

Filigree and Niello Techniques in Jewelry That are Integral Parts of Traditional Anatolian Clothing

İlknur Demirbağ¹

Abstract

Anatolia is a rich cultural region with a long tradition of jewelry making. Rather than being an attempt to stand out in society by being adorned, the first jewelry used had implications connected to fertility spells and protection. Having many distinguished connotations today, jewelry may be defined as “special items in which traditions and beliefs play an important role in their creation and use, typically made of metal and decorated with stones, and mostly used by women for adornment.” Gold is one of the most valuable and commonly used material in jewelry manufacturing, despite the use of many other ones. There are numerous construction techniques when we examine the processing methods that are employed. The earliest and most exquisite forms of Turkish jewelry art are the ones employing filigree and niello techniques. Data obtained from archaeological excavations show that filigree technique has existed since 3000 BC. In Mesopotamia, it dates back to 2500 BC. This technique continues to be used in Anatolia to this day. The craft of filigree, as demonstrated by the surviving examples, originated primarily in Southeast Anatolia and disseminated throughout the Turkish people starting in the 15th century. Filigree engraving has survived to this day thanks to jewelers, whose trade circle shrank as the jewelry craft transformed as a result of industrialization. The main locations where filigree craft is still practiced are Mardin, Midyat, Ankara, Beypazarı, and Trabzon. Niello, a jewelry-processing technique that originated in the Caucasus and Dagestan about 200 years ago, was one of the most well-liked handicrafts of the Ottoman Empire. This technique is among the silver-smiting techniques used in 120 workshops in the province of Van, particularly during the 1800s. It is one of the handicrafts that has persisted and is still being practiced today.

1 Istanbul Technical University, Türkiye, demirbagi@itu.edu.tr,
orcid.org/0000-0001-5537-979X

Introduction

A unique place among the artifacts from antiquity to the present is jewelry, which functions as a kind of mirror reflecting the cultural traits of the time. Every single one of them is a tangible cultural component that connects the past to the present by bearing witness to history. Additionally, jewelry reflects the exquisite taste and craftsmanship of human kind.

It is therefore crucial to emphasize that filigree and niello in jewelry, which hold a significant place among the complimentary components of Anatolian clothing taste, are still in favor and help maintain cultural heritage.

Although samples from both men's and women's jewelry are used to explain the topic, a framework has been developed to discuss the images and the approaches that are preferred for them, without holding down the text. Naturally, there are several angles on which to analyze the topic, including how certain techniques have evolved historically. However, this was not preferred because it is a pretty vast subject in and of itself.

Alongside to referencing existing literature on specific topics, the author's extensive experience working on the subject over many years and having seen and touched several works, provided a substantial contribution to the text. Experiences with this topic are based on research that was submitted in 2006 to the ITU Institute of Social Sciences as a thesis for proficiency in art. This part contains a brief excerpt from the thesis, which is based on the works carried out with prominent names, like Sabiha Tansuğ and Gökseven Ileri, who have sizable collections. The thesis also involved taking pictures of the majority of the pieces in the artists' possession and generating catalog information.

Having many distinguished connotations today, when it comes to traditional jewelry, this term may be defined as "special items in which traditions and beliefs play an important role in their creation and use, typically made of metal and decorated with stones, and mostly used by women for adornment."

Rather than seeking to stand out in society by being adorned, the earliest jewelry used throughout the human history was interpreted with spells such as fertility and protection. Jewelry art and jewelry, which are parts of our historical richness, which all nations and civilizations from the Hittites to the Sumerians, from the Seljuks to the Ottomans left their traces on while creating and developing them, and to which we are the inheritors, began to be used as adornments over time with the development of societies.

An example of the meaning of these first jewelry used by humans regarding protection and fertility spells is as follows: “For example, a necklace made from the teeth and nails of predatory animals used to show the mastery and courage of the hunter, and on the other hand, it was also an amulet showing that the power of this animal had passed to the hunter” (Türe and Savaşçın, 2002:12).

Jewelry also serves as a symbol of the civilizations to which it belongs in the Anatolian culture, where various societies and cultures follow each other and blend together to form a harmonious social fabric while maintaining historical integrity.

Jewelers’ creations, with their multitude of items, represent not only the technological and economic development levels of the cultures in which they live, but also the beliefs and aesthetic preferences of those societies. They do this by combining creativity, mastery, and patience with the knowledge and experience transferred from generation to generation.

The symbolism found in jewelry has always held significance, despite the fact that new techniques and materials have been utilized to create this form of craftsmanship in response to changing eras, beliefs, and cultures.

For example; one such symbol of abundance is the shell stone, or *kespikh*, used in jewelry. Its triangle design can be seen as a blessing or as a shield against evil eye.

Particularly found on women’s headpieces and belt buckles, the Seal of Solomon design is said to provide twice the protection against the evil eye. It is formed by overlapping two equilateral triangles upside down to make a six-pointed star.

Green is the color of prosperity and abundance, whereas red is the color of happiness and gladness. Blue, on the other hand, is enhanced when it is used particularly on amulets that offer protection from the evil eye.

The crescent represents the young girl. Furthermore, the crescent is seen to be proof of the matriarchal nature of families.

Half-moon earrings are a traditional sign of the transition from girlhood to womanhood when it comes to women’s representation, especially for brides.

The full moon, on the other hand represents the mother woman.

However, upon examining the materials used to make jewelry, we find that while a variety of metals have been utilized throughout history, the majority of materials seen in traditional jewelry today are gold and silver.

The softest and easiest metal to shape is gold, which is also a good conductor of heat and electricity. Its color lasts for many years, because it doesn't go through chemical reactions. There are variations based on the level of purity. The proportion of copper and silver that is blended into it in jewelry affects its grade. The most common gold grades are 22, 18, 14, and 8 carats.

Due to its lower price, silver is more readily accessible than gold, but processing it is also more difficult. Nonetheless, during the processing step, it is still utilized by hardening it with copper. Silver naturally oxidizes, which is why it changes color with time. In jewelry, it is typically used as 925 carats.

“The Chalcolithic period, which spanned from 5,500 to 3,200 BC, is when silver and gold were first used. Gold jewelry was rarely used as a burial offering in ancient and classical periods; instead, it was typically made as a gift to temples. Gold jewelry became widely used in daily life during the Hellenistic period when the Thracian gold mines were opened and the vast amounts of gold and silver that were kept in Persian treasury were put into circulation.” (Higgins, 1980, Türe and Savaşçın, 2002:106)

“Emulating the ostentatious Persians, the nobles and wealthy merchant class supported the artists, and their excessive demand for artistic jewelry enabled the production of finely crafted jewelry.” (2002:106)

Recent history reveals that Mehmet the Conqueror's settlement of Armenian masters in various cities following the conquest of Istanbul in 1453 marked the beginning of the Ottoman Empire's increase in the manufacturing of gold jewelry.

Numerous manufacturing techniques are visible when we examine the jewelry processing methods, which is the primary focus of this text. The earliest and most exquisite forms of Turkish jewelry art are those utilizing the filigree and niello techniques.

1. Filigree Technique

“The Persian word “Filigree” describes the technique of reducing silver to a thin wire, braiding it into a design, and soldering it.” (Meriç, 1993:47)

In more detail, filigree is defined as “an elegant lace-like latticework made by arranging thin gold or silver wires to form various patterns by bending,

wrapping, or braiding them, then soldering them to a metal background or each other.” (Encyclopædia Britannica, C. 20: 509)

Given that the Ottoman letter “waw” is a pattern on filigree objects, it is also referred to as “waw work.” It goes by the name Filigree in international sources.

It is also referred to as “tweezer work” because a tool known as a “tweezer” is used in its manufacturing.

Data obtained from archaeological excavations show that filigree technique has existed since 3000 BC. In Mesopotamia, it dates back to 2500 BC. This technique continues to be used in Anatolia to this day. The art of filigree is believed to have originated primarily in Mosul during the 12th century, and then spread to Syria and Anatolia.

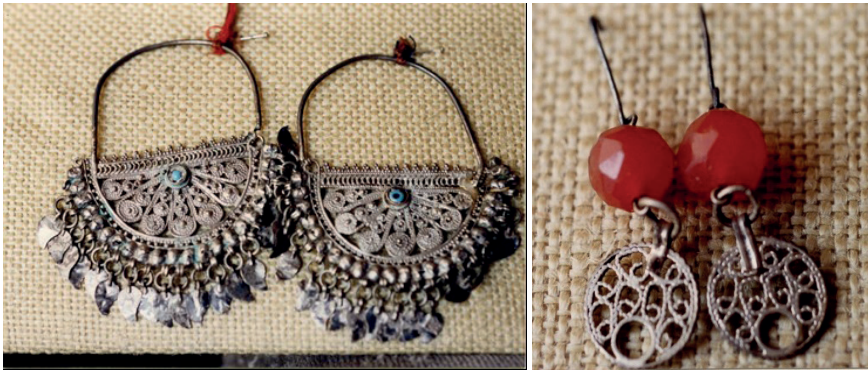
It is well known that Turkish filigree art spread widely during the fifteenth century and evolved significantly, particularly in Southeast Anatolia, where examples of the craft have persisted to this day. Among the locations where the craft of filigree is preserved are the provinces of Mardin, Midyat, Ankara Beypazarı, and Trabzon.” Currently, this art form is flourishing in the most exquisite ways in Erzurum, Kayseri, Bartın, Eskişehir, Trabzon-Sürmene, Kars-Hanak, Central Urfa and especially Ankara-Beypazarı.” (Meriç, 1993:47-48)

The range of traditional Turkish jewelry worn by women is far greater than that of men. Particularly, a lot of head jewelry is seen. The jewelry used in head adornments includes headpieces, forehead ornaments, ear ornaments, chin ornaments, nose rings, earrings, neck ornaments, several types of headscarf pins, and hair ornament combs. In addition to these, women wear a variety of additional jewelry, including necklaces, jowl ornaments and amulets around their necks, and belt buckles, belts and aprons around their waists. In several of these pieces of jewelry, the filigree technique is commonly used.

Particularly in jewelry for women, the filigree technique is widely used due to the elegant appearance of wire-made lace.



Göksenin Ileri collection, silver filigree belt buckle



Sabiha Tansuğ collection, two pairs of silver filigree earrings

Its creation calls for patience and skillful labor. The material that the filigree master will utilize is created by himself. First, a mold is filled with the melted metal (usually silver) in the crucible, and the metal is formed into a rod. This rod is then processed into a wire by way of a steel mill. This process is quite time consuming and difficult. The rod is drawn out of the mill's other end after entering through its wide end. During this process, it becomes longer and thinner. This process continues until the desired fineness is reached. Stated differently, it takes until the metal rod, which measures around 0.5 cm, becomes 1 mm. In the meantime, the metal hardens. It is heated on an asbestos layer to anneal it, making it easier for it to go through the rolling mill again. The master, meantime, is wearing a broad belt made of heavy leather and decorated with hoops. He uses his physical strength

to finish this task by attaching the end of the wire to these hoops when he requires extra arm strength to create an extremely long wire.

Once the material is ready, the next stage consists of two parts. Preparing the “muntach” - the primary blueprint for the work at hand - that will act as a guide for the master, is the first step. The thickness of the that will be utilized in this particular instance is double that of the wire that will be used to insert the motifs. The method used to join the wires is welding. By the way, while welding such small wires, temperature is crucial. Because the wire will melt if the heat is applied even slightly too much. Therefore, it is a process that requires meticulousness and patience.

Once the skeleton (muntach) is finished, motifs with names like waw, rope (güverse), mesh (tırtıl), kake, dudey, rose, etc. are produced with thinner wires and inserted inside. Welding is also used in this process.²

Following the assembly of all the components, the work that has become discolored, rusted, or unclean during these stages is bleached to restore its original brightness. For this reason, it is placed into a copper container filled with water containing nitric acid. The required color will be achieved by boiling it for a few minutes. It is then thoroughly cleaned with water and allowed to dry. Then, it is thoroughly brushed once more - today with soapy water and a fine-wire brush, but in the past with soapwort³. This also cleans the surface of burrs and extra residue left behind from welding. Finally, the process is completed by polishing the surface with the help of a flat piece of steel.



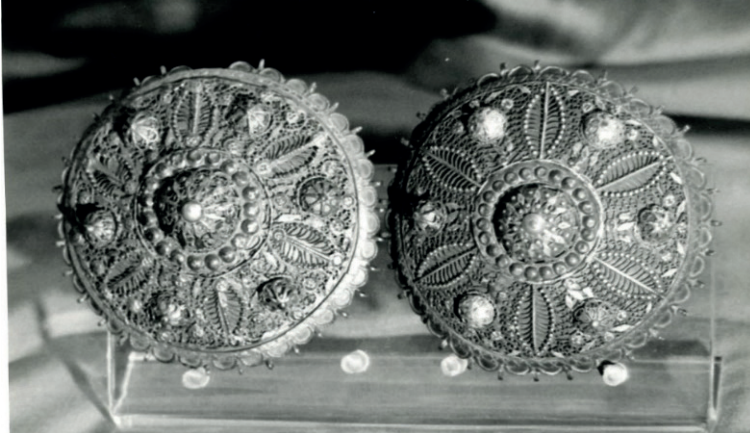
Göksenin İleri collection, silver filigree belt.

2 <http://www.suryaniler.com/kultur-sanat.asp?id=369>

3 Soapwort: It is a plant and its seeds are very effective at cleaning. It is applied as an all-natural soap.



Göksenin Ileri collection, silver filigree headscarf pin



Göksenin Ileri collection, silver filigree headpieces.

2. Niello Technique

The word Savat (Niello) comes from the Arabic word “esvad”, which means “black”.⁴

One of the silver processing methods used at 120 workshops in the province Van, particularly during the 1800s, is Savat (Niello), a jewelry processing technique that originated in the Caucasus and Dagestan approximately 200 years ago and was one of the most well-liked handicrafts of the Ottoman Empire era. Even though these workshops in Van were gradually closed during the years following World War I, Savat is nevertheless considered to

4 <https://ci.turkpatent.gov.tr/Files/GeographicalSigns/b61585f5-0145-42e2-aafe-418b5dceb570.pdf>

be among the handicrafts that have endured and are being preserved today. It is also known as Niello.

The first step in using the niello technique is for the artisan to engrave the required shape onto the object that needs to be manufactured. Then, the preparation of the niello mixture starts. The name Savat (Niello) refers to an alloy of sulfurous, black metal. Sulfur, copper, lead, and silver are combined in specific amounts to create this alloy. “These mixtures are made independently. Then firstly, copper and silver are melted together in a crucible. Four scales of lead are then added to this solution. Afterwards, the transfer of sulfur starts. The adding process is kept up until a dark gray color is achieved.” (Şekerci, 2014:105) This process is called sulfur feeding.

There are two types of niello techniques: pouring and sliding. With the pouring technique, after the alloy is melted and combined with baking soda in a crucible, it is let to dry. Subsequently it is pounded into a powder using a mortar. The powdered niello mixture, which has been sieved, is poured onto the carved patterns on the metal to be processed. It is baked at low temperature to ensure that the alloy spreads into the slots. The piece is then allowed to cool before being polished and carried to its final form once it has been filed and leveled.

With the sliding technique, borax is mixed into the powdered sulfurous alloy. In this way, a mud is obtained. After applying the niello in the form of mud to the design that is going to be filled, each step of the pouring technique is applied one after the other. All that separates them, is that the niello used in sliding technique is placed in the slots in the form of mud, and the niello used in pouring technique is placed in the slots in the form of powder.



Göksenin Ileri collection, niello belt buckle.

Traditional men's jewelry is less diverse than women's jewelry. These jewelries were usually made of silver. The main men's jewelry are amulets⁵, rings and chains⁶. One of the metalworking techniques used on these jewelry is niello.



Göksenin Ileri collection, silver niello amulet, flat



Göksenin Ileri collection silver niello amulet, cylinder

However, items that are regarded as accessories as well as jewelry for men can both use the niello technique. Among them are tobacco cases in particular.

5 Amulet: Cases in which people place papers on which they write prayers to ward off evil.

6 Chain: This is the decorative piece seen on men's pocket watches and the chain that fastens the watch to their clothing.



Göksenin Ileri collection, silver niello tobacco case.

In addition, it is a metal processing technique used in women's headpieces, belts, belt buckles and bracelets.



Göksenin Ileri collection, niello headpiece.

The combination of the two techniques is quite common, particularly in jewelry designed for women. The buckle of the belt, in particular, is often adorned with filigree, while the belt itself is ornamented with niello technique.



A belt for women that combines the usage of filigree and niello, from the collection of Göksenin Ileri.

Conclusion

Since the end of the ice age, when humans finished their biological and cultural evolution, jewelry making has been one of the earliest examples of primitive art. As a result, the human impulse to interact with others and project status has been linked with jewelry, which for thousands of years has been the best way to express symbols.

The purpose of traditional men's and women's jewelry has been to shield against the evil eye since the moment of birth, even if it has become increasingly common in women's lives, particularly after marriage.

It shouldn't be assumed from this article, which aims to provide specific examples of niello and filigree techniques, that traditional jewelry exclusively utilizes metals, or that there are only two types of metal processing techniques. It is important to emphasize that a broad range of materials and processing methods are used to create jewelry.

Regarding the usage of these two techniques in women's and men's jewelry, it is especially evident that nearly all men's jewelry is ornamented with niello technique, whereas both niello and filigree techniques are used together as well as individually in women's jewelry.

Over time, jewelry has evolved from its original goal of making life easier to become a popular choice for gifts, votive and ornaments. Throughout entire time, jewelry created using a variety of materials and techniques, particularly niello and filigree techniques, continues to exist and inspire contemporary jewelry with its examples in traditional jewelry worn today.

SOURCES

Printed Sources

- Altan, T.- Savaşçın, M. Y. (2002). *Anadolu antik takıları*. İstanbul: Goldaş Kültür Yayınları
- (Encyclopædia Britannica (1990) Telkâri. C. 20, İstanbul: Ana Yayıncılık A.Ş.
- Atanur, M. (1993). Telkâri. *Kültür ve Sanat*, 19, İstanbul: Türkiye İş Bankası Yayınları.
- Higgins, R. (1980). *A Grek and Roman jewellery*. London.
- Şekerci, H. (2014). Kuyumculukta savat tekniği ve savatlı takı uygulamaları. *Vocational Education*, 9(4), 100-109.
- Türe, A. (2005). *Takımın öyküsü*. İstanbul: Goldaş Kültür Yayınları.
- Türe, A. (2006). *Takımın öyküsü*. İstanbul: Goldaş Kültür Yayınları.

Internet Sources

- <https://www.iko.org.tr>
- <https://www.midyat.net>
- <https://www.nefisyemektarifleri.com/blog/coven-otu-nedir-nerede-yetisir-faydalari-nelerdir/>
- https://www.unutulmussanatlar.com/2012/07/savat-isciligi_77.html
- https://www.unutulmussanatlar.com/2012/10/telkari-sanat_36.html

Photos

- Demirbağ, İ. (2006). *Jewelry and accessories in Turkish traditional clothing*. İstanbul: İstanbul Technical University, Institute of Social Sciences Thesis of Proficiency in Art. Photographs taken by Ahmet Turan Demirbağ.

