The local wisdom on Aren (Arenga pinnata) palm tree in Toba Batak tradition of North Sumatera at Lake Toba Area

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Abstract. This present paper discusses the local wisdoms related to aren “Arenga pinnata” palm tree in multi-ethnic tradition. It aims at (1) identifying the local plantation of aren palm tree and (2) finding folk discourses as collective memory based on the aren palm tree Toba Batak in Toba Batak at Lake Toba area. This research is conducted by qualitative approach with ethnographic model from the view points of anthropolinguistics and philosophical study. The analytic parameters are interconnection, valuability, and sustainability. The focus of analysis is on the performance, indexicality, and participation.

1. Introduction
Aren palm tree (Arenga pinnata) called bagot in Toba Batak was found somewhere at Lake Toba area. It is now getting less and less for it is hardly replanted. The present aren palm trees grew them self without being planted and preserved. There are some steps of planting aren palm trees, from collecting the fruits up to harvesting. Aren palm tree is a multifunctional plant in local community of Toba Batak for many local products especially household appliances are made of aren palm tree. Since aren palm tree is closed to the daily life of the local community, folk discourses (proverbs, parables, traditional verses, tales, and other verbal expressions) as the collective memory of Toba Batak were created. The folk discourses philosophically contain local wisdoms.

Philosophical study consists of speculation and analysis as the sequential unit of interpretation. Philosophy begins in wonderment, in curiosity, in questioning – everything – and in speculating about answers to these questions. The word speculation philosophically means to consider a subject or an idea and to contemplate it profoundly. Most philosophers are not content merely to wonder or speculate about things but feel that they must also subject their imaginings, wonderings, and speculations to rigorous analysis. Analysis involves taking a question, answer, belief or theory and subjecting it to careful scrutiny, breaking it down into its parts, using physical evidence wherever it is available and also applying a rigorous form of reasoning, called logic [27].

Language containing the cultural resources is one of the interesting objects of anthropolinguistics. The symbolic categories which are used to indexicalize activities are the domains related to antropolinguistics. Anthropolinguistics is the study of language within the framework of anthropology, the study of culture within the framework of linguistics, and the study of other aspects of humankind within the interrelated framework of both anthropology and linguistics [19, 20]. These philosophical study and antropolinguistics are complementary approaches to give direction for qualitative paradigm with ethnographic model in this study.
2. Methods

2.1. Planting Aren Palm Tree
Aren palm tree (Arenga pinnata) called bagot in Toba Batak was found somewhere at Lake Toba area. It is now getting less and less for it is hardly replanted. The present aren palm trees grew them self without being planted and preserved. Based on this problem, it is necessary to replant aren palm tree at Lake Toba area, but it is hardly found the aren palm tree nursery or aren palm tree seeding. Based on the qualitative research, the traditional planting of aren palm tree is as follows:

2.1.1. Collecting the fruit of Aren Palm Tree. The fruits used as the seed should be mature and healthy, which is indexed by brown yellow skin, not attacked by pests and diseases with the diameter of fruit ± 4 cm. The fruits taken should be outer part of the fruit bunches. The fruits could be saved for two weeks in plastic sacks and or boxes for easily facilitating the separation of seed from its skin. Collecting the fruit of aren palm tree is locally called papungu halto.

![Figure 1. Collecting the fruit of aren palm tree (papungu halto)](image1)

2.1.2. Separating Seed from the Skin of the Fruits. Separating the seed from the skin of the aren palm tree’s fruits, one should put on gloves for fruits contain oxalic acid causing the itching for the hands. Another way is to brood the aren palm tree’s fruits collected until the seeds are separated from the skin of the fruits. By this way, the seeds can be taken easily from the skin of the fruits without the itching. This separating seed from the skin of the fruits is locally called mangalangkati halto.

![Figure 2. Separating seed from the skin (mangalangkati halto)](image2)

2.1.3. Germination or Making Sprouts from the Seed. There is myth saying that aren palm trees can’t be seeded, they grow by themselves with the help of weasel spreading the seeds on the valley. However, seeds of aren palm tree could be seeded above sandy soil put on the rice straw (urame) and
covered with compost. They remain there for five-six weeks before the sprouts appear. The germination is flushed with water every morning or afternoon for retaining moisture. This germination is locally called *parsamean*.

![Figure 3. Germination (parsamean)](image)

2.1.4. Nursery. The sprouts of the aren seeds are dug, moved, and put into polybags or plastic bags filled with compost. The polybags containing sprouts are put under the shade from direct sunshine and flushed with water every day. It takes around 5-6 months before they can be planted to the available field. The process is locally called *mambibithon*, deriving from Indonesian language.

![Figure 4. Nursery (mambibithon)](image)

2.1.5. Planting to the Available Field. Around 5-6 months inside the polybags indicating the growing of the first leaves, the small aren palm trees can be planted to the available field. The process is locally called *manuanhon bagot*. 
Figure 5. Planting to the Available Field (manuhanhon bagot)

2.1.6 Caring the Aren Palm Tree. Traditionally, aren palm trees are not usually fertilized, they grow on their own without being nurtured on the valley. This is the reason that local language doesn’t recognize a certain term for this process, but the term manjaga bagot “keeping aren palm tree”, deriving from national language, could be used. However, before being tapped, the aren palm tree is cared; the fibers around the trunk are removed.

Figure 6. Caring the Aren Palm Tree (manjaga bagot)
2.1.7. Harvesting or Tapping the Sap. After the age of four up to six years, the hand of the aren palm tree appears and the hand is tapped to produce sap, which is called nira (Indonesian) or tuak na tonggi (Toba Batak). Among other local products, the main product of aren palm tree is sap which is still sweet or fermented. The symbolic category for this is well-known in local language that is maragat. It indexicalizes that activity is well-known for the local community.

From the steps of planting aren palm tree, we hardly find the domains (symbolic category) relating to the name of the process. It is because aren palm trees grow by themselves on the valley at Lake Toba area. Planting aren palm tree was not activity relating to life cycles of Toba Batak. The present symbolic categories (naming the activities) deriving from national language (Indonesian) indexicalize
the present local planting aren palm tree by the rule of linguistic adaptation. Anthropolinguistically, symbolic categories as domains indexicalize human being activities.

Local knowledge as such is local wisdom because it is local genius as the people’s indigenous knowledge that the local people use to overcome their social problems. The local geniuses derive from the values of cultural traditions. The term “local wisdom” may interchangeably be used with the terms “indigenous knowledge”, “local genius”, “local skill”, “local resource”, “local norms and ethics” or “local aesthetics” [24]

3. Result and Discussion
Since aren palm tree is closed to the daily life of the local community in Toba Batak, folk discourses. Folk discourses are verbal expressions such as cultural metaphors, proverbs, parables, traditional verses, and tales as the collective memory of local community [22]. Some Toba Batak folk discourses were created based on the aren palm tree. The folk discourses contain local wisdoms or practical wisdoms that they are necessarily studied by philosophical approach. Philosophical study tries to apply speculation and analysis. Speculation is philosophically based on deep consideration and contemplation while analysis is based on empirical data and logics.

Metaphor tuak tangkasan in Toba Batak indexicalizes the fresh drink made of the sap of aren palm tree which can be consumed as the supplementary healthy drink. The word tuak denotatively means ‘sap’ and the word tangkasan means ‘clear’. Metaphor tuak na tonggi indexicalizes money culturally given by the wife-receiving party to the wife-giving party in customary ceremonies. The word tuak denotatively means ‘sap’ and the word na tonggi means ‘which is sweet’. The two linguistic metaphors based on the sap of aren palm tree indexicalize the cultural resources related to customary ceremony involving the participation between wife-receiving party and the wife-giving party. It is performed by customary leaders in every life cycle ceremony or rites of passage in Toba Batak.

Parable sada songon daion mual, unang mardua songon daion tuak in Toba Batak indexicalizes the unity of opinion which is likened as one taste of drinking water, not two tastes like fermented sap of aren. The phrase sada ma songon daion mual denotatively means ‘one like the taste of water’ and, unang mardua songon daion tuak ‘not two like the taste of sap’. The indexicality of the linguistic parable is to ask people to have the same opinion about something. It indexicalizes cultural resources related to different opinion.

The traditional verse Bagot na marhalto, na tubu di robean; horas ma hami na manganton, songon i ma hamu na mangalean in Toba Batak indexicalizes both parties of the participants are “safely blessed”. The first party of participants is those who treat meal and the second party is those who eat the meal. The traditional verse consists of four lines: the first two lines are called sampiran and the second two lines are called ‘content’. The first two lines mean ‘the aren palm tree growing on the valley’, the second two lines mean ‘we are who eat are safely blessed and so do those who treat’. In traditional verses, the first sentence is related to the third sentence and the second sentence is related to the forth sentence in rhyme (final equation of pronunciation); the first sentence is related to the second sentence and third sentence is related to the forth sentence in meaning (semantic relation). The semantic relation could be invented by the analysis of the domain as a symbolic category.

The pronunciation [marhalto] equals with [manganton] and [robean] equals with [mangalean] as seen in the following lines of the verse.

| Bagot na marhalto | ‘The aren palm tree which have fruits’ |
|-------------------|--------------------------------------|
| na tubu di robean | ‘grow the valley’                     |
| Horas ma hami na manganton | ‘We who eat are blessed’ |
| songon i ma hamu na mangalean | ‘so do you who treat’ |

The semantic relation of the first two lines and the second two lines is “causal relationship” or “cause and effect”. The valley which is usually fertile will be the cause of aren palm tree to have fruits, so do the people are blessed to eat because of the people who treat or give.

According to the fairy tale or legend of aren palm tree for the community at Lake Toba area, aren is regarded as the embodiment of a girl who wished to release her orphan brother whose legs were stuck
because of his debt. She sang and shouted to pray to her god that she would sacrifice herself for the prosperity of the local people if her brother was released. Her prayer was accepted by god that big wind came and changed her to be aren palm tree: her body became tree, her hair became fibers, and her tears became sap. One theme of this fairy tale indexicalizes that aren palm tree is likened as a girl. The similar indexicality is also recognized by other ethnic groups regarding arm palm tree as female. That is the reason why sap tapper’s song is addressed to female sex either a girl or a lady. There are some other examples of folk discourse using the element of the aren palm tree as the symbolic category. As a qualitative study, it tries to discover the “meaning” and the “pattern” of the folk discourse.

4. Conclusion
The local symbolic categories of planting aren palm tree starting from the papungu halto ‘collecting the fruit of aren palm tree’, mangalangkati halto ‘separating seed from the skin of the fruits’, parsamean ‘germination or making sprouts from the seed’, pambibitan ‘nursery’, manuanhon bagot ‘planting to the available field’, manjaga bagot ‘caring the aren palm tree’, up to maragat ‘harvesting or tapping the sap’ indexicalizes that aren palm trees grow by themselves at lake toba area. It is hardly found the modern planting of aren palm trees. However, the present symbolic categories newly adapted from national language indexicalize that there is tendency to pay attention aren palm trees as multifunctional trees.

Folk discourses such as cultural metaphors, proverbs, parables, traditional verses, and tales based on aren palm tree indexicalizes the collective memory of the local community. All folk discourses contain cultural resources related to the local community and understanding the folk discourses needs understanding the human beings and their culture.

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