

Tooth transfigurement in Indonesia

by
Michael Martens

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ABSTRACT

Tooth transfiguration refers to various ritual practices, including tooth extraction, tooth cutting, tooth filing, tooth blackening and tooth ornamentation, that deliberately alter the natural state or appearance of the teeth. In Indonesia such rituals are usually part of a rite of passage into adulthood. This article introduces the subject of tooth transfiguration and gives the researcher a list of pertinent subjects and vocabulary to ask about.

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Some ethnic groups in Indonesia practice rituals in which they do something to alter their teeth. Many groups no longer practice such rituals but did so in the recent past. The purpose of this article is to make language and culture researchers in Indonesia aware of such tooth transfiguration rituals. This will enable them to better investigate such rituals that are practiced or were formerly practiced in the area of their research. This article introduces the subject and gives the researcher a list of pertinent subjects and vocabulary to ask about.

Tooth transfiguration, also called dental transfiguration, tooth mutilation, or dental mutilation, refers to various ritual practices that deliberately alter the natural state or appearance of the teeth. In Indonesia, such rituals are usually part of a rite of passage into adulthood. Some kinds of tooth transfiguration rituals practiced in Indonesia include

- tooth extraction (also called tooth evulsion);
- tooth cutting, either by sawing or chiseling;
- tooth filing or grinding, either to make the teeth pointy or to make them more even;
- tooth blackening; and
- tooth ornamentation.

Chewing ‘betel nut,’ i.e., areca nut, *Piper betle* leaf or fruit, and lime powder, is common throughout Indonesia. This practice dissolves some tooth enamel and stains the teeth. But betel-nut chewing does not fall under the category of tooth transfiguration for two reasons. First, its effect on the teeth’s appearance is incidental and not the main purpose of chewing betelnut. Second, it is not a rite-of-passage ritual, whereas tooth transfiguration rituals in Indonesia usually are.

1 An old practice

Tooth transfiguration rituals go back to the beginning of the Austronesian people, and perhaps even earlier.¹ There is archeological evidence that people groups in Formosa and

¹ Kruyt 1938 reports evidence that among the Napu people of Central Sulawesi, “...the custom [of tooth transfiguration] was not known a long time ago. The village head there said ‘The grandmother of my mother still had a complete set of teeth. Her daughter was the first to have her teeth knocked out.’” It is possible that tooth transfiguration rituals had died out in Napu and were then reintroduced. It is also

on the Chinese mainland practiced tooth extraction before the time that the Austronesian people dispersed from there.² According to the theory currently in vogue, it was from Formosa that the Austronesian people migrated out to eventually populate the Philippines and most of Indonesia, and then continued their spread on to Melanesia, Micronesia, Polynesia, and a few other regions.³

2 A widespread practice

Tooth transfigurement was and is practiced widely in Indonesia and in Asia in general. I spent some time combing the Internet and books, and I found references to tooth transfigurement practices in Sumatra, Java, Bali, Kalimantan, Sulawesi, and Papua. When I looked for information on the Asia-Pacific region in general, I found references to tooth transfigurement practices of one kind or another in these areas:

- mainland Asia (India, China, Burma, Vietnam);
- Formosa;
- Japan;
- the Philippines;
- parts of Polynesia, Micronesia and Melanesia;
- among the Australian Aborigines.

Encyclopedia Britannica⁴ mentions various kinds of tooth transfigurement rituals in Ecuador, some groups in Africa, and in ancient Peru, Mexico and Central America. So tooth transfigurement is not found in Asia only.

possible that the oral histories that Kruyt heard were not accurate. Even if Napu tooth transfigurement rituals were of recent origin, this does not mitigate the fact that such practices are millennia old in Indonesia.

² Sagart 2005. Robert Blust, one of the greatest authorities on Proto Austronesian, gives the date of 4000 BC for the beginning of the Austronesian migration from Formosa (cf. **Austronesian languages**. (2008). Encyclopædia Britannica. Chicago: Encyclopædia Britannica).

³ Laurent Sagart, a scholar in Austronesian studies, supports the Sino-Austronesian hypothesis. According to this hypothesis, Proto Austronesian and Proto Sino-Tibetan were closely related. One piece of evidence that he cites to support this hypothesis is that similar rituals involving tooth extraction are found among both Austronesian and Sino-Tibetan people groups. Sagart reports that there is archeological evidence that a specific type of tooth extraction ritual, namely the extraction of the upper lateral incisors in both girls and boys, was practiced in Dawenkou (a Neolithic culture of China) from about 4500 BC, and in western Taiwan around 3000 BC.

⁴ Body Modifications and Mutilations. 2008. Encyclopædia Britannica. Encyclopædia Britannica 2007 Deluxe Edition. Chicago: Encyclopædia Britannica.

3 A forbidden practice

In the colonial period, when much of the Indonesian archipelago was under the control of the Netherlands, the colonial government in some parts of Indonesia forbade rituals in which teeth were mutilated. This prohibition caused tooth transfiguration rituals to become rare or to die out completely in many parts of Indonesia.

For example, beginning in the 1920s the colonial government banned tooth transfiguration rituals among the Uma people of Central Sulawesi. In the 1980s an Uma author who was born around 1912 wrote an essay describing these rituals. In that essay he mentions by name two Uma men, who around 1930 disobeyed the colonial ban and as a result of their disobedience were taken away and imprisoned. Uma tooth transfiguration rituals became rare in the 1930s, and by the late 1940s these rituals had become virtually extinct. Many middle-aged Uma adults today are not aware that tooth transfiguration rituals were a common part of life as recently as their grandparents' generation.

Although the colonial government banned tooth transfiguration rituals in some parts of Indonesia, they did not do so in other areas. In Bali, for example, tooth transfiguration continues to be part of a rite of passage for youth entering adulthood. Perhaps the colonial government did not ban this rite in Bali because it was tied to the Hindu religion. Perhaps another mitigating factor was that the Balinese ritual does minimal damage to the teeth, especially when compared to the more drastic tooth transfiguration rituals among the Umans and other Kaili-Pamona people groups in Central Sulawesi.⁵

4 Types of tooth transfiguration found in Indonesia

Here is a brief description of the types of tooth transfiguration rituals I have found mentioned in Indonesia. This list is probably not exhaustive.

4.1 *Tooth extraction*

Tooth extraction, also called tooth evulsion, is the forcible removal of teeth. The most common teeth that are removed in such rituals are the incisors. The teeth to be removed are either struck with a hammer-like tool or jerked to the side with a lever-like tool to loosen them, then pulled out.

⁵ In the Balinese tooth transfiguration ritual, called *mentatah* in Balinese, up to six teeth are filed; it is unclear to me whether the six are the upper canines and incisors, or all four canines and two incisors. The filing of these teeth represents the eradication of the six internal enemies of mankind: *Kama* (lust), *Loba* (greed), *Krodha* (anger), *Mada* (drunkenness), *Moha* (confusion) and *Matsarya* (envy). (This information is condensed and translated from a web site:

http://mosalaki.multiply.com/photos/album/106/Upacara_Potong_Gigi. At the time of the writing of this article, there were two videos on YouTube that show a small portion of the Balinese tooth transfiguration rite. (cf. <http://www.youtube.com/watch?v=y4Q8rgEmibY>; <http://www.youtube.com/watch?v=U9Mf5b7Td8A&feature=related>)]

Among the Umas of Central Sulawesi, all of a young girl's incisors (four upper and four lower) were removed in the rite of passage called *mehopu*'.⁶ This rite was usually performed when the girls were beginning puberty. As mentioned above, the colonial government banned this rite beginning around 1920, and it had almost died out by the 1940s.⁷

4.2 *Tooth cutting*

In some tooth transfigurement rituals practiced in Indonesia, certain teeth are shortened. I label this tooth cutting. The most common teeth involved in tooth cutting are the canines and incisors. There are several methods used to cut or shorten teeth:

- a tooth can be broken off with a hammer and chisel;
- a tooth can be sawn off with a saw-like tool;
- a tooth can be sawn first to make a weak spot and then hit with a hammer or chisel to break it off at the weak spot.

In the Uma ritual called *mekeso*, a boy's incisors were cut to shorten them. I have no description of how this was done, but it was probably done either by sawing off the tips of teeth with a saw-toothed iron blade or by grinding the teeth down with a stone or file.⁸ This ritual was performed when the boy was in puberty or a young adult. Only the upper incisors were cut if the boy had a younger sibling. But if he had no younger sibling, both the upper and lower incisors were cut.

4.3 *Tooth filing*

Another method of tooth transfigurement is filing. Filing is done either with a metal file or a stone similar to the kind used to sharpen iron blades. The Indonesian dictionary *Kamus Besar* defines the verb *mendabung* (from the root *dabung*) as 'to make-even (file) the teeth before sharpening.' The presence of this word in Indonesian is evidence that such a practice was known in western Indonesia. Tooth filing can be subdivided into two types:

⁶ The root *hopu*' means 'extract, yank out' so the verb *mehopu*' can be translated 'extracting.'

⁷ I have taken the information on Uma tooth transfigurement rituals from two essays by Herman Rigo, which were published in Laua 2001. The contents of this book are in the Uma language, and as such are not yet accessible to the scholarly world. It is hoped that an English version will some day be published.

⁸ In Uma the root *keso* is used only of this tooth-cutting ritual. In Ledo and Tado/Lindu, the root *keso* refers to an initiation rite for females. In Pamona, the cognate root *geso* means to smooth something by rubbing it in a saw-wise fashion. The root *asa*, which may be from PMP *hasaq "to whet, sharpen" was used in some Kaili-Pamona languages to refer to tooth transfigurement rites.

4.3.1 Filing to make the teeth even

In this type of ritual, certain teeth are filed to make them even, i.e., so no tooth is longer than the surrounding teeth. Usually it is the canines that are filed, sometimes also the incisors, and rarely, the bicuspids.

4.3.2 Filing to make the teeth pointy

In this type of ritual, certain teeth, usually the incisors, are filed to make them pointy. I have found references to this kind of tooth transfiguration among the Mentawai people of Sumatra,⁹ among various groups in Kalimantan,¹⁰ and among the Kamoro people on the south coast of Papua.¹¹

In Indonesian, the phrase *memotong gigi*, literally ‘cutting teeth,’ refers in a general way to ritual tooth extraction, cutting and even filing. The phrase *mengikir gigi* refers specifically to tooth filing.

4.4 Tooth blackening

Another common tooth transfiguration practice in Indonesia is tooth blackening. A dye is applied to the teeth to stain them. Sometimes this is done in conjunction with tooth cutting or filing. Sometimes the surface of the tooth is abraded first so that the dye will bond more permanently.

The practice of blackening the teeth was widespread in the Asia-Pacific area. Lewis 2003 says, “Everywhere in Southeast Asia and Polynesia tooth coloring was used by indigenous populations to indicate sexual maturity or marriage”; he cites examples from Japan, Vietnam, the Philippines, Singapore, Indonesia, Madagascar, New Britain and Yap Island.¹² I have also found references to it in Burma and southern India.¹³

The art of tooth-blackening in Japan is called *ohaguro*, and used a mixture of iron and herbs. The following excerpt from Lewis 2003 illustrates the pervasiveness of tooth blackening in another Asian country.

In ancient Japan the art was developed to such an extent that the Chinese of A.D. 25 referred to Japan as “the country of the black-teethed

⁹ I found references to tooth-filing among the Mentawai people in various web sites by searching for sites containing the words “Mentawai” “tooth” and “filing.”

¹⁰ Jones. 2001.

¹¹ Lloyd Peckham, pers.comm.

¹² Lewis 2003, pp. 448-449.

¹³ The Encyclopedia Britannica article “Body Modifications and Mutilations” cited in an earlier footnote mentions tooth blackening in Burma and India.

people”.... Until 100 years ago, long after the practice had become unpopular among men, women still blackened their teeth as a sign of marriage, much as we use the wedding ring. (Lewis 2003, p. 448)

In Indonesia tooth blackening is referred to as *menghitamkan gigi*. It was practiced in Sumatra,¹⁴ Java, Bali, Kalimantan,¹⁵ Sulawesi,¹⁶ Sumba and Flores.¹⁷ It may have been practiced in other parts of Indonesia as well, but in my research to date I have found references to it in these areas only. Today there are only a few places where people still have first-hand or relic knowledge of tooth blackening processes, and “historical sources have by now become the primary resource for the study of this custom” (Zumbroich 2009, p. 382).

Methods for dying teeth varied from area to area, but usually involved the use of some kind of plant material. Zumbroich has cataloged over sixty plants that at one time or another were used in Southeast Asia to blacken teeth; most places however apparently knew of and used one or only a few plants. Zumbroich divides plant-derived tooth blackening substances into three categories: (a) plant sap; (b) soot and wood tar; and (c) dyes made by compounding a plant substance with a metal salt.

4.4.1 Plant sap

The simplest method for blackening teeth is to chew the roots, stems, bark, leaves or fruits of certain plants. Sometimes the plant part which caused blackening was added to a betel quid and chewed along with the other ingredients. Other times the sap or latex was collected and applied to the teeth with the fingers.

An example of plant sap is the red latex collected from the physic nut plant (*Jatropha curcas*) that was applied to the teeth in parts of Sulawesi. In different parts of the Philippines people chewed the aerial roots of the climbing aroid *Epipremnum pinnatum*, or the bark or fruits of *Paederia foetida* (*Rubiaceae*); in Java it was the juice of *Homonoia riparia* (*Euphorbiaceae*); while the “Orang Mamma” of Sumatra use the juice of a fig. (Lewis 2003, pp. 448-449.)

In general the effect of the plant sap was not immediate, but oxidation processes turned the teeth darker over time.

¹⁴ Lewis 2003, p. 448 says that the “Orang Mamma of Sumatra were known to file the crowns of their teeth to the gums at the age of puberty and to varnish the stumps and other teeth with the juice of a fig.”

¹⁵ Jones 2001.

¹⁶ Valentijn 1856, p. 205 refers to “Macassarese with their filed, black gleaming teeth.” Information on tooth blackening in Central Sulawesi is from my personal notes from my years of research in the Uma area, and also from Albert Kruyt’s 1938 book *De West-Toradjas op Midden-Celebes*. Parts of this book were condensed and translated into English by Luc Spyckerelle at the request of Lorraine Aragon, and made available to me by David Mead, pers.comm.

¹⁷ See the map in Zumbroich 2009, p. 383.

4.4.2 Burn products

Soot, which in some forms is also called carbon black or lamp black, was used by some people groups in Indonesia to blacken teeth. Usually this soot was obtained from a specific source. For example, after filing or cutting the teeth of young boys, the Umas stained the teeth with soot they obtained by burning wood from a tree called *pangajole*. (I have not been able to identify this tree species.) A person skilled in the art of tooth-blackening burned this wood and collected the soot on an iron blade held above or close to the fire.

A widespread method of collecting soot was to cover a burning piece of coconut shell with a second shell that had a hole in it. The oily soot rising through the hole was collected on a knife.¹⁸ Either it was applied directly to the teeth, or it was combined with ash and/or oil to make it a proper consistency for application. The Indonesian term for this substance is *gerang*.¹⁹

Another plant product used to blacken teeth is wood tar. Wood tar is a thick mixture of burn products and sap that oozes out when certain kinds of wood are heated. Zumbroich 2009 p. 390 notes that wood tar for tooth blackening was collected from langsung, mangosteen, durian and guava wood (these trees were cultivated, therefore the wood was readily available). Jones 2001 reports among some Dayaks of Kalimantan "...a dry wood known as *sinka* was heated on a metal blade that had been moistened with drops of water. Sap [probably wood tar] oozed from the wood to form a viscous liquid with the water which was then applied to the dentition." Lewis 2003, pp. 488–489 mentions in the Philippines the burned bark of *Antidesma* spp. (*Euphorbiaceae*); among the Dayaks of Borneo, the stems of *Agrostistachys borneensis* (*Euphorbiaceae*); and in Singapore wood tar extracted from the straits rhododendron *Melastoma malabathrium* (*Melastomataceae*).

4.4.3 Chemical dyes

Some indigenous peoples used chemical dyes to blacken teeth. These dyes were compounded from a plant extract and a metal salt. This process involved bringing iron (commonly) or copper (less often) into solution, for example by soaking metal filings or metal scraps in coconut water. Jones 2001 reports that the Tuaran Dayaks stain teeth with copper sulfate and young fruits of "pinang or betel palm"—by which I suppose he means the areca nut palm. Zumbroich 2009, p. 391 notes that in Viet Nam an "intensely black" dye was made by combining iron sulfate with pomegranate rind, areca nut, or galls (from *Rhus chinensis* Mill. var. *chinensis* 'Chinese gallnuts').

¹⁸ This substance is technically called empyreumatic oil of coconut.

¹⁹ *Kamus Besar* defines *gerang* as 'black powder from coconut shell charcoal, etc. mixed with oil to blacken teeth.' Another term is *mangsi*, which not only refers to ink but also to 'soot (*tepung arang*) for blackening teeth.' *Kamus Besar* does not specify the source of *mangsi*.

Galls, also called gallnuts, gall-apples or oak apples, are hard lumps on the leaves or twigs of certain oak trees or other trees that form when the tree is infested with the larvae of gall wasps. Interestingly in other parts of the world galls and iron sulfate were used to produce a black ink. In Europe, iron-gall ink was the standard for writing and drawing for well over a millenium. The Indonesian term for galls is *majakane* (also spelled *majakan*, *majakani* or *manjakani*). The definition in *Kamus Besar* for *majakane* confirms the association of galls with tooth blackening: ‘hard fruits used as an ingredient in medicines or tonics, and that is made into charcoal (*arang*)²⁰ to blacken teeth, containing tannin, which has an astringent effect (*Quercus lusitanica*).’ Again, the existence of such a term in an Indonesian dictionary is evidence for the practice of tooth blackening in western Indonesia. Stevens and Schmidgall-Tellings (2004), under its entry for *manjakani*, *majakani*, reports that oak galls were imported to Indonesia.²¹ This suggests that some Indonesian groups were open to using a better tooth-blackening product when foreign trade made it available.

4.4.4 Other tooth-blackening agents

In Vietnam some people groups stain their teeth using a substance called red sticklac, which is a resin produced by the tiny lac insect, *Kerria lacca*. This resin is mixed with lemon juice or rice alcohol. When applied to the teeth in combination with a solution containing iron and/or other substances, it permanently stains the teeth a blue-black color.²² Red sticklac was imported to the Philippines (Zumbroich 2009, p. 392), but I have not come across reports of this method used in Indonesia.

4.5 *Tooth ornamentation*

Jones 2001 reports that various people groups of Kalimantan decorate their teeth with various attachments. These include:

- brass studs, pounded into a cavity made with a bow-drill;
- brass inlays fashioned from wire into crude stars and pounded into the teeth;
- a thin brass plate worn over the incisors and hooked onto the molars;

²⁰ Other sources suggest that galls only need to be dried and powdered.

²¹ *Quercus lusitanica* is native to the Mediterranean area and Persia. Galls from this tree were an ancient trade item. In Indonesia it is possible that galls used for tooth blackening also came from other species growing at or closer to home. For example Waring 1897, p. 66 writes about galls marketed in India: “Many varieties of galls are met with in the bazaars; the best for medical use are globular, about the size of a nutmeg, of a yellowish-white colour and very astringent taste, with a small hole on one side of the surface. In the absence of this kind the other varieties of galls may be employed, as they all partake, more or less, of the same astringent qualities.” I expect Indonesian markets would have been similar.

²² Information was obtained from the web site <http://www.thingsasian.com/stories-photos/1296>.

- a thin ‘vener’ fashioned from copper and retained by a pin driven through the tooth in a hole created with a bow-drill.

I have not read of such tooth decorations in other parts of Indonesia. Most tooth transfiguration practices in Indonesia are part of rites of passage, but tooth ornamentation is more in the realm of cosmetic adornment.²³

5 Why tooth transfiguration?

In some Indonesian people groups, tooth transfiguration rituals are a rite of passage, usually performed at puberty or early adulthood. In some groups both males and females undergo the same or similar tooth transfiguration rituals. In other people groups there is a distinction made between the sexes. Kruyt 1938 reported that among some of the people groups of western Central Sulawesi, girls underwent more drastic tooth transfiguration rituals than did boys.²⁴ Also the tooth transfiguration ritual for girls was accompanied by a feast, whereas the comparable ritual for boys was not; for boys, circumcision was the more important rite of passage.

Among people groups that practice tooth transfiguration it is common for people to offer explanations for the ritual.

- Some people say that tooth transfiguration makes a person more attractive. A corollary to this is the belief that long teeth or white teeth make a person look like an animal.
- Some say that their tooth transfiguration practices make a person healthier.
- Teeth filed to points may make people look more aggressive and warlike.
- Others believe that filing a person’s teeth to points will ensure good hunting, since pointy teeth resemble the teeth of the wild pig.²⁵
- Jones 2001 cites the 1883 report of a missionary that the Dulit Dusun people “...do not file their teeth but break the upper incisors to gain a stronger blast at the *sumpitan*, or blow-pipe, in order to extend the range of his poison arrows.”

²³ From time to time I have seen adults in Sulawesi, especially in South Sulawesi, with one or more front teeth made of gold. Although such gold teeth are the product of dentistry, the choice of gold rather than porcelain for visible false teeth or crowned teeth may hark back to tooth ornamentation practices of the past.

²⁴ For example, among the Umas all of a girl’s incisors, both lower and upper, were extracted. But a boy’s incisors were merely cut shorter, not extracted.

²⁵ Jones 2001.

As with other rites of passage, there may be social pressure on young people to undergo tooth transfiguration, and those who have not undergone it may feel shame. Hollan 1996 quotes the words of an old man of Toraja, South Sulawesi:

We Torajas would have been ashamed if our teeth had not been filed.... If we had gone to market and our teeth had not been filed, we would have been laughed at and we would have been ashamed.... Also it would have been said that we weren't really Toraja if our teeth had not been filed. But nowadays it [tooth filing] isn't done. Formerly, it **had** to be done. (Hollan 1996, p. 70)

Often there are local stories to explain the reason for tooth transfiguration rituals. When the Umas still practiced tooth transfiguration rituals, people commonly told the story of a wife long ago who bit her husband in the penis during an argument. According to the story, this incident caused such concern that the elders decreed that henceforth all women would have their incisors extracted. Kruyt 1938 reports hearing similar stories among other Central Sulawesi groups. Such stories probably were invented to explain already-existing rituals, and are not to be taken as historical accounts of the origin of tooth transfiguration rituals.

6 Tooth transfiguration in Eastern Indonesia?

In researching the topic of tooth transfiguration, I have found frequent references to these rituals in western and central Indonesia, i.e., Sumatra, Bali, Kalimantan and Sulawesi. But I came across almost no references to tooth transfiguration rituals in eastern Indonesia, i.e., I found no references to it in Nusa Tenggara Timur²⁶ or in the Maluku provinces,²⁷ and only one reference to it in the Papua provinces.²⁸ I have thought of several possible factors that could explain this.

- Spotty research by me: It could be that I uncovered almost no references to tooth transfiguration rituals in eastern Indonesia because my research was spotty and incomplete.
- Lack of research by others: In general there has been less anthropological study of people groups in eastern Indonesia than in western Indonesia. And some of the research that has been done on eastern Indonesian groups is not readily available because it has not been widely published or is available only in out-of-print Dutch sources.

²⁶ I also found no reference to it in Nusa Tenggara Barat. But since that province is close to Bali, I am fairly certain that the lack of references to it in literature on tooth transfiguration is due simply to lack of scholarly research in that area.

²⁷ That is, the provinces of Maluku and Maluku Utara.

²⁸ That is, the provinces of Papua Barat, Papua Tengah, and Papua Timur.

- Austronesian vs. non-Austronesian: As mentioned in section 1, it has been hypothesized that tooth transfigurement rituals go back to the Proto Austronesian people groups of Taiwan, who took these rituals with them as they spread throughout Indonesia. It is possible that such rituals were unknown or not as widespread among the non-Austronesian people groups that already inhabited the archipelago. A large number of the people groups in eastern Indonesia speak non-Austronesian languages.
- ‘High’ culture vs. ‘low’ culture: It is possible that among people groups that had adequate food supplies and thus developed more elaborate societal structures, tooth transfigurement rituals were more likely to flourish. In contrast, such rites tended to die out among people groups with a limited or precarious food supply.²⁹
- Staple diet: It could be that rice-eaters or sago-eaters who have had some incisors extracted or cut can get along with little difficulty. But people groups that eat tubers such as sweet potato and yams as their staple food may have more need of their incisors to bite these tubers.

What I have written here in section 6 is speculation—more like hunches than hypotheses. I hope that it will incite some response from readers. If I get enough responses, either corroborating or contradicting my hunches, I will write a follow-up article.

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²⁹ Extreme examples of this are the Balinese, where tooth transfigurement rituals are elaborate, costly and linked with Hinduism; and the hunter-gatherer groups such as the Kirikiri in the Mamberamo region of Papua, who have no tooth transfigurement rituals at all. As Duane Clouse said of the Kirikiri, “They are lucky to still have teeth by the time they are adults!”

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