Gold Gilding
(A Traditional Craft in Kathmandu Valley)

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Introduction:

Gold gilding is one of the old professions in Nepal and is very famous and lucrative business. The skill is coming down from generation to generation within the certain class of the population- the Shakyas of Kathmandu valley.

Since the scientific method of gold gilding came into use, the traditional method should and would die out one day because the method of working in traditional method is premitive and tiresome. The cost price is also quite high in comparison to the scientific method. The scientific method is fast replacing its traditional counterpart.

So far to our knowledge, we do not know exactly when the art of gold gilding came into Nepal. Few pieces of gold ornament excavated in Lumbini and Kapilavastu shows that the custom of wearing gold ornament were already prevalent there before Christian era.

In Kathmandu valley the golden images were already in worship during sixth seventh century A. D. An inscription of Amsuvarma from Changunarayan of 607 A. D. states that the golden *asana* of Narayana including his *vahana* been renovated since the older one was broken (Bajracharya: 2030,317). Although the inscription was from 607 A.D. the original *asana* must have been older enough since this was renovated on that year. Changu Narayan was established by Haridatta Verma in 325 A. D. The image also could have been established then. Since we are not allowed to check and touch the image we can not say it definitely whether the image is of pure gold or gold gilded only. After Amsuvarma there are several examples of the gold offerings made during Lichchhavi period.

Most of the temples in Kathmandu valley were plundered and destroyed by the Muslim invader Sams-ud-din Illias in 1349 A. D. Therefore, we have no examples of such golden temples prior to that date.

When Kathmandu succeeded to arrange the trade agreement with Tibet in 1630s it enjoyed to have very good lucrative business of gold. All the gold dust that were produced in Mongolia were sent to Lhasa for processing out the gold. Since Lhasa did not have any skill for gold processing then, it

was diverted to Kathmandu for the same. It brought a good amount of gold as a revenue to the Kathmandu rulers. Once again most of the temples in Kathmandu valley got golden roofs and even the kings started to erect their statues with gold gilded (Acharya:2024, 343)

After the establishment of Tshing dynasty in China, Mongolia also came under its domain and this gold flow to Kathmandu was slowed down from 1716 but the skill was still exported to Tibet and the trade relation was maintained.Tibet still remained a sole trade-spot for Kathmandu businessmen until 1905. Then the business was shared by its Indian counterparts also as the Kalingpong route to Lhasa was opened by East India Company in that year. However, it remained until 1950s in smaller scale.

After the cut off of this business with Tibet, fortuntely the tourism industry flourished in the kingdom of Nepal which gave a con tinuing support to this craft. Good number of Nepalese curio items with gold gild could secure international market and thus could be exported. Besides, due to the public conciousnes of the archaeological conservation also this arts could still be survived without much setback.

Since the scientific method of gold gilding in modern world is introduced, it is highly feared that this traditional method will have to die one day sooner or latter.Although it is long lasting in nature the amount of gold spent on this traditional method is quantitatively more and job itslelf is tidious one. The scientific method is easy and cheap but lasts lesser period in time.

Procedure:

Before starting the real act of gold gilding we should prepare two major components- gold paste and surface of the base metal silver or copper. Since the gold is noblest metal it could be gilded only on those two metals.

In traditional methol no other base metal surface can absorb the gold properly. Sometimes if tried much, the amount of the gold wasted could be much more than the satisfaction of its result.

To started with the object in which the gold is to be gilded must be made ready in shape and it is cleaned thoroughly and then rubbed with sand-paper. The object to rub the surface was an overburnt brick in olden days and is now replaced by the different graded manufactured sand papers.

The surface should be rubbed in such a way that it should twinkle at its maximum and surface should be smooth. Then immediately it should be coated with mercury, otherwise due to the atmospheric reaction the surface will turn dark within couple of hours. If it turns so the surface has to be cleaned and rubbed again and the process should be repeated for gilding the gold until it gets as described above.

Once the object is ready for gilding, first of all the whole surface should be coated with mercury. It is done with the help of a piece of old cloth. The mercury is mixed with salt, *chu paun* (citric acid) and woodash plus water and then rubbed vigorously with the cloth. It is done exactly like a lady cleans the bottom of her cooking vessel. Slowly the mercury gets coated over the surface.

Once the mercury is fully coated, the object looks like a first class steel object.All the redness of the copper goes away. Then the object is washed carefully with clean water to melt out the salt and *chu paun* (citric acid) mixed with the woodash and mercury before. The surface would turn with unwanted

patches after gold gilding if the object is not washed properly in the water before coating the gold paste. The residual portion of salt and *chu paun* reacts with the mercury, gold and copper and gives those unwanted patches. Once the object to be gold gilded is ready on the other hand the golden paste should also be ready.

To make the gold paste, there are further different stages in which the final paste is made ready. As the gold is malleable metal the gold bullion is made into thinnest sheet possible. It was to be done with a hammer beaten method in olden days and is now repla ced by the electric pressure machine. In tra-- ditional method, the gold bullion was to be beaten with a hammer several times then heated and beaten again. The process is repeated until it gets a paperthin. Now adays there are iron rolls fitted with electric motor in which the gold bullion is passed through several times. Each time the gold piece is passed through, it gets thinner and thinner and is made thin gold ribbon at last. Then the golden ribbon is cut into smallest pieces with the help of a scissor.

Once the gold is cut into smallest pieces, it is then mixed with the mercury in one is to four ratio and grinding is started in a stone mortar with the help of a pestle. It is also done exactly like a lady grinds her spices in the Nepalese kitchen. But the act of grinding is done very slowly otherwise the drops of mercury and gold escapes away which are equally precious metals. The necessary amount of salt and *chu paun* are kept on adding to help the gold completely amalgamate with the mercury into the paste. The grinding process is very slow and tidious job. One trained man can grind maximum of only 20 to 25 grams of gold in a days work.

Once the gold paste is ready it looks like thick aluminium paint in colour. It seems that the gold is melted and mixed with the mercury. Paste does not look like gold. One can test it be feeling pressed between the thumb and index finger if the paste is ready. The ready paste is really fine grained.

When the paste is ready first of all it is portioned in bits, with the help of a copper stick coated with mercury, all over the surface which is to be gold gilded. It is done in order to divide the equal part of the paste for all the surface.

Once the gold paste and object to be gold gilding is ready and portioning is alright the gold paste is rubbed with the finger over the surface evenly.

The thickness of the gold gilding depends upon the amount of the gold available to the worker. Usually the medium gilding requires about five grams of the gold to a kilo of copper and two grams to a square foot in case of flat surface. The amount could be raised if one intends to gild thicker. In case of silver surface, the amount of gold required is fifteen to twenty per cent than required for the copper surface because silver is nobler metal than copper.

Once the gold paste has been coated all over the surface desired, the act of real gold gilding starts.The gold pasted object is brought near the glowing charcoal fire and object is heated in order to evaporate the mercury and the gold to be gilded. The object is heated for about ten seconds and taken out and brushed it with sweinhair brush followed by cotton swab. The wiping by the cotton swab helps the mercury and melted gold to be fixed evenly on the surface and slowly the evaporation of the mercury. Again it is heated and brushed and wiped in the same manner. The act is repeated eight to ten times.

depending upon the intensity of the fire. Once the gold is fully pasted over the surface, it looks bass yellow without twinkle.

Since this step is very important, it would be better to ellaborate more. The act of heating and brushing should be done very carefully, otherwise the surface gets over heated and gets uneven spotted and darkened as well. The content of the mercury should be evaporated. If not properly done the gold surface will get green and white spots again due to the presence of residual portion of the mercury. This act should be done slowly and carefully. Therefore it is always slower the better. A trained eye could judge if the mercury is still left over the surface.

After this much been done, the act of brightening the object starts. For this act, the gold gilded object is dipped in the water soaked with Chinese soap berry (*S. Saponaria*). The Chinese soap berry is soaked in the water for about a couple of hours. It is then taken out and slowly scrapped with the sharp edge of a carnelian knife. The carnelian knife is used because it does not leave the scratch mark on the surface. The bass yellow is slowly scrapped away by the carnelian object leaving tiny dots on the pours of copper surface Once the complete surface is done away witht his carnelian knife,the object is brushed lightly with a soft metal brush. It was done in olden days with short sweinhair brush. The act is called *Lasan Tayegu* (brightening the surface).

Now the object is nearly complete and twinkles but still exhibits some greenish yellow like that of brass metal.

At last, the wiping away of the brassy yellow colour is to be started. In this stage, the dried sticks of a plant called *majito* is boiled with water and the decoction is extracted. The decoction looks dark red like liquid of iron oxide. The decoction is put on a pot and the object is heated to some extent and dipped on this liquid. The object is heated to the point as if an iron is heated to press the cotton clothes. Then the heated object is dipped into the liquid. The dipping gives some sound. The object is rubbed with old cotton clothes each time and it turns more into golden colour as well. The process is repeated three to five times and even moresome times until it gets desired tone of golden colour.

Then the object is supposed to be ready gold gilded. For an information the *majito* plant grows around the hills of Sankhu township in the eastern of Kathmandu valley, and the objects needed for the act of gold gilding are:

Raw Materials

1. Gold
2. Salt
3. Mercury
4. Charcoal
5. Woodash
6. Majito plant (Rubia Cardifolia)
7. Chinese Soap-berry (S. Saponaria)
8. *Chu Paun* (Citric Acid)
9. Charcoal or Dried Cowdung Cakes

Tools

1. One Blower
2. An Oven
3. Cotton
4. Carnelian knife
5. An iron rod with hook
6. Clamp
7. Cutter (Scissor)
8. Fine soft old cloth
9. Stone mortar and pestle
10. One plate
11. One boilerpot
12. One small copper stick (coated with mercury)

13. One short sweinhair brush (now replaced by different soft metal brush.
14. Some pieces of over burnt black bricks. (now replaced by different shades of sand papers)

Conclusion

At last one can raise a question why gold gilding ?

It was customary practice among the rulers, elites and other rich people to offer an image or a costly donation to the temple in olden days Nepal. Gold, of course, would come in first place to offer. But one should mind that the limited production of it and its monetary value as well. Due to its lasting and prestigious nature people invented the art of gilding gold over different other base metal surfaces. It could last long and exhibit as if it is made of gold. Due to its marvellous looking, preciousness and beauty, people started this method to adopt in offering valuable donations to the temple and decorate other many parts of the architecture. It has been the token of beauty, prestige and pride.

The chief donors of such golden offerings were mainly kings, chieftains, nobles, richmen and craftsmen of this skill as well.

Usually important figures of gods and goddesses like Vishnu and Shiva, Buddha and Bodhisatvas; important personifications like kings and nobles; important divine *Vahanas* like *Garuda* and *Nandi*; important architectural pieces pinnacles, tympanums, main entrances to the royal palaces and temples; rooftops of the major temples like Pashupatinath, Taleju, Swayambhu and Boudhnath and other many temples are found gold gilded. Most of the resident of the royal deities are gold gilded offered by the state or the royal families and Buddhist shrines are gold gilded since the professional goldsmiths are Shakyas, a Buddhist sect in Kathmandu valley.

Most of the main deity in the Vahals of Kathmandu valley and Gompas of the Himalayan regions are either made of gold or if not gold gilded at least. The number exceeds more than thousands.

In Nepal, the main activity of this craft was scattered in the three cities of Kathmandu valley, Dolkha in the east and Palpa and Pokhara in western hills. Newar craftsmen could enjoy this lucrative business as far as in Lhasa, the capital city of Tibet. Most of the Tibetan monasteries possess thousands of such golden images in their collection made by the Newar people of Kathmandu valley. But it is now centered only in the three cities of Kathmandu valley where one can get this service.

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