually use the names of *Dewi Sri* in prayers and rituals for good rice harvests. The evil elements in farming – like tigers, rhinoceroses, deer, monkeys, mice, and insects – on the other hand, are often explained as manifestations of the evil spirits who had been chased away by the supernatural whip of the gods.

Another traditional belief is related to time and order in the cosmos. In general the traditional Javanese community understood that time harmoniously linked nature and humans. Humans, therefore, were taught that they needed to pay attention to ‘time’ so that the harmony with the cosmos could be maintained. They believed that there was a ‘good time’ which brought about good luck and a ‘bad time,’ linked to bad luck, which should be avoided. The numerological system of the time cycle, *petungan*, helped people avoid disharmony with the universe.²² During cultivation, time was understood in cyclical terms of eight-year cycles, which are called the *windu*. Each year had its own rule as to the starting day for field work, what kind of field work would be undertaken, how to pray, what meals to provide for offerings (a meal that was eaten when the work was begun), what pests to attack, and how to overcome those pests. The Javanese farmers usually took note of the characteristics of each year in their cultivation practices. This pattern was also believed to be cyclical, allowing farmers to prepare for what would happen during the year.

In farming practice, the cultivation process was simple, very dependent on nature, and done by using traditional methods. All of the farming processes – from cultivating, seeding preparation, planting and harvesting – were done together through a system of sharing or mutuality. All cultivation processes were guided by an order or season of time called *pranata mangsa* or *tata mangsa* (order of season), a calendar of planting in Javanese culture, known from generation to generation, by observing natural events following traditional astronomy.²³

Mennonite Faith and Its influence on the Beliefs of the Margorejo Mennonite Farmer

The foundation of this traditional system was challenged by the Dutch missionaries. When P.A. Jansz established Margorejo, local people still practiced the beliefs described above. But Margorejo was a Christian village based on a mission method designed by P.A.'s father, Pieter Jansz, the purpose of which was evangelism. Therefore, all people who wanted to join Margorejo were required to convert to Christianity and then live by the Christian standard of morality. For this reason, P.A. Jansz drew up a detailed list of strict rules, meant as a Christian law of life, in Margorejo.²⁴ Residents were required to demonstrate good behavior and obey all rules related to Christian morals. People who disobeyed or committed a crime were required to leave Margorejo and their children were disenfranchised from obtaining their share of land in the community.²⁵

Most of the rules mandated related to personal morality. They restricted the ownership or sale of opium, alcohol, and other things restricted by the government. They forbade adultery and polygamy, gambling and sensual dancing (*tayub*). They also restricted earning interest. They disallowed work on Sunday and obligated farmers to attend worship services in church. And they required that children be brought to school and educated in Christian values.

Even though P.A. Jansz's main focus was evangelism, there were some rules that also concerned agriculture, especially those regarding land use. Every farmer was allocated one *bau*, or 0.8 hectares (about two acres), of land and each was able to add to their land by renting land for f5 per *bau*. But no farmer was allowed to have more than a seven-*bau* field. The aim was for these rules to provide a degree of equality among the people of Margore-

jo. Another aim was for everyone to farm; indeed those who wished to live in Margorejo were required to cultivate their fields. Farmers who received an allotment of land in Margorejo but who did not cultivate the land for a period of two years had their rights to the land taken away.²⁶

P.A. Jansz was also concerned that all of Margorejo's people would feel socially responsible for common needs and realize a spirit of 'brotherhood.' This sense of responsibility was conveyed by rules which mandated that after the sixth year of occupying the land, every farmer must make an offering to the church of as much as 10 percent of their farm produce, which would be used to maintain the church and school buildings, and to help the sick and the poor. Moreover at every harvest time all Margorejo farmers were invited to take part of their crop and contribute it to the church's rice barn. This stockpile was used by the community in the event of natural crises.²⁷

One significant change in the life of Margorejo farmers, one which made them different from surrounding farmers, was with regard to religious practices which related to agriculture. As noted above, traditional Javanese farmers were very familiar with supernatural powers that affected farming activity; they employed rituals, offerings and mantras (magic spells) and they counted time, believing it to affect both agricultural success and failure. But P.A. Jansz intended Margorejo farmers to become newly born Christians who no longer practiced the old life and beliefs. Thus, one of Jansz's rules was that all Margorejo people must "really be ready to avoid any idolatry and practice such as attending a sacred place, to practice fetish, relate to satanic power and natural gods, and follow the horoscope of destiny, count days, and other practices which violated Christian belief."²⁸ This set of rules thus contained restrictions on two important things strongly related to the traditional Javanese farmer: one related to the belief in the supernatural power; and the other was the counting of time that had influenced traditional agriculture.

These rules affected the Margorejo farmer, especially in practices and beliefs that were familiar to the traditional Javanese farmer. Certain rituals and mantras that were related to agricultural activities ceased in Margorejo. Traditionally, farmers had made a *slametan*, that is, a Javanese salvation ritual, when they started to cultivate the land. In the *slametan*, food was brought to the field, prayed over by an older spiritual person, a *dukun* or shaman, and then eaten by all people who worked in the field. Moreover the *dukun* would make an offering and put it in some

sacred place as an offering to the agricultural gods who would bless and protect all of the cultivation activities. Also the harvest festival that commonly had been celebrated with the traditional dance of *tayub* was no longer celebrated in Margorejo; not only was it deemed to possess a mystical element, it was also seen as tending to sensuality.

Nevertheless, some traditional Javanese beliefs persisted among Margorejo farmers. One related to the idea of a 'good time' or a 'bad time' for farming activities. This belief was still practiced because it could be done in a clandestine way, seemingly without violating village rules. Besides that, not all of Margorejo's residents really followed all of Jansz's rules. In his reports, Jansz, for example, mentioned some criminal cases in Margorejo, including murder and adultery.²⁹

There were thus two groups in Margorejo, namely the so-called 'Christian people' who did not practice the Christian faith as outlined by Jansz, and then the members of the 'church congregation' who adhered seriously to Jansz's Christian codes. It could be concluded that traditional Javanese farmers who joined the Margorejo community and became Mennonites had altered their agricultural life, ending the mystical rituals or spiritualism. But some beliefs about good and bad agricultural time and some farming practices or methods were still held by many of the farmers.

In general Margorejo farmers who converted to Christianity held the following beliefs: a belief in God only; a rejection of belief in traditional gods and mystical elements in agriculture; a denial of the existence of 'good timing' in agriculture and an insistence that all time is God's alone; the rejection of ritual practices; and social solidarity arising from the 10 percent tithe of farming production. However, in relation to the farming practice itself, some old ways continued, including the following: farming in traditional ways, using the Javanese calendar as guidance in agriculture, and using fertilizer from nature.

The Green Revolution and the Margorejo Mennonite Farmer

Another radical change came to Margorejo with the onset of the Green Revolution at the end of the 1960s. It was a revolution in the modernization of agriculture and introduced new technologies, especially the invention of high-yielding varieties of rice. The aim of the Green Revolution was to improve agricultural productivity, especially in rice crops, in order for Indonesia to reach self-

sufficiency in food. The background of the Green Revolution in Indonesia lay in a food crisis arising from an imbalance with population growth.³⁰ Unstable political, social and economic circumstances following Independence in 1945 made the food crisis especially serious. In 1950, during the Soekarno reign, Indonesia imported one and a half millions tonnes of rice, about 10 percent of the total of the nation's rice consumption. The government introduced many policies to improve agricultural production and reached the target of self-sufficiency in rice by 1956. It did so by introducing policies to provide for chemical fertilizer, high yielding seeds, and credit for the farmers wishing to borrow money. These policies, however, were not ultimately successful. The pinnacle of the food crisis occurred in 1965, a year that ended with a one-thousand-to-one devaluation of the *Rupiah* (Rp.) and an inflation rate of 600 percent per year. In politics, the leadership was transferred to General Soeharto who started the New Order regime in Indonesia.

The main focus of the new regime was to build the economy, especially to fulfill food requirements and food self-sufficiency through agricultural development. That objective was outlined in the first policy paper, the First New Order Five-Year Development Plan (*Repelita I*), covering the years from 1969 to 1974. The purpose of that policy was to modernize traditional agriculture by employing new knowledge and technology. Agriculture was to be reinvented with the adoption of new varieties of rice from other countries like the Philippines, Thailand and Malaysia. The idea was to introduce these changes to Indonesia gradually in the form of *Bimbingan Masyarakat* (BIMAS or Massal Guidance), that is, a village-based program of farming socialization. The program also stressed profitable inputs and credit for fertilizer and pesticides, each of which helped to increase yields and production.

In general the Green Revolution policy in Indonesia included several steps. The first step was the intensification of agriculture, which was an effort to increase the agricultural production through five farming initiatives, the *panca usaha tani*,³¹ namely: 1) the use of good seeds known as 'Excellent Varieties'; 2) the use of chemical fertilizer; 3) professionally designed irrigation; 4) the use of pesticides for intense eradication of pests; 5) the technique of regular planting. The other steps in the Green Revolution involved a number of policies: the Extension of Agriculture, which was mostly an effort to increase the food production area by opening up new areas of cultivated land; the Diversification of Agriculture, an effort to increase agriculture production by planting a variety of commodi-

ties; and the Rehabilitation of Agriculture, the idea of increasing agriculture production by rehabilitating cultivated land that had deteriorated in quality.

To support the Green Revolution, the government invested heavily in rural infrastructure like irrigation canals, water supplies, bridges, roads, and major highways. Other programs for primary schools, health centers, markets, and reforestation were also established. In 1978, programs to build up the local infrastructure amounted to 12 percent of the National Development Budget.³² Farming tools were funded and tractors imported and then distributed to farmers with subsidized credit through the Bank Rakyat Indonesia (National Bank) which became a rural bank specializing in microfinance.³³ Rural business entity units were built in each district as institutions to distribute farming infrastructure and to collect rice. To market the rice, the government created the National Logistic Institution and with local offices charged with the task of buying the rice from farmers with the use of a price floor system. The government thus tried its best to modernize traditional agriculture.

After several years, agricultural production had significantly improved. During the 1970s and 1980s the agricultural portion of the Gross Domestic Product (GDP) grew by more than 3 percent per year.³⁴ The climax was in 1984, as for the first time Indonesia succeeded in attaining self-sufficiency in rice. But, aside from the seeming success story of the Green Revolution, there was also a negative impact, including decreased farm income due to high dependency on chemical inputs, damage to the environment, and an increased gap between the rich and poor.³⁵ Moreover, the success of achieving self-sufficiency in rice was short-lived and by the 1990s, Indonesia once again began importing rice to meet its national rice demand.

The Green Revolution radically changed Indonesia's farming system, including agriculture at Margorejo. In my interviews with farmers, they readily provided their opinions and feelings on the significance of change over the past seventy years, even as they did not fully recognize just what had happened.

Regarding new rice varieties, before the Green Revolution was introduced at the end of 1960s, the farmers in Margorejo knew only rice varieties with high stalks and those which were planted once every six months. Rice varieties like *Bengawan Solo* and *Dolo Rante* could only be harvested twice a year. From 1961 to 1963, drought in the Margorejo area caused agricultural production to decrease and the community experienced a difficult food crisis.

After 1970, the farmers started to use new rice varieties, such as PB, IR, and C4. These new varieties were shorter in stature and the time between planting and harvesting was only three months. As a result, farmers could harvest as many as three times a year, meaning that production rose significantly.

The new rice varieties also changed the harvesting method for farmers. In the past, when they planted old rice varieties with high stalks, the harvesting was done by cutting the rice stalk at its top using a tool called *ani-ani*, a hand-held harvesting knife for cutting rice panicles. It was used to prevent grain from falling off the panicles. The farmers would cut the rice panicles one by one, so harvesting took more time. After the panicles of rice had been cut, they then had to be tied in bundles of uniform size, after which the owner of the field or his son carried it home on a structure of sticks. Those rice panicles then were stored in a barn. The stalks and residue of the rice plants were left idle in the fields for some time and then they were cut and incorporated into the soil. Thus, in a single action, the soil was prepared for the next seeding and the rice stalks became fertilizer for the soil.

This method has since disappeared. Harvesting today is done by the *dos* method, in which rice stalks are cut at the bottom of the plant using sickles. Then the rice stalk is shredded by a husking machine which separates the grains of rice from the stalk. The separated grain then is put into sacks and taken home, while the rice stalks which have been cut can be used as cattle feed or burnt in the field so that the field can be planted again as fast as possible. This matter later affects the level of soil fertility.

This new harvest method has had the effect of changing several things, among them, the shift of employment from women to men. When using the *ani-ani* in harvest, the harvesters were women. It also meant that a high number of employees were required to work during the harvest. The harvest of a single hectare of paddy field rice could take about thirty to forty women working between the hours of seven o'clock to eleven o'clock in the morning. But since the introduction of the *dos* method, the harvest has been done by men using sickles and the number of workers required has declined to only about five to eight.

Second, there have been changes in the wage system. In the old method, harvesting was done corporately, bringing farmers to work together in the *gotong-royong* (mutual cooperation), a work unit that included members of the extended family and neighbors, or including people who did not own fields but wanted to harvest in order to earn a share of the rice. The wages of the harvest were

determined by the amount of rice plants each person cut. The total of the profit share was also based on the degree of closeness of kinship or family relationship, which was then divided into several levels.³⁶ In the new *dos* system, the harvest is handed over to a certain group of people which are paid a certain agreed-upon price.³⁷ This job is additional work for the male farmers. Even in the harvest season, they will work as an employee or harvester in the *dos* systems for farmers in other villages, sometimes even in other districts.

A third change is the utilization of a de-husking machine or a *seleb*. In the old method of harvesting, the rice was cut at the panicles so that the grain did not fall out and then it was tied up and taken home to be stored in the barn. The rice seed was then de-husked by pounding the kernels with a pestle, which was done by women. In ancient times the women pounded the rice at dawn together before they cooked rice for their families. Their work was a sign of daybreak. Sometimes poor women of the village would come and offer their service of de-husking and would be paid with some portion of the rice which had they de-husked. A final change in switching to the *dos* system is that the rice is threshed in the fields and then put in bags and taken home. The rice is then dried in the hot sun and after drying, it is ready for the de-husking or *seleb* process. The *seleb* machine itself emerged around the 1980s. Now more farmers store de-husked rice in barns. As a result the church barn in Margorejo that was originally used in drought season is not used anymore; in fact it has been sold.

Chemicals and Technology

Another set of changes introduced by the Green Revolution involves the use of chemical fertilizers and pesticides and new technologies. In the past, farmers did not use chemical fertilizer. Even when the government introduced chemical fertilizer in 1970, many people rejected it. The process of fertilization was done by the farmers only organically with rice straw incorporated into the soil. The farmers of Margorejo feel the rice fields of the past were more naturally fertile than they are today and easier to manage. After they began using chemical fertilizer, it seemed the soil became less fertile. For example, in the past, that is, at the beginning of the 1970s, it was enough to use one hundred kilograms of "urea" fertilizer on a hectare of land once for each plantation time. Now one hectare of land needs five hundred kilograms of chemical fertilizer

for one planting time. When a field has had three crops in one year it needs one and a half tonnes of chemical fertilizer.

In the past farmers also used a traditional way of expelling pests. Some of them did so by praying in the fields, planting galingale in the corners of the rice field and leaving orange peels there. It was a trust in local belief that the pests possessed an evil power which could be expelled by supernatural power. The galingale and the orange peel were trusted as tools that could “reject evil power” by the farming community. The other technique was to burn rice husks which were mixed with sulfur to keep grasshoppers away. To expel birds, the farmers used a traditional tool which made a noisy sound when wind blew through it. When the farmers introduced pesticides, they agreed that the number of pests decreased quickly, but they also said that more and more chemical variants were required to be effective and that it became increasingly more difficult and expensive to handle.

For basic cultivation in the past, farmers used a traditional implement like a plow which was pulled by water buffalo, and then the pestle (*alu*) for de-husking rice. The use of traditional tools requires relatively more time and considerable labour. With the advent of the Green Revolution and the introduction of agricultural mechanization, the government began to distribute modern tools that farmers could pay for with credit. Not all farmers have modern equipment, such as tractors for plowing and harvesting machines, and thus they usually hire such machines. The existence of modern equipment means that the job of cultivation is done more quickly and more effectively, but it also means that the number of workers required has decreased.

Sometimes these new ways become problematic. For example, in 2014 a new cropping tool was introduced. It was a machine harvester operated by just one person who could cut the rice paddy and separate the grain from the stalk at the same time. The machine makes harvesting very fast and does not require many workers to harvest. But many people oppose the machine as it means that a lot of farmers are no longer able to work as labourers in the harvest.

Among the new technologies which are widely used in Margorejo are the water pump and the wellbore for irrigation. In the past, farmers in Margorejo relied solely on nature and practiced a type of agriculture that was completely rain-fed. The success or failure in agriculture was determined by natural factors. In the 1960s Margorejo experienced a very severe drought that caused a food crisis. Today, farmers in Margorejo, especially in the dry land ar-

ea, use water pumps and wellbores to irrigate their fields, so that the dependence on rain is minimized.

Alongside these changes, however, are practices and values in agriculture that have not changed in Margorejo. With regard to the value of solidarity with the poor at harvest time, only the way it is undertaken has changed. In the old system a form of solidarity with poor people who did not own agricultural land was shown by allowing the women to participate in the harvest with a predetermined division of the crop. When the *dos* system was introduced only male workers performed the harvest and people who did not own their own land no longer had an opportunity to participate in it. Nonetheless, the landowning farmers introduced a way for the people who did not own fields, or the very poor, to get some rice by allowing the harvesters to not separate the grain as cleanly as they are able, thus leaving some for the poor, who are usually women, to glean. This activity is commonly called *ngasak*, a process by which some rice is intentionally left in the fields. Usually there are four to five women who *ngasak*. Landowners are aware of this practice, which is permitted as a form of mercy.

Another change affects female workers. Although women's labour in the fields began to diminish as the changes mentioned above took place, to date there is still some work in agriculture that is women's work. Women, for example, work with seedlings and plant the seedlings in the field, a process known as *dawud*. They are also involved in the process known as *matun*, which is removing grass from the fields. Usually they get paid Rp. 40,000 per day for these activities.

Traditional techniques are still used to repel birds. Although chemicals have been introduced to eradicate pests, there is no invention, whether it is drugs or devices, to repel birds. Therefore, farmers usually place stuffed scarecrows in the fields to scare away birds. But this is not based on the idea that the bird is the incarnation of *Prit Anjani*, an evil power in farming, or that scarecrows are the incarnation of *Batara Kala*, the highest god, as Javanese farmers believed was true during the nineteenth century.³⁸ Besides the reliance on scarecrows, farmers usually also install tin cans tied to a rope, which makes noisy sounds when exposed to the wind. Shacks are also built in the fields in which farmers sit with slingshots, thereby keeping the birds away from the rice.

All changes and continuities in farming activities described above have not happened only to Mennonite farmers of Margorejo. In farming practices, differences between the Mennonite farmer and other farmers are not clear. Nor are there differences in the

social interactions related to farming. The Mennonite farmers and other farmers live together, have good interactions and learn new farming methods from each other. In short, with regard to farming practices, the Mennonite farmer of Margorejo is similar to the common farmer who lives in that area. With regard to their religiosity, however, the Mennonite farmers of Margorejo are different from other farmers, especially in the area of local spiritualism.

Forms of Religiosity in Margorejo

In religiosity, the relation between traditional Javanese belief and Mennonite faith, and then further, the relationship with modernity embodied in the Green Revolution, make the Margorejo Mennonite farming community unique. The changes that occur do not always indicate a full cultural replacement, that is, the replacing of old belief with something completely new. Rather all the elements – traditional belief, Mennonite faith and modernity – are mixed to make for a unique, hybrid worldview.

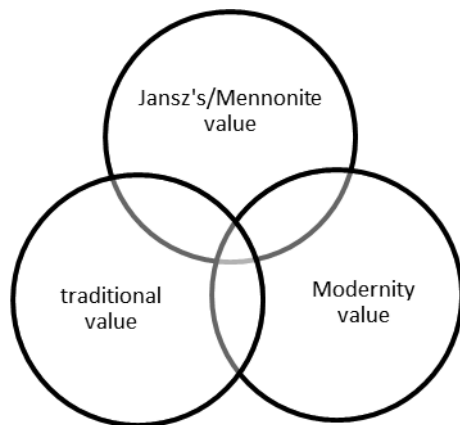


Figure 1: Spectrum of Belief of Margorejo's Mennonite Farmer Community

If this culture is not entirely traditional, it is also not entirely Christian and does not fully follow the pattern as designed by P.A. Jansz, the founder of the community, nor is it completely modern. Each of the three elements – traditional belief, Mennonite faith and modernity – is deeply embedded in Margorejo society. But they are

not held uniformly, as each individual holds on to a particular element within the spectrum of belief. Sometimes there are dynamic intersections among the three elements. For example, a farmer may use pesticides and be open to using new technologies, but he also might pay attention to counting the days and pray to Jesus to bless his land. It might be a modern value or a Mennonite value or a traditional value that becomes the dominant element.

The Emphasis on Modernity

The emphasis on modernity among the farmers sees the implementation of the Green Revolution as the most important factor in agriculture. It sees the farm as a material object that can be maximized through science and technology in the form of mechanization and chemicalization. Farmers who emphasize modern views are themselves not united as they put different emphases on religious belief, with some saying the faith or tradition has no place in agriculture and that agricultural progress depends solely on science, technology and capital. This view is expressed, for example, by Mr. Sutari who said that the most important factor in agriculture is capital or money.³⁹ Why money? Because in his view, success in farming depends on the amount of fertilizer and pesticide used, the intensity of agricultural maintenance, and well drilling. Each of these aspects requires capital, and thus the main factor in farming is capital. As he said,

The most important factor in farming today is capital, not belief as in the past, like having prayers expel diseases. In the past there were no pesticides, but now pesticides are available. So today prayer has been replaced by pesticides. Therefore, something in which people can believe today is the capital...The natural condition can be overcome by technology. When there is no water, people can find enough from drilling wells.⁴⁰

For Mr. Sutari, modern ways have ushered religion from the fields.

The Emphasis on Jansz's Mennonite View

The farmers who emphasize the Mennonite faith view point are those who do not follow the traditional view of agricultural timing, as well as any traditional rituals, and thus make a complete separation between traditional beliefs and agriculture. It can be said they are farmers who follow the views of Pieter Jansz. They believe in God who has power over the nature. So harvest is seen as the bless-

ing and gift from God. Therefore, they claim to always pray for the farm's success every night, at home or in the fields. At planting time, some farmers encourage workers to pray that the process will be smooth and successful. As one farmer said:

As a people who believe in our Lord we are allowed to ask. The Bible also says that we should ask in prayer. We ask that no pests attack, for enough rain, for bountiful harvests. It is our intention to ask. If God provides for us, we welcome it with gratitude. This does not mean that this will be the best outcome. It is possible that there would be a crop failure and thus trials to test our faith.⁴¹

In general, farmers who emphasize the Mennonite views tend to be critical of traditional beliefs, such as the counting of traditional time and rituals. One such farmer is Mr. Sugiman.⁴² He spoke loudly against occult practices that are sometimes still believed by people in the vicinity. He recounted how angry he was with his sister one time when he was very ill; she had gone to a shaman to ask for a talisman in the form of water so that he might accept his fate with ease, if he was meant to die that he would die, if meant to recover that he would recover. Mr. Sugiman rejected the water and he prayed for God's help. His sister was angry because she felt unappreciated. But eventually Mr. Sugiman gradually recovered and it was a spiritual experience for him, for he knew that God was helping him. It was likewise in agriculture. Sometimes when he took on work as a labourer in a nearby village he was asked to participate in the common *slametan*, the festival meal, prayed over by a traditional religious leader. He pleaded not to partake: "Why do I have to eat food that has been offered to the spirits? Is there no other food? The plain food looks good." He said that he found "food linked to the spirit realm of food disgusting, because [he felt] the spirits were licking him, spitting on him. But since it was an established practice they had their own system of trust; in that case I did not want to join the festival meal!"⁴³

Although they trust firmly in God, in their farming practices they are very open to science and technology. They cultivate agricultural land, and live similar to the rest of society in general, with the use of technology, and in particular artificial fertilization, and chemicals such as pesticides.

The Emphasis on a Traditional View

Farmers who still hold the traditional view are peasant farmers who still take into account the calculation of traditional time as a factor which they insist influences agricultural success and still hold Javanese traditional views on the cosmos. However, traditional rituals only occur in some villages, while in others they have been abandoned. So they still trust the traditional beliefs, although they do not accept certain ritual practices. The farmers who hold the traditional view are mostly elderly, thus the traditionalists are diminishing. And even those who hold to traditional values and traditional beliefs, within their farming practices, allow for progress in agriculture. For example, they accept hybrid agricultural seed and technology, and they accept medicine for their farm animals. So they accept progress in farming, but they don't entirely abandon the traditional view and still practice it in various ways.

One of those ways is that they accept that nature can only be comprehended as cyclical. Some farmers believe that success in farming is related to cycles that in turn relate to specific years. They understand that there are years in which nature seems very friendly: the rain is adequate, the pests do not destroy the crops, and the crops are abundant. But in other years times are not good: the rain is so little, the harvesting fails, the pests destroy. Those years are said to come in cycles of eight years. Mr. Kasdi stated: "there is good time, there is bad time. There is a plot which cannot be changed."⁴⁴ Mr. Sukarman said the same thing: the specific year is closely related to specific weather which effects farming.⁴⁵ He gave an example of the previous year, 2014, known as *Rabu Wage*⁴⁶ according to the Javanese calendar; the rain was intense and there was tremendous lightening. Many farmers failed to harvest that year. But the next year, 2015, the year of my interview with him, was clearly the *Minggu Pon* according to the Javanese calendar, literally the "Sunday *Pon*" year, a time when the corps would surely be great.

Another way in which traditionalism reveals itself is in the idea that wisdom can be obtained by observing the signs of nature. This view says that nature goes around cyclically, affecting weather and success in farming. The important thing for the farmer is to live wisely. Mr. Kliwon said, "when the year is good (promising), do not be careless. And when the year goes bad you should be mindful of it."⁴⁷ The meaning of "not to be careless" is that farmers should be mindful, namely they should prepare reserves of rice to face the difficult years. When they are in the difficult years, they need to

calculate carefully, deciding just when to have a loan from the bank or not. The important thing is that knowledge of nature's cycles makes farmers more alert to issues of life, instructing them to cool down, not to be stressed psychologically, and to undertake daily activities in measured ways. And when they are successful they must remember that there will also be difficult times. But when they must face the difficult times, they must not worry, because the hard times will soon be over and change to become peaceful times. This approach allowed Mr. Kliwon to face the failure of harvesting in the beginning of 2014 calmly.

A third sign of tradition is the idea of surrendering to God. This idea is that farmers believe strongly that life includes blessings and money, but also failure, with the acceptance that all has been arranged by God. Human beings only undergo what God has willed. This idea comes with the attitude of "acceptance" or *narimo*, part of local wisdom. Success in farming, they believe, results from God. That's why they don't need to strive excessively or be driven. Humans definitely always want much but God alone determines just who gets their portion. Mr. Sagi emphasized that success could not be forced. He said, "pursue as hard as you can, but when success does not become your fate, it cannot be reached and cannot be a blessing. Human beings can merely accept, they cannot manipulate anything."⁴⁸ This attitude of surrender to God effects a fundamental perception towards farming and was in evidence in an account Mr. Sagi offered of his decision to turn down an offer for a bore well. His reason for turning it down, he explained, was that if the water deep under the surface of the land was forced to come up, how would the next generation receive its water resource? To force nature's hand could be fatal.⁴⁹

Another sign of tradition is that many farmers believe that there is relationship between human beings and nature. This is similar to the Javanese view that human beings are microcosms, while nature is a macrocosm. This idea is revealed by some of the interviewees. For instance, when I asked Mr. Sagi why the fertility of the land is getting worse, he said that land looks like a human being's body. When one becomes older, the body becomes weaker; it is the same thing with soil. The nutrition of the soil is diminishing, which is caused by the soil getting older and being over fertilized.⁵⁰

In another example, Mr. Kliwon spoke of his understanding that nature is like the human being in that it too has feelings. When I asked, "why does nature change again and again?" He replied that "nature, including its content, surely changes. Nature is like the human being, happy at a certain time, and in another occasion

feels sorrow; it is the same as nature. There is a time when nature feels grief. In another time nature feels excited; it wants to make human beings happy. It is as if nature talks to human beings.”⁵¹ Other farmers believe that feelings, emotions, and a human being’s moods impact farming.⁵² Mr. Kliwon clarified that when he is not in the good mood, when he is angry for example, family problems result and then the farm’s crops will not become a blessing either. Other farmers believe that someone’s critical time can impact either success or failure in agriculture. Mr. Suratman said that basically everyone has his or her personal good or bad days; thus, in farming, if someone wants to have optimal results, they should not plant on that person’s bad days.⁵³ A person’s bad day, for example, is the third day after the weekday on which that person was born. Mr. Suratman was born on a Friday, thus his personal bad day is Sunday. He says that he never plants on Sunday even though his workers would be willing to work on Sunday. In fact, when in the past he planted on a Sunday he found that the result was unsatisfactory. Based on observing that experience, he saw a relation between someone’s life and nature. The other ‘bad’ day which must be avoided is the day when a person’s parents passed away.⁵⁴ Mr. Suratman usually plants rice on Monday or Thursday, because that day is considered his good day. And what makes those days good for him is that they are connected to Javanese numerology, the *pitungan*, which teaches that human destiny is connected to the traditional numbering of days in a person’s life.

Conclusion

The important stages in the history of agriculture in Margorejo produced several interesting developments, but these same stages of change did not seriously alter the total society. In fact what was created was a creative interaction, one in which old values were abandoned, but not without affecting and contextualizing the new, meaning that the difference between the old and the new was not as pronounced as it might appear at first. It takes on the form of *aprosiasi*, an appreciation for the subjective, the values and beliefs that undergird a particular process.

In addition, within Margorejo there have been differences in the response to change. This means that there is no one definitive form of belief or set of values in agriculture at Margorejo. It shows that farmers have been the subjects of change, influenced by developments in the social vicinity of their farms on the one hand, and de-

terminated by the cultural shape and colour residing in the process of farming on the other. In the context of the global Mennonite family, the Mennonite farmer in Margorejo has helped clarify the colour of a contextualized Mennonite understanding, one in which both the values of traditional Javanese culture and the values of Dutch-originated Mennonite values give shape to a farmer's encounters with nature. It is ultimately a cultural construction that makes for a uniquely Javanese Mennonite approach to farming.

Notes

- ¹ J. H. F. Sollewijn Gelpke, "Budidaya Padi di Jawa: Sumbangan Pada Ilmu-ilmu Bahasa, Daerah dan Penduduk Hindia-Belanda," in *Budidaya Padi di Jawa*, eds. Sajogo et Collier William (Jakarta: Obor, 1986), 1-98.
- ² Timo Myllyntaus and Mikko Saikku, "Environmental History: A New Discipline with Long Traditions", in *Encountering the Past in Nature: Essays in Environmental History*, eds. Timo Myllyntaus and Mikko Saikku (Athens: Ohio University Press, 1999), 2.
- ³ Donald Worster, "Doing Environmental History," in *The End of the Earth: Perspectives on Modern Environmental History*, ed. Donald Worster (New York: Cambridge University Press, 1989), 289-307.
- ⁴ See Jan Wissemann Christie, "Water and Rice in Early Java and Bali" in *A World of Water*, ed. P. Boomgaard (Leiden: KITLV, 2007), 235-258.
- ⁵ For example, Peter Boomgaard, "From Riches to Rags? Rice Production and Trade in Asia, Particularly Indonesia, 1550-1950" in *A History of Natural Resources in Asia*, eds. Greg Bankoff and Peter Boomgaard (New York: Palgrave, 2007), 185-203; Anton Lucas and Arif W. Djati, "The Politics of Environmental and Water Pollution in East Java" in *A World of Water*, 320-351.
- ⁶ Peter Boomgaard, Freek Colombijn, and David Henley, eds., *Paper Landscapes: Explorations in the Environmental History of Indonesia* (Leiden: KITLV Press, 1998).
- ⁷ Joachim Radkau, "Religion and Environmentalism" in *A Companion to Global Environmental History*, eds. J. R. McNeill and Erin Stewart Mauldin (Chichester: Wiley-Blackwell, 2012), 510.
- ⁸ Clifford Geertz, *The Interpretation of Cultures* (London: Fontana Press, 1993), 90. In his explanation of the definition of religions, Geertz use many examples from Javanese culture. So it can be assumed that this definition is appropriate for Javanese society.
- ⁹ Geertz wrote *Religion of Java* (London: Free Press, 1960) from this approach. Formally, in Java there are only five religions (Islam, Christian, Buddhism, Hinduism, and Kong Hu Chu). But as a cultural system, Java's belief, values, and ritual could be categorized as Java's religion as well.
- ¹⁰ J. A. Niels Mulder, "A Comparative Note on the Thai and the Javanese Worldview as Expressed by Religious Practice and Belief," *Journal of the Siam Society* 58 (1970), 80.
- ¹¹ Denys Lombard, *Nusa Jawa: Silang Budaya*, vol. I, II, III, trans. Winarsih Partaningrat Arifin, et.al. (Jakarta: Gramedia, 1996).
- ¹² Lombard, *Nusa Jawa: Silang Budaya*, vol. III, 169.

- ¹³ Lawrence Yoder, *The Introduction and Expression of Islam and Christianity in the Cultural Context of North Central Java*, (PhD Diss., Fuller Theological Seminary, Pasadena University Microfilm International, 1987).
- ¹⁴ This also clarifies Clifford Greetz's theory that used social classification to define various religiosities in Java. From Greetz's point of view in *Religion of Java*, the religion of people who live in Margorejo and work as farmers should be syncretism (*abangan*). But in reality, every individual has a different religious preference.
- ¹⁵ Javanese Mennonite Church.
- ¹⁶ The farmers who were interviewed for this paper were between thirty and seventy-five years old. Interviews included both owners and farm labourers and the interviewees were mostly male, although occasionally farmers' wives were also involved in the interview.
- ¹⁷ This idea was from his father, Pieter Jansz, who wrote a pamphlet entitled *Landontginning en Evangelisatie op Java, een Voorstel aan de Vrienden van het GodsRijk* (Amsterdam: Hoveker en Zoon, 1874). In Jansz's vision, the land actually would be opened both for Christians and Muslims to live together. In practice, however, P.A. Jansz modified this idea and all people who joined the village were obligated to convert to Christianity. See Alle Hoekema, *Dutch Mennonite Mission in Indonesia* (Elkhart: Institute of Mennonite Studies, 2001), 48; Sigit Heru Sukoco and Lawrence Yoder, *Tata Injil di Bumi Muria*, (Semarang: Pustaka Muria, 2010), 168-169.
- ¹⁸ Sukoco and Yoder, *Tata Injil di Bumi Muria*, 181-182.
- ¹⁹ Suko Sukarman is a village official. Suko Sukarman, personal interview, June 16, 2014.
- ²⁰ There are several version of story of *Dewi Sri*, depending on one's social location. These versions, however, have a similar meaning about the origin of rice and the role of *Dewi Sri*. For an analysis of the differences in the stories see Rens Heringa, "Dewi Sri in Village Garb: Fertility, Myth, and Ritual in Northeast Java," *Asia Folklore Studies* 56 (1997): 355-377.
- ²¹ Philip van Akkeren, *Dewi Sri dan Kristus*, (Jakarta: BPK Gunung Mulia, 1994), 16-17. (Trans. *Sri and Christ: A Study of the Indigenous Church in East Java*, [London: Lutterworth, 1969].)
- ²² Thus in all their activities, the traditional community in Java considered *petungan* in choosing the best time to travel, to move to another house and to marry, and also in making agricultural decisions, such as when to plant the rice field, cultivate the land and harvest the crop. Clifford Geertz, *Religion of Java*, chapter 3.
- ²³ *Tata mangsa* was divided into four main seasons (*mangsa utama*), namely *Mangsa Ketiga* (the dry season, eighty-eight days in length), *Mangsa Labuh* (the transitional season before the rainy season, ninety-five days), *Mangsa Rendheng* (the rainy season, ninety-five days), and *Mangsa Mareng* (the transitional season before the dry season, eighty-six days). Each of the main seasons was divided into two shorter seasons, which in turn were divided into even smaller seasons, resulting in twelve seasons in one year. Sukardi Wisnubroto, *Pengenalan Waktu Tradisional Pranata Mangsa dan Wariga Menurut Jabaran Meteorologi dan Manfaatnya dalam Pertanian dan Social* (Yogyakarta: Mitra Graha Widya, 1999).

- ²⁴ Note from board mission meeting on January 28, 1886 in Amsterdam. This note can be accessed in Stadsarchief Amsterdam (SAA), Achief 305 Doopsgezinde Zending Vereniging, mv.nr.3.
- ²⁵ Sukoco and Yoder, *Tata Injil di Bumi Muria*, 204.
- ²⁶ The issue of land was very important in the history of agriculture in Java. Egbert de Vries concludes that the main agricultural problem in Java in the early-twentieth century was inadequate farming land. See Egbert de Vries, *Pertanian dan Kemiskinan di Jawa*, (Jakarta: Obor, 1985), 110.
- ²⁷ Sigit Heru Sukoco, personal interview, January 19, 2016.
- ²⁸ Sukoco and Yoder, *Tata Injil di Bumi Muria*, 204.
- ²⁹ In practice, the strict rules which Jansz made in Margorejo were not totally successful. In his note, Jansz explained that there were some criminal and morality issues occurring in Margorejo, including murder and adultery, which demonstrates that Jansz's effort to build Margorejo as a morally pure Christian village was not totally realized. Ibid.
- ³⁰ Population growth in Indonesia is becoming increasingly rapid. For example, in 1870 the total population was 16.2 million; in 1973 it was 80.1 million. While the population grows, however, agricultural space remains limited. In Java the size of a farmer's field is on average 0.5 hectares. See, Achmad T Birowo and Gary E. Hansen, "Agricultural and Rural Development: An Overview" in *Agricultural and Rural Development in Indonesia*, ed, Gary N. Hansen (Colorado: Westview Press, 1981), 4-5.
- ³¹ Dawam Raharjo, *Transformasi Pertanian, Industrialisasi, dan Kesempatan Kerja* (Jakarta: University of Indonesia Press, 1984), 66.
- ³² Peter Timmer, "The Formation of Indonesian Rice Policy: A Historical Perspective" in *Agricultural and Rural Development in Indonesia*, ed. Gary N. Hansen, (Colorado: Westview Press, 1981), 33-43.
- ³³ Raharjo, *Transformasi Pertanian*, 67.
- ³⁴ Timmer, "The Formation of Indonesian Rice Policy," 35.
- ³⁵ Raharjo, *Transformasi Pertanian*, 67.
- ³⁶ Close relatives of the landowning family were the most eligible to earn the parts of the crop they managed to cut, usually between 1/8th to 1/6th of the total. Meanwhile neighbors, or those who did not have any fields of their own, earned 1/12th to 1/16th of the crop. Koentjaraningrat, *Kebudayaan Jawa* (Jakarta: Balai Pustaka, 1984), 177-181.
- ³⁷ The payment is made by a contract system with the payment for every quintal being approximately Rp. 50,000, further divided by the number of workers in any one of these groups. So if in a square of field they can harvest one tonne of rice, the group then will be paid Rp. 500,000. If there are 5 members in the group, then for a square field, each worker will receive Rp. 100,000.
- ³⁸ In the myth of *Dewi Sri* there are manifestations of evil's power that become rice's enemies. One of these enemies is a bird, which is understood as a manifestation of *Prit Anjala*, which destroys rice plants. According to the myth, however, Prit Anjala was very afraid of *Batara Kala*, the highest god who protects rice, and taught his offspring that whoever looked like a human being came from *Batara Kala*. That is why traditional farmers in the nineteenth century made scarecrows, which were meant to frighten Prit Anjala.
- ³⁹ Sutari, personal interview, March 23, 2015.

- ⁴⁰ Ibid.
- ⁴¹ Solikin, personal interview, March 11, 2015.
- ⁴² Sugiman, personal interview, January 25, 2016.
- ⁴³ Ibid
- ⁴⁴ Kasdi, personal interview, March 11, 2015.
- ⁴⁵ Sukarman, personal interview, February 25, 2015.
- ⁴⁶ There are five days in the Javanese calendar (called *pasaran*): *Paing*, *Pon*, *Wage*, *Kliwon*, and *Legi*. People usually combine these with the international calendar: Sunday-Paing, Monday-Pon, Tuesday-Wage, Wednesday-Kliwon, Thursday-Legi, Friday-Paing, Saturday-Pon, Sunday-Wage, etc. Each combination will reoccur in thirty-five days (called *selapan*). For a more detailed explanation, see Clifford Greetz, *The Religion of Java*, 38.
- ⁴⁷ Kasmito Kliwon, personal interview, June 13, 2014.
- ⁴⁸ Sagi, personal interview, February 25, 2015.
- ⁴⁹ Ibid.
- ⁵⁰ Ibid.
- ⁵¹ Kasmito Kliwon, personal interview, June 13, 2014.
- ⁵² Purwanto, personal interview, February 25, 2015.
- ⁵³ Suratman, personal interview, February 25, 2015.
- ⁵⁴ Ibid.