Panaad and the *Paril*: Traditional Systems of Soil and Water Conservation in Cebu, the Philippines

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ABSTRACT

Agricultural heritage encompasses practices, beliefs and values related to farming and crop production passed on from generation to generation through direct experience and other informal means. This paper focuses on a type of terrace farming which uses stone walls (*paril*) to conserve soil and water, and is traditionally practised in the upland *barangay*s of Argao, a well-known heritage town in Cebu, the Philippines. It examines various aspects of this agricultural heritage and its associated rituals, beliefs and legends. The knowledge of building and repairing the stone walls, as well as the performance and meanings of rituals embedded in legends, demonstrate the intangible aspects of this built agricultural heritage.

Keywords

agricultural heritage, cultural landscapes, upland terrace farming, ritual practices, soil conservation, water conservation, *paril, datag, barangay,* Argao, Cebu, the Philippines

Introduction

The town of Argao in south-eastern Cebu in the central part of the Philippines is known for its cultural heritage, mostly its Spanish colonial era buildings in the town centre. It is also known for a local pastry delicacy called *torta* as well as for locally-woven *hablon* (a kind of cloth). These are the products of centuries-old practices handed on from one generation to the next. Other intangible heritage in the town relates to centuries-old Catholic rituals, one of which is the traditional Flores de Mayo celebrated every May. This primarily involves children, but the ritual was drastically changed by one parish priest in the year 2000 (Amper: 2015).

Argao's natural heritage in both the coastal and upland areas also attracts a number of tourists. Initial, non-academic research in the upland *barangays*[1] in Argao has revealed a distinctive native farming tradition that involves terracing the hillsides. Farmers have used *parils* (stone walls) to create additional arable land for agricultural production in *Barangay* Tabayag in the uplands of Argao. Based on the recollection of old people who are the descendants of the pioneer farmers who first tilled the land, this practice dates back to the late Spanish period or the beginning of the 19th century. The main crop is corn, though sometimes other crops such as ginger, onions and other vegetables are also planted.

This study documents local knowledge about this technique of soil and water conservation as recorded in stories, relationships, and symbols based on the memories of farmers in the community and handed down from generation to generation, and highlights the interface between nature and culture in this traditional system of farming.

Specifically, the study documents the development of the practice of using *parils* from when it began up to the present, and describes significant individuals and events related to the practice.

The context

The Philippine economy is still largely agricultural and the majority of the population live in rural areas and make their living from farming. The country's main agricultural crops are rice, corn, coconut, bananas and other fruits, sugar cane, tobacco and abaca. The province of Cebu, located in the Visayas region which is geographically in the centre of the country, relies on agricultural production. Due to the elongated shape of the island of Cebu, all of its municipalities have both a coastal area and an upland area. Residents along the coasts rely primarily on fishing while those in the uplands rely on farming. (Figures 1 and 2)

The municipality of Argao is located 66 kilometers south-east of the provincial capital. It is a first class municipality with a total of 45 *barangay*s, mostly classified as rural. (Figure 3) A significant part of the land area of Argao is mountainous and its terrain is mostly rugged. (Figure 4) Considered to be one of the oldest towns in

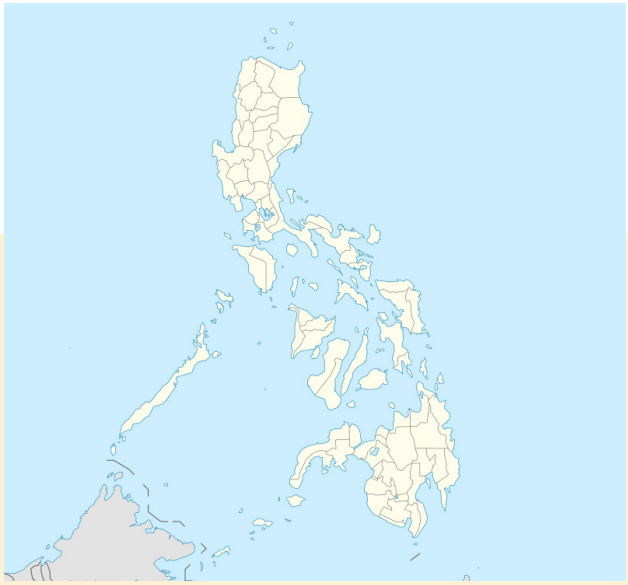

Figure 1
Map of the Phlippines showing Cebu.
Source: Hellerick - Own work, CC BY-SA 3.0, commons.wikimedia.org

Figure 2
Map of Cebu showing location of Argao
Source: Google Maps

Cebu, the Municipality of Argao is known by tourists for its rich heritage. In the town centre is the Cabecerra which has been the seat of government since the Spanish colonial period. It consists of the municipal hall with a tiled roof dating back to the early 19th century, a stone baroque church dating back to the 18th century and a fort dating back to the same period.

Argao also has a rich agricultural heritage as can be seen in its mountain *barangays*. *Barangay* Tabayag practises *paril* farming using age-old farming techniques that have enabled farmers to produce rice, corn and other subsistence crops. It is approximately 45 minutes away from the Poblacion by motorcycle and has seven *sitios,* namely Proper, Upper, Piongot, Binalabag, Suyak, Lantoy and Kabalawan. Based on the 2015 census of population and housing, it has a population of 894, which is lower than its 2010 population of 999. Out-migration is one cause of this population decline as many young people prefer to work in the city rather than continue tending their farms (Barangay Profile: 2014). The *barangay* has a relatively dry environment and is the site of numerous *parils*, stone structures believed to have been built during the late 1800s to the early 1900s or perhaps even earlier. Despite having no regular source of irrigation, this practice has enabled around four generations of farmers to utilise and benefit from this farming system handed down by their forebears.

The *paril*: a traditional method of soil and water conservation

A *paril* is a rock wall structure built between two hills and designed to collect eroded soil from the hillsides and prevent it from being washed away by flood waters. Over time, the eroded soil gradually forms a plain, called a *datag,* between the stone walls which is large enough to provide space for farming. Its area and dimensions vary from location to location depending on the contours of the land. There are some *parils* that are taller than an average adult, and there are some *datags* that are as big as a soccer field. These have been in existence for generations and are still being used alongside contemporary farming methods. Thus the *paril* has retained its agricultural significance and is considered an ingenious farming technology built by people in the past to solve the problems of their time. The early pioneers were successful in handing down this technology, along with its associated values and belief systems, to the next generation up to the present day. The

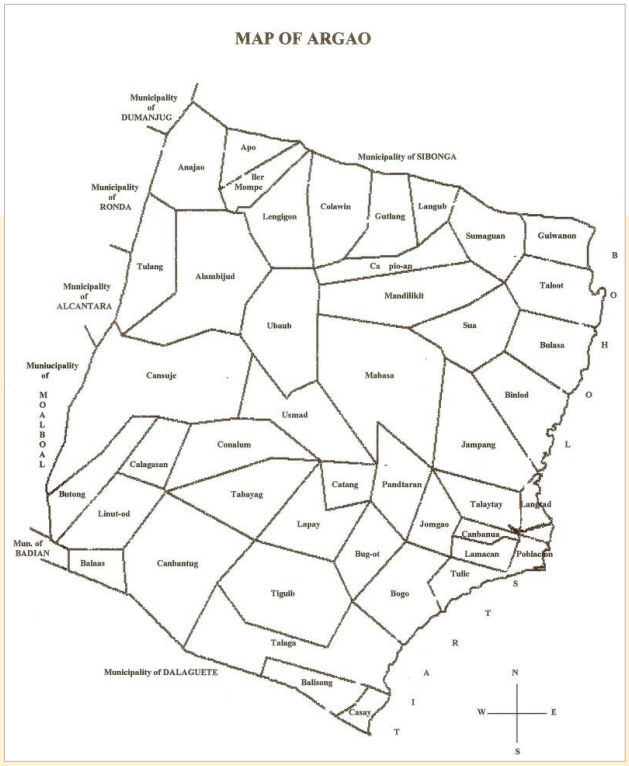

Figure 3
Argao and its *Barangays*
Source: allaboutargao.wikispaces.com/ARGAO%27S+BARANGAYS [18 May 2018]

Figure 4
Barangay Tabayag's mountainous terrain showing terraced landscape
Source: Google Imagery [12 May 2018]

introduction of Catholicism and formal education have, however, resulted in the dwindling of belief in nature spirits and in the performance of traditional rituals associated with farming and the environment. There is also a growing concern about who will sustain this built agricultural heritage given that members of the younger generation now prefer to work in cities rather than continue farming.

Construction and function

The description of how these *parils* were constructed is based on the narratives of descendants of the early pioneers who made them. According to them, stones were piled one on top of the other on the site; the larger ones were placed at the base while medium-sized ones were placed on top. Smaller stones were inserted into the gaps. The pioneering farmers who constructed these rock walls chose rocks and stones carefully so that there are only small gaps in between them. (Plate 1) These walls are strategically erected in ravines where streams of rainwater naturally flow and where the topsoil from the hillsides erodes. They are an example of local, low-tech engineering purposely crafted to manage water resources efficiently, and most importantly to conserve soil from the slopes. These stone wall structures are intentionally designed to collect the valuable soil that is washed off the hills and mountains by heavy rains, which in turn, over time, accumulates and creates fertile plains suitable for growing crops.

Over the years, the mass of soil increases and deepens. In order to prevent the soil from overflowing the stone walls, new stones will be skilfully and carefully piled up on top of the old ones. This craft, locally known as *tumpi-tumpi,* will be repeated by succeeding generations whenever necessary. This process will increase the height of the stone wall and expand the surface area of the *datag*. This in turn will lead to the creation of another stone wall on a *datag* and will eventually, over time, create a series of plains or *datag* rising like a flight of stairs. (Plate 2) One informant said: *Stones! Large stones...we pile the large stones, and then when it floods, the soil is slowly collected there...then we add piles of stones again, until it has collected enough soil to form a wide plain.* This task is primarily done by the older generation of farmers with the help of their children in collecting stones of different sizes to be piled up. Through observation and practice, those of the younger generation are taught how to do the *tumpi-tumpi* including selecting of the right-sized stones to the actual piling up of the stones. While helping their parents or grandparents in doing this task, the children learn by doing. This knowledge and these skills are put to good use when the young people are the ones tilling the land in the *datag*, thereby ensuring the continuity of the practice. They in turn teach their children, and so on.

Plate 1
A *paril* (stone wall structure) built to collect eroded soil.
Photo: Zona Amper, April, 2015

Plate 2
A series of *datags* and stonewalls rising in a series of terraces in Sitio Cabalawan, *Barangay* Tabayag.
Photo: Zona Amper, April, 2015

Early pioneers

Largely based on the qualitative data collected from key informants, the *paril* is believed to have been built during the early 1900s. Since almost all of the informants could only trace and identify the last two generations of their kin who had contributed to the development of the *paril*, it is possible that the stone wall structures have been in existence far longer than is thought. As one informant stated regarding the legacy of their *paril*,

> *My grandfather...and I think maybe it was still their grandparents before them...because when they were already adolescents, the paril and datag were already there. It takes a long time for the soil to accumulate. So, I think it began during the time of the grandfather of my grandfather. I know only my grandfather, but I don't know his grandfather.*

However, there is one significant find in this historical inquiry. Key informants were the brothers Marcelo and Simplicio Arobo whose grandfather was Joaquin Arobo, who, together with two of his unidentified siblings allegedly pioneered this system in *Barangay* Tabayag. Joaquin Arobo and his family were originally from Dalaguete (a town south of Argao), and migrated to Argao in search of 'greener pastures'. According to Marcelo,

> *At first it was my grandfather who came from Dalaguete and migrated here. First they were in Payahan, but then they heard that there are fertile lands here in Tabayag. That's why they came to Tabayag, here in Cabalawan. The land here at that time was very fertile and they did not even use ploughs at that time. Furthermore,* Marcelo added, *the paril was made by my father's father...so maybe it was constructed around 1902, since my father was born only in 1922.*

Another informant, Dioscoro Remando, said that his father, Severino Remando, bought a land area that included a *paril* from a certain Joaquin in exchange for a big goat. This validated the claim that Joaquin Arobo may have been one of the pioneering *paril* builders in Sitio Cabalawan, Barangay Tabayag.

Historical change and development

The early pioneers observed that the constant agricultural activities, such as ploughing on sloping land, as well as the seasonal rains, caused the soil to erode from the hillsides leaving stones and thinning the soil on the ground which made the once-fertile land difficult or unusable. They therefore built stone walls in the ravines where the rainwater naturally flows in order to collect the soil instead of it being washed down to the rivers. One of the grandsons of the early pioneers recites the story of his grandfather during the early years of the development of the *paril*.

> *When he arrived in Cabalawan, in Cambares, the land was very fertile. Then they kept on ploughing the land. Over time the rocks beneath the ploughed slopes surfaced. It became difficult to plough the slopes because of the stones. We can go there in the area so you will see the many stones on the slopes. But because of the paril, the eroded soil has formed a plain at the foot of the slopes where they could plant their crops.*

The *datag* was considered to be arable land due to its fertile soil. Thus, at that time, it did not require any sort of chemical fertilisers, locally called *abuno*. They basically only used manure or the waste of chickens, cows, *carabaos*, or pigs or *hayupan*. During recent years, however, things have changed and local farmers need to employ fertilisers otherwise the crops will not survive. This may be due to constant cultivation without fallow periods. Such a situation is an added financial burden for the local farmers. An informant said, *in the past we did not use fertilisers since the soil was already fertile. It is different now, since the plants do not grow well without fertilisers. I use fertilisers, that is why our funds run short. So we just minimise the use of fertilisers.*

During the early 1980s a new farming technique emerged as a result of government initiatives. It is called 'contour farming' locally known as *bag-ong pamaagi* or 'new way'. It is a more convenient technique introduced by the American, Bill Grannet of the Soil and Water Conservation Foundation, a local Cebu-based non-governmental organisation. This new technique reshapes hillside slopes into stairs of terraces using a tool called an A-frame. This technique is known as S.A.L.T. or Sloping Agricultural Land Technology. Despite the introduction of this contemporary technique, the traditional *paril* is still functional and retains its great agricultural importance. Contour farming, like the *paril*, creates agricultural space for the local farmers where they can plant their crops and it does not require years to develop. However, the plains it creates are not as big as the *datags* formed by

the traditional *parils*, and they require a large amount of fertiliser in order for the crops to grow successfully. The use of fertilisers is an added financial burden for the local farmers. An informant said, *If the yield is high, actually proceeds are low because we use fertilisers. Contour farming requires massive use of fertilisers, unlike the paril.*

There have been a lot of changes over time; the *paril* is continually being developed by successive generations and its development is greatly dependent on its stakeholders. The early pioneers' deep interrelationship with the natural environment helped them keep up with the dynamic nature of their finite natural environmental resources and consequently, has gradually modified the landscape to suit their basic needs. The *paril* is clearly the combined work of nature and humans.

Management and maintenance of the *paril*

Proper management and maintenance has to be done throughout the year to carry on the craft of stone wall building so it can retain its primal function of creating an agricultural space. Like most things, large-scale damage comes from smaller problems and the cause of it is neglect. If one sees even small gaps or cracks in the stone wall that can lead to damage, immediate attention must be given to the stone walls to restore or repair them so the cracks do not get worse. As one informant observed, *In the past, my father would immediately repair any damaged part since if it is not repaired, it will give way if there are floods. It will revert to its being a waterway if the paril is not repaired.* Another informant noted that there are even times when the stone wall needs to be reconstructed. According to him, *...then he reconstructed it since it easily gave way since the stones were not properly placed.* One informant said that after the earthquake in October 2013 some of the stone walls were partially damaged and needed to be repaired. However, there were other owners belonging to the younger generation who did not know how to repair the damaged stone walls. The danger with not repairing the damage immediately is that it may continue to deteriorate and eventually the wall will be destroyed.

Other practices include the planting of napier grass, locally called *bungalon,* or other types of plants along the edges of the *paril* to help in holding and compacting the soil and stones so that the wall will not give way in times of heavy rains and floods. Using the *paril* and the *datag* is also the simplest form of maintenance. Like an ancestral house, if no-one lives in it, no-one will be able to see if there is any damage. However, some of the people who have inherited the stone wall structures have grown old and can no longer carry out the duties and responsibilities themselves. In some cases, their heirs are already working elsewhere and are no longer farming. They manage to hire younger folk and pay them cash to do the work for them, ranging from ploughing to harvesting to repairing. The local term for this is *suhol.* This situation is one of the concerns of the old people whose sons or daughters are no longer engaged in farming and are either working in the town or in the city. They are concerned about who will maintain the *parils* and the *datags* which they have inherited from their forefathers.

Associated values, beliefs, rituals and practices

The *paril* is valued by farmers as it provides them with fertile ground on which to plant crops for subsistence and survival. Without these *parils* and *datags*, upland farming would be a much more difficult and less productive task due to the topography and geological features of the area. All the informants say that, *If it were not for the paril and datag constructed by our forefathers, it would be very difficult to plant crops on the slopes of the hills which are prone to soil erosion. We thank our forefathers for their ingenuity.* This is the reason why they have maintained these *parils* and *datags* over time because it is considered an inheritance and a legacy of their forebears passed on to them. However, many among the much younger generations seem to place less value on the *parils*, *datags* and farming in general due to other livelihood options in the lowlands.

There are different practices with regard to land inheritance in the Philippines. Generally, land is inherited by all children divided equally among them. Unlike what is commonly practised elsewhere, the usual practice among the local people in *Barangay* Tabayag, Argao is for the parents to give the *paril* and *datag* to the youngest son. Other parcels of land are divided among their other children. This was the practice followed by the Arobos. Thus, it was Simplicio who inherited the *paril* and *datag* of his father (who was also the youngest son) who also inherited it from his father, Joaquin Arobo, Simplicio's grandfather. Marcelo Arobo, Simplicio's elder brother did not inherit any *paril* or *datag* from their father, but he inherited a parcel of land without a *paril*. It is the

responsibility of the heir to manage and maintain the *paril*. One informant said, *It is my younger brother who maintains the paril now and he is the one farming there.* Another informant who happens to be an heir explained, *The rule in the past was for the youngest son to inherit a big portion of their father's land.* However, there are some families where the father passes the land to those children who he thinks will continue to farm and maintain it. In some cases where the farmer does not have any children, then his nephews and nieces may be the ones who inherit the *paril* and *datag*.

Along with the *paril*, values are also passed on to the succeeding generation. The value of heritage is passed on *Our heritage is important...that is why I will give it to my nephews and nieces so that they will also look after it well* - and the emphasis is on the *paril* as an important source of subsistence, *If I am no longer on this earth and if you don't have work, where will you go? You can always come home...that's why they should not sell the land, unlike others who do. That is my advice to my three children.*

Rituals and practices also surround the *paril*. These ceremonial practices are essentially anchored to supernatural beliefs, like performing rituals to appease nature spirits when it is almost time to harvest the corn. There are many local terms such as *diwata*, and *dulot* which more or less carry the same meaning if used as a verb. The ritual only takes a short time, especially if the *mandudulot* (one who performs it) is already hungry. It can be performed any time of the day as long as it does not fall on Mondays, Wednesdays or Fridays. In the *baul* or cornfield, two or four sacrificial chickens will be killed, and seven *tagay* or small glasses of tuba or coconut wine will be poured into a *pamadahan*, an empty hair wax container with *mais inanag* (young corn). All of these will be offered to the 'Guardian of the corn field'. (Plate 3)

A certain entity living in the towering hill of Mt. Lantoy will also be called upon during the ritual. (Plate 4) *There is also a name we call upon...Mangaw...the head or king there in Mount Lantoy.* Mangaw is also said to own a golden ship. The *mandudulot* performs *tabi-tabi* or *misa-misa* and *libot-libot,* something that resembles what a priest usually does. *Tabi-tabi* is when the spirits are called and the men ask permission to hold the harvest ritual. The *misa-misa* is thanking the spirits for guarding the corn field and for a good harvest. The *libot-libot* is done around the corn field. These rituals and practices and associated beliefs are considered very sacred. If not performed properly, the locals believe that bad things might happen. *If we do not perform the harvest ritual, they might do harm unto us...we could get sick.*

There is also another ritual called *panaad,* a local term which means a promise. It is done whenever a *paril* has been successfully constructed or repaired. It is also considered a form of thanksgiving or *pahalipay*. According to a key informant who also performs such rituals, *These rituals have been passed on for generations from the*

Plate 3
A corn farm (in a wide *datag*) in Sitio Cabalawan, *Barangay* Tabayag.
Photo: Zona Amper, April, 2015

Plate 4
Mt. Lantoy, considered a sacred site in the upland *barangays* of Argao. It was declared a watershed forest reserve by the government of the Philippines.
Photo: Zona Amper, April, 2015

past…that's why it has become a promise to really do it to give back to the spirits. That has been our tradition which we do in our farms.

Another popular practice is the *itlog-itlog* or *subay-subay.* This is done by placing an egg on the body of a bottle of a popular brandy. This is a practice used to determine the cause of illnesses in order to prescribe proper remedies. It will determine the cause of the illness whether it be natural or supernatural. It is also used to communicate with the spirits to ask whether they accept the offering or not. When the offering is made, the ritualist will ask the spirits if the offering is enough. If the egg will stand, then it means that the offering has been accepted. If not, then the men should add other offerings until the spirits do accept them.

Although there are some farmers who no longer practise such rituals for the spirits, they say they still give thanks to God for a bountiful harvest. But they no longer believe in the *diwata* and other nature spirits who are said to be the guardians of their farms. They said they only believe in God because they are Catholics. Other younger farmers do not perform such rituals because they no longer believe in nature spirits because they have learned about scientific thinking in school. However, there are still a number of farmers who continue to perform the rituals as their forefathers taught them to do.

Conclusion

Farming practices are inherent parts of culture that have permeated all other aspects of culture since time immemorial. Barangay Tabayag is an upland *barangay* engaged in farming. Given the difficulties in cultivating the land posed by its physical landscape, the forefathers of today's farmers devised a way to overcome such difficulties through the building of *parils*. Over the years, these rock walls built in valleys and ravines between the hills and mountains have been instrumental in soil and water conservation, as well as in creating additional space for farming and planting crops necessary to ensure food security. Associated beliefs and practices have also complemented the use of the land to maintain a balance between nature, livelihood and the spiritual realm.

This built heritage, as well as the associated intangible heritage, including knowledge, skills, beliefs and rituals, has been passed on from one generation to the next. However, there are factors affecting the continuity of such heritage which need to be addressed. One of these is the introduction of formal education and religion which have changed the world-view of the younger generation, thereby affecting their ideas about farming as well as the associated beliefs and rituals. Although this has provided them with opportunities to explore other ways of earning a living, it has also affected the sustainability of the rock walls and upland farming. Hopefully this study can be used by the Municipality of Argao Cultural and Historical Commission to plan and implement measures for the conservation of these rock walls. At the same time, there is a need to educate the younger generation about the importance of continuing the heritage which their forefathers have passed on to them.

This study highlights the need for the continuous practice and maintenance of both tangible and intangible heritage, in order to sustain their authenticity as well as their utility to the present generation. Even in the current environmental situation amid technological advances, the *paril* is still of great importance for the sustainability of upland terrace farming in Argao. It is therefore imperative for heritage conservationists to document such practices and promote their revitalisation through the provision of support services to agriculture by local government bodies. In this manner political, economic and cultural heritage will work together to maintain the agricultural heritage of Argao well into the future.

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ENDNOTES

1 The native Filipino term for a village, district or ward, suburb, or other demarcated neighbourhood; a small territorial and administrative district forming the most local level of government or the smallest administrative division in the Philippines.

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