R.S. Duin

A WAYANA POTTER IN THE TROPICAL RAIN FOREST OF SURINAM/FRENCH GUYANA

Present-day Wayana pottery production

Within the scope of my master thesis (Duin 1998) I conducted an ethno-archaeological study among the Wayana of Surinam and French Guiana beginning in 1996 (Fig. 1). In 1999 and 2000 I returned, in order to continue my study with the Wayana. Today there are circa 1000 Wayana and Aparai living in 21 villages along the Aetani, or upper Maroni river, separating French Guiana from Surinam. With the exception of two conglomerations of over 100 inhabitants, there is an average of 15 to 20 people inhabiting one settlement. It is a Tropical Lowland Culture, practicing slash-and-burn horticulture. Their language belongs to the Cariban stock. My fieldwork focused on different aspects of the material culture, but I was specifically interested in architecture and the ‘built environment’. During my stay among the Wayana I took part in all activities concerning daily life, and in this way I was also confronted with their pottery production. In fact, I appeared to be lodging with a potters son.

Fig. 1. Map of Wayana area in the Guyanas.

Prior to the fieldwork, I had seen several photographs (Hurai 1968; Darbois 1956) including ceramics. However, in the field, ceramics were scarce. Most have been replaced by metal and plastic vessels, cups and dishes. Western products have been adopted by many, for ceramics break easily and water boils more quickly in a metal container. Most ceramics made today are sold to tourists. Some vessels from this stock are used in a manner that differs from its originally intended use. Only elderly women use potteries occasionally to cook.

As traditional pottery making is disappearing in many societies, any archaeologist or anthropologist in a position to do so should record the procedures of potters still working (Rye 1988: 14). Hence, I paid several visits to Kumakapan, the village of Kali the potter, in order to study Wayana pottery production: materials, tools, techniques, and firing methods. In 2010 there were two potters, both female, among the Wayana of the Maroni: Kali and Alimina. Kali is in her fifties and some fifteen years younger than Alimina. Ninya, granddaughter of Alimina, is studying to be a potter. Both potters work independently and have no assistants. While manufacturing the vessel they keep contact with the environment and can participate in a conversation taking place in a nearby hut. Kali (Fig. 2) was proud that I showed interest in the pottery production process and was willing to provide information. This article is mainly based on observations of her activities and conversations with kin members. Wayana terms are written in italics for an enemic approach.

Production

Pottery (ébow) among the Wayana is produced with a kaolin clay (neumane) mingled with a little black clay (pulane) that is located in the very same clay bed. Both Kali and Alimina extract their clay nearly twenty kilometres south of their home village, a two-hour trip if not held up in one of the intermediate villages upstream by canoe. On the occasion of extracting, they combine this with a hunting/fishing trip of one or several days with the whole family. Next, the clay is stacked in a corner of the work hut, which is not exclusively used for pottery production. After a drying period of one to two months this block of dry clay is pulverised in a rectangular wooden mortar (ahou; whereby ahou means 'to eat, to chew') with a wooden pestle (akapip, literally: 'mother of the mortar', or in a second sense 'tooth of the one who eats'). Pulverised clay is dry sieved in order to remove undesirable inclusions. A required quantity of dry pulverised clay is dry sieved for a second time. Due to irregular mazes, smaller inclusions such as quartz particles are not sieved out. Wayana do not intentionally add non-plastic additives. In contrast to other Amerindian people in the Guyanas (van den Bel, Hamborg and Jacobs 1995), no ash from the akapi-bark is used as temper. A little water is added by hand to make balls of clay. In general, one clay ball serves to manufacture one vessel. There are more clay balls made than necessary for one session. Leftovers, when dry, are pulverised again.

To form the vessel, a little clay is taken from one of these balls. First a bottom (huchel) is formed in the hand by pinching, or squeezing clay between fingers and
thumb. Then clay is taken from the same ball and rolled into coils with the thickness of a thumb (sinewomat). These coils are added to the base, with a little overhang to the outside, and pressed to the preceding ring between fingers and thumb. This technique is known as 'ring building'. Six levels are needed for a 12 centimetre high cooking pot.

Wayana do not know the potter's wheel. A small plank or former piece of basker is used as flat surface support to place a larger vessel and turn it (Fig. 3). In this manner a restricted vessel with simple contour is made. Coils are evened with the thumb, from mouth to bottom. A scraper (pelo) is used to smooth the surface. This pelo is a five centimetre long rectangular calabash with rounded corners. Afterwards, an extra coil is added to the opening. By means of the scraper, the lower part of the body is driven outwards, and the wall below the rim inwards. Resulting in an independent restricted vessel with composite contour. In other words, a bowl with a globular wall with corner point and outflaring neck. Instead of a calabash scraper, some Amazonian people use shell for smoothing the superposed coils and shaping the ceramic. For example among the Iawa.

"Le mélange de terre et de cendre déboulé en forme de boulettes superposées, égalisé à la main et avec des coquillages" (Flornoy 1953: 204).

The rim is rounded and smoothed with a wet fungus (pitapita), that soaks since this water has been used to moisten the pulverised clay. To produce a 12 centimetre high

cooking pot with a diameter of 20 centimetre, an average of twenty minutes is needed before the complex shape is reached. A one-inch coil is reduced to a wall thickness of 8 millimetre. When the potter is satisfied with the form, she places the vessel in her work hut and covers it with a cloth. The vessel is turned upside-down, whereby the neck is supported by a cloth strip. The formative phase has been finished. A second vessel is manufactured.

The following day, the thick clay bottom of the vessel is reduced by means of the scraper. Inside and outside are burnished with a polishing stone (nele) - a reddish cobble—when the clay is leather hard. Kali, the potter, explains this is to drive out the water. Burning, alike the other activities, starts early in the morning. When the entire surface has been burnished the ceramic is placed aside. Later that day an additional burnishing session may take place.

When, according to the potter, all water is out—after one or one and a half hour since the formative phase has been finished—she starts a fire (ingot) just outside her work hut. Firewood is taken from the stock in the kitchen. This fire is increased by means of a fan (ngapamiti) and both vessels are placed sideways alongside this open-air fire (Fig. 4). Preheating takes place in order to eliminate all free moisture and minimise the risk of shattering during heating with quick-burning fuel. Kali observes the vessels from time to time during preheating, and if she feels it is necessary, some parts of the body are treated with the polishing stone.

After one hour both vessels are shoved in the hot ember by means of a pole, bottom-up. One end rests on a large block of wood or the other vessel to leave space for airflow on the inside. Fresh firewood is stacked in a pile, covering the two vessels. During this open firing process, the first stage is reducing due to an insufficient airflow. Yet when the pile starts to burn down, the vessels are exposed to air, resulting in an oxidised reddish brown outer core. Because the vessel is placed bottom-up the outer-outercore is more oxidised than the inner-outer core. Where firewood rests onto the vessel this melts in a reduced spot on the outer-outer core. Unfortunately, no temperature measurements could be taken. After half an hour, once the pile is burned down (Fig. 5), both vessels are shoved from the burning hot ember by means of a pole. When they have cooled off sufficiently to pick them up by hand, both are swept clean. Kali ticks with her finger against the wall to assure it is well fired. Maka, it is done, and she places the two vessels in the work hut. In these open-air fires the temperature does not reach high levels. Wayana do not make handles (epepithero, literally: 'with helper'). As they explain themselves, handles will break from the body due to low firing temperatures and heavy content—beverage (sil), or pepper water (num) for cooking.

After firing, apulukan-resin is applied onto the outside surface. This resin bears the same name as the tree it originates from (apulukan, Inga alba (Swartz) Willd.). Resin application gives the vessel a polished appearance. Wayana say this is to strengthen the pottery. After firing, the potter may well decorate the vessel by painting, incision, and/or modelling. Although not commonly practised today among the Wayana for 'it takes too much time' as they clarify themselves.
Fig. 4. Both vessels are placed sideways alongside an open-air fire during preheating.

Fig. 5. After half an hour, once the pile has burned down, both cooking pots are done.

Colour application on ceramics is threefold: uniform red, white-on-red, or polychrome. This practice differs from slip application as commonly seen with ceramic decoration. When the clay is dry, it is pulverised and sieved, as we have seen already for the preparation. This pulverised dry clay is mixed with mopa-resin (Poussaena courbaril, L.) and applied by means of a brush (imilkkup), consisting of a shaft of wood or bamboo with a feather or cotton tip. Points can be applied with a 'pointer' (eistkakam), a fishbone or sharpened splinter. Red clay (silu akpin) can be found higher on the bed slope; white kaolin clay (numuswi) from around water surface; black/blue clay (puluni) found in small patches in the same bed as kaolin; yellow clay (kuli) from the riverbed; yellow-green clay (katanus) from deep below the riverbed.

Incisions consist of zones filled in with dots, parallel lines, as well as zoned-incised-crosshatch (Fig. 6). Zones filled in with parallel lines named 'without dots' (esikakpin) in Wayana. Zoned-incised-crosshatch is named 'with dots' (ceitkakam). It appears figures are zones, filled in 'with dots' or 'without dots'. Depending on the technique utilized, the appearance of the idea 'with dots' consists of zone-punctate (drilling, painting), or zoned-incised-crosshatch (carving, painting). When carving wood, bone and shell, it is not unchallenging to make 'dots'. Therefore the idea of ceitkakam is converted into a physical appearance of crosshatch. On the other hand, all three appearances (dots, parallel lines, and crosshatch) can be applied by painting.
Use

Most ceramics are used in food processing (Fig. 7). For a more detailed description of the Wayana culinary tradition see "La marmite Wayana" (Schoepf 1979). The following elaboration describes the use of pottery some twenty years ago when plastic and metal vessels were less prominently present. Today Wayana have found a metal or plastic equivalent for each ceramic item.

First, there are large vessels (oha) for cooking and storage of drinks, especially for the large quantities of cassava beer. They have a large volume and a wide opening in order to stir the cassava beer with a small oat (zechotep) serving only for this purpose. Large quantities of cassava beer, for gatherings, were prepared and stocked in canoe-shaped...
wooden troughs with handles at each end ("banaaru or oki eni"). This name is general for beverage. To transport large quantities from one village to another, massive waterproof basketry containers (maipulu, literally: "upight") were used. Today plastic barrels are used to prepare, store and transport beverage. For distribution of drinks through the village, another vessel (kacimata) was used.

There are several kinds of beverages. Kacale, or the well-known cachiri, made from bitter manioc (suku, Manihot utilissima), is just one of them. Other drinks based on bitter manioc, but with different kinds of preparation, are kohuka, sakulu, and umasui. Sweet manioc (tapuaba, Manihot esculenta) is used to make a drink by the same name (tapuaba). Sweet potatoes are used to make supeku, bananas for palu evah ou banana juice, and sugar cane for awah evah. Just after preparation all drinks contain a very low percentage of alcohol and are consumed like beer in ancient times Europe.

"Haren dronck manadane van Casiar, is dikk gelijk Venetian Dry, maar is wichtigh ene krachtgron om te drinken als Haaferkorn Bier" (Petersen. De Vries 1911 [1654]: 190).

It is the common drink of everyone, even of the nippers. Only after three days of fermentation, and longer, does it attain a certain alcohol percentage and is it drunk during gatherings. Secondly, ceramics were used to serve beverage to guests, as described above. Most of these bowls (kalopo) have an outflaring rim, other bowls (tsinelli) have an inward turned rim. Bowls made of split calabash (klap, Crotonia cukui) serve this purpose too. These calabashes are also used to pour out drink in ceramics from the stock. Today saucepans, with an average content of two litres, are used. Thirdly, there are griddles to bake cassava bread. The ceramic one is named elin, while the metal replacement is named jam. Like all ceramics, the griddle (elink) is also made by the coiling technique. Fourthly, cooking pots (tunah evah) in which pepper water (tunah) serves to cook fish and game. Cooking pots seem to be larger variants of kalipo. Finally, plates and dishes (tsinelli), upon which food is placed. Food from the cooking pot is taken by the cook and placed upon his/her plate with a little tunah, some peppers and a little salt. Then, all who have been invited may eat from this plate. Cassava bread is placed upon another plate. When Wayana eat they do not drink.

Water containers (tunah evah) are not mentioned. The Wayana there do not have ceramic water containers. Calabashes (tapu, Lagenaria siceraria) are used to store water, although today they have been replaced nearly everywhere by plastic buckets or barrels. These are different from the calabash bowl (kalopo). Some are up to sixty centimeters in height, whereby the neck has been restrained during the natural growing process. These keep the water, obtained from a nearby stream or river, cool. Small ones can also be used as musical instrument, though principally used when babies are present.

Beyond food processing are 'former ceramic' (elinko), reused pottery; e.g. as a stove, or to mix soup with apulokura-resin in order to obtain a black colorant that is used in basketry and woodwork. The 'former bowl' (kalipo) is placed on top of a circular house as roof weight to prevent palm leaves from being blown away, and to prevent rain coming in. This is a cover to protect. In another case, related to a shamanistic tradition, a ceramic was placed in front of a persons face when he died. Yet another small bowl, with white hands on a plain red, had been dug up and reused to store beads. However, it is beyond the present article to discuss these items in detail.

Symbolism of pottery

Oral tradition tells why women have to manufacture and fire pottery. It was a menstruating woman who approached the 'Mother of the pottery', and the treasure had been spoiled forever.

"Car jadis, comme l'enseigne les récits mythologiques, les Wayana-Aparai recevaient toutes leurs terres caillus de la Mère de la poterie. C'est elle qui leur prodiguait les plâtres à galtes de manioc, les grandes jarres à cachiri, les marinades à caïne et les récipients à lait. Mais depuis que une Wayana indiscipline s'est rendue auprès de la gardienne, le trésor a tari et ce sont les femmes qui doivent façonner et cuire l'argile" (Schoepf 1976: 80).

Pottery (elink) is also linguistically related to woman (selili) and the female sex and womb (elit). In 1999, Kali did not make pottery because her son had become father of a baby girl. She explained that if her pottery would break during firing, this would cause damage in the lower abdomen - or womb - of her granddaughter. When the pottery (elink) breaks, the womb (elit) will break. This according to the Law of Resemblance. Only after a given time period is this taboo abolished. Other Wayana explicate that pottery is heavy and so the baby will become heavy.

In the myth of the Hero Twins (Mopo Kayului) we see how Mopo and Kayului were sheltered, when they were still in their eggs, under a large vessel (elink) by their grandmother Toad. Important elements of this myth are described by de Goeje (1941: 76-81), whereby de Goeje himself notes that this version includes many a hiatus, but the report by Couleau (1893: 548; Couleau writes Guaynari) is even less complete. Moreover, Couleau assumes this story is of Christian origin. De Goeje (1941: 77) considers this untrue. Further on in this story, grandmother Toad shelters under a ceramic bowl (kalipo) when the flood arrives. This myth conditions pottery as a metaphor of protection. Furthermore, Kayului builds the first roundhouse (tukuparan). On top of this roundhouse, a ceramic is placed as roof weight and to prevent rain coming in. Protection once more. The roundhouse, in itself a reference to the Universe due to its microcosmic nature, protects against the ferocious environment. We have seen above that pottery is related to the womb, and the womb protects too.

Pottery is mainly used to cook cassava and bake cassava bread. Lévi-Strauss, in his Mythology series, presents the symbolism of cooking.

"The cooking being a cultural transformation of the raw, and the rotten its natural transformation" (Lévi-Strauss 1978: 478).

Cooking, or boiling, is a 'cultural' act whereby both fire and water are used.

"Boiling takes place inside, whereas roasting is cooking from the outside" (ibid: 482).
And as Lévi-Strauss continues, boiling is 'cado-cooking'; in the house for a small, closed group, while roasting is 'ana-cooking' outside the house, offered to strangers.

As a consequence, pottery is symbol of culture. Referring to the protective womb and related to the Universe in which we dwell, pottery is a cultural medium to transform raw into cooked. Pottery is regarded the ultimate cover, i.e. protection.

Epilogue
This article is a contribution to the descriptions of procedures of traditional pottery making, as asked for by Rye (1988: 14). Although there is still the odd hiatus in this article concerning Wayana pottery production, e.g. temperature measurements and symbolic analysis of the motives themselves, it offers a rather complete portrayal of Wayana pottery production, along the upper Maroni, border river between Surinam and French Guiana, in the last years of the last millennium A.D.

Furthermore, this article is a contribution to the development of operational models for interpreting archaeological data concerning the study of ceramic production in the region studied by Caribbean archaeologists. Possibly the methods and techniques described in this article may give support to specialists in ceramic analysis in developing their hypotheses.

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Notes
1. In the summer of 1998, video recordings of the manufacturing process have been made too. These recordings have been used to review the pottery production process, and will be edited in the near future for educational purposes.

2. Today plastic sieves are used, replacement of basketwork sieves (matsen) as they are still in the production of cassava beer.

3. The same techniques are used for decorating the wooden disk (mathecarica) in the top of the community house.

4. There are three kinds of cassava bread, all made from bitter cassava. As the terms used in preparing cassava have no equivalent in English the Wayana terms are not placed within brackets. The mathecarica is ground on a small stone that is placed on a stangau, pressed in a stangau, dry stored on a mount, and finally baked - without further additions - on a dibémi; a stangau, thin and sun-dried, for long-time conservation. A stangau, thick, preferably to be consumed within three days; and a variety used to prepare cassava beer (for kandaka, adami, and unami). A kandak, course paste made from dried kandak that was left to dry in the bush after nuts were harvested, has to be eaten the same day. Griddles vary in diameter from twenty centimeters for kandak, supported by a tripod made, up to one meter - for stangau and stangaus, supported by three stones (kima aka, also called kimana abou), literally 'griddle breads'. Schepfl (1979: 60) notes that these former rough used as support are referred to as 'room of the griddle' (kimana ak), and a cylindrical support of pottery in the centre is named 'peaks of the griddle' (kimana rous).

5. Time is a mix of water and kandak (root) (later received from pressing bitter cassava, that is boiled next, and from which foam has been skimmed, to which red, orange and yellow peppers (ens. Capsicum frutescens) are added. A list of peppers for the elders and very few for the children for they do not like their meal spicy. If not finished, the fish or game meats in the pot that will be stored in the kitchen in order to serve for the next meal. Last scraps in sawa can be mixed with kandak from the bush and cooked to a runny adami, easy as dip for cassava bread.

6. This is a generic name, not to be confused with nova eni, or cooking pot.

7. For the Law of Resemblance see Albrecht (undated).

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