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Apprentices and masters - the transmission of ancient goldsmith techniques

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Abstract. A historical overview from Sumerians to the present day on the goldsmith's craft following two lines: the apprenticeship in the guilds and the ethical and religious value of gold working.

Keywords. Apprentice, master, ancient techniques, goldsmith.

INTRODUCTION

What is the value of knowing the ancient goldsmith techniques today? Is it possible, once rediscovered, to put them into practice again? With which advantages and for whom? The answer to these questions depends on the vision one has of the work: whether it is perceived as a shared activity and integrated into the ethical and political sphere of the community, or whether the consideration of the work is an individualistic one. The shared vision implies the preservation and transmission of experiences since a value as such is recognized to technical abilities. In this case the profit is subordinated to a historical identity kept alive over time. The individualistic vision, on the other hand, has - as its objective - the maximum economic profit in the face of minor expenditure: it is not linked to the context in which it operates, to history, to tradition, it does not imply aesthetic or ethical evaluations. If an individualistic, exclusively economic vision prevails, knowing the ancient goldsmith techniques is of little use: it can be only useful for marketing purposes, regardless the quality of products. But for those who want to give artisan work an ethical, aesthetic and social value, it is necessary to research, study, learn, practice and protect ancient technologies. This contribution, with some brief archaeological and historical examples, wants to remember the importance of a philosophical approach to craft activities, which otherwise are destined to disappear if forced to adapt to the disruptive technological innovations of our day.

Few human activities can continue to use the same working methods over time without them becoming obsolete. The craftsmanship of the workshop is among these: it has changed little over the centuries and today it is undergoing a period of serious crisis, at least in Italy. The validity of the



Figure 1. 22 kt gold classic Greek style earrings, diameter 2.5 cm. Technique: filigree. Author: Alessandro Pacini.



Figure 2. Fibula in gilded silver, garnets and bone. Length 3 cm. Technique: cuttlefish bone fusion, pure gold leaf gilding. Author: Alessandro Pacini.

working methods over time depends on the family-type organization of the artisan laboratory and on the limited and mainly manual production of the artifacts. This gave the crafts a rituality, a respect that sometimes brought them closer to the world of religion or magic. Looking back to the most remote past of the goldsmith's art, we can see that in all ancient civilizations skills and craftsmanship were considered of divine origin. Not all human beings achieved the knowledge of the mysteries which lie in the transformation of matter: among the chosen persons, secrets were shared and transmitted within associations of experts (often constituted in trade associations or corporations). Thus we are witnessing two parallel stories, that of the divine origin of the arts and that of the professional corporations. Mircea Eliade writes: "The smelter, the smith and the alchemist claim a common magical-religious experience [...] the secret of this experience [...] is transmitted through the initiation rites to crafts" (Eliade 1987, p. 8). And then: "The Celestial Smith completes the creation, organizes the world, establishes culture and guides human beings towards the knowledge of the mysteries" (p.153). There are numerous documentary testimonies of the divine origin of the arts and often in particular of the goldsmith's art, gold having always played a magical role thanks to its beauty and incorruptibility. A list of Sumerian kings (written between 2100 and 1900 BC) states that each sovereign was assigned a semidivine mentor, an Apkallu, to teach all the arts, including that of the government (Pettinato 2004, XXII). In ancient Egypt there were various deities connected more or less directly to the artisan crafts: Ptah (the god of pottery) who dictated the rules of artistic creation, Khnum (who created men by modeling clay on the lathe), Neith (the inventor goddess of the shuttling for weaving), Thot (the god of magic, writing,

geometry and mathematics), Maat (the divinity of Harmony and Equilibrium). In Egypt the Houses of Life were already present in the Old Kingdom during the third millennium BC and have continued to exist for many centuries maintaining a multidisciplinary pedagogical vision. They were cultural centers where various arts were taught, including writing, embalming, and magic. Connected to the Royal Palace or the Temple, there were schools of mathematics and geometry for the calculation of proportions, where the artists learned techniques of ornament and sculpture, and the goldsmith arts. The Houses of Life probably were also attended by Zosimos from Panopolis, an alchemist and Gnostic mystic who was one of the first authors of alchemy and who lived between the 3rd and 4th century AD in Egypt which by that time had become a Roman province: "Only with a methodical discipline and treasuring the teachings of the ancients can man heal from poverty, that is the loss of the sense of unity between microcosm and natural and spiritual macrocosm" (Tonelli 2004, p 101). Even the Minoan civilization had deities that supervised the crafts activities, such as Khousor, Kothar and Talo. Some ceramic tablets found in Pilo (a Mycenaean city in Messina) attest the existence of professional guilds in Crete. In the Royal Palace G of Ebla, in ancient Syria (2400-2250 BC), 17000 ceramic tablets were found with cuneiform inscriptions: some indicate the specialization of the craftsmen of precious objects in detail. Jacopo Pasquali has identified specialized figures in the processing of natural carnelian of light orange color (si-si), and of the heat-treated dark red carnelian (gug-gul). He identified the: puzur-ra-ma-lik lú si (i.e. master cutter of carnelian), the: da-zi-ma-ad (i.e. helper cutter of carnelian), the: ib-du-ma-lik lú si (i.e. expert

craftsman in a processing phase of carnelian natural), the: iš-a-ma-lik lú gul-si (i.e. expert craftsman in a processing phase of the carnelian tractors), the: dumu-nita lú si-si (i.e. apprentice cutter), the: dumu-nita-gùn (i.e. apprentice dyer of carnelians) (Pasquali 2005, p.10). Given such a specialized level of processing of each single gem, it is possible that corporative work organizations already existed, although they were controlled by the royal palace. In the Bible we find the action of the holy spirit at the origin of technical abilities: “Moses said to the Israelites: «See, the Lord has called by name Bezaleel, son of Uri, son of Cur, of the tribe of Judah. He has filled him with the spirit of God, so that he will have wisdom, intelligence and science in every kind of work, to conceive projects and make them in gold, silver, copper, to carve the stones to be set, to carve wood and make all sorts of genius work. He also put in his heart the gift of teaching and so he did with Ooliab, son of Achisamach, of the tribe of Dan»”. These are the verses 30-35 of the book of Exodus, written between the sixth and fifth century BC, but referring to facts from the mid-thirteenth century BC. In the classical world, artisans played a fundamental economic role and trade corporations were well structured. Plutarch in the *Life of Pericles* lists various crafts and then writes: “Because each art gathered with itself, like a general with his army, the masses of workers and craftsmen [...] the various work needs distributed and spread welfare throughout the population” (12, 5-6). Pliny in the XXXIV book of *Natural History* recalls some famous Greek sculptors including: “Silanion, about whom the admirable fact is that he became famous without any teacher” and further on: “Silanion was the most scrupulous in terms of technique and a ruthless judge of himself. He often destroyed the finished statues because he was not satisfied with the result, he was nicknamed the madman”. Being self-taught at the time was remarkable, out of the ordinary. A trade was normally learned in a workshop, under the guidance of a teacher, from a young age. Plutarch and Pliny lived in the first century of the Christian era when the tutelary deities of the craftsmen still existed: Sethlans for the Etruscans, Efaistós for the Greeks, Vulcanus for the Romans. It was under the Romans that the professional guilds (*collegia*) saw their maximum expansion and the highest levels of organization. In the 8th Law of the 12 tables (about 450 BC) it is written: “*Sodales legem quam volent, dum ne quid ex publica corrumpant, sibi ferunto*”, that is: “Corporations may give themselves the legislative system they prefer, provided they are not in contrast with public law”. Each *collegium*, which could count hundreds of members led by the *magistri*, had its status and its seat (*schola*). Naturally it was the colleges



Figure 3. Chalice in gothic style, silver, gilded silver, jaspers, travertine. Technique: lost wax casting, embossing, turning, enamels, niello. Author: Alessandro Pacini.

that managed the apprenticeship of young artisans. Such was the importance of craft corporations in Roman times that scholars have identified thirty Latin terms that indicated this type of association. At the end of the Roman empire, under the Roman Barbarian kingdoms, the court laboratories produced precious artifacts for the nobility which had a political value, as gifts of exchange when searching for allies. With the beginning of the Middle Ages the corporations lose power and often disappear, but the apprenticeship continues in the workshop of a master goldsmith who could also be a soldier or an officer or even practice other trades. Some medieval jewelers became famous holding prestigious posi-

tions, such as Saint Eligius (588 - 660) a senior official of the court of the Merovingian kings and then bishop of Tournai and Noyon. The guilds continued to exist: Byzantine *scholae*, Lombard *consortes* (the word appears in the edict of Rothari, in 643), *ministeria* in Pavia between the X and XI century. But it was above all the monasteries which preserved and handed down the arts in addition to the classical culture. Between the ninth and twelfth century they ideologically dominated Europe, their great laboratories produced high-end goldsmiths. Moreover, no place was better than the monasteries for associating the profession with spirituality and rituals. Theophilus, probably identified with the Benedictine monk Roger from Helmarshausen, wrote what may be considered the first manual of artistic techniques in Europe. The communal age between the twelfth and fourteenth century saw the birth and triumph of the Arts, that is, the trade guilds that for the first time even had the political control of the cities. *Magistri*, *discipuli* and *laborantes* worked within them in a production context organized in a similar way to a family. The apprenticeship lasted for some years, after which a judging commission composed of the *Consoli dell'Arte* admitted the *Matricole* on the basis of the quality of the *Masterpiece*, a final essay of the technical and artistic skills possessed. At this point the matriculated to the Art could have his mark of production. Cennino Cennini (1370-1427) wrote: "And as soon as you can, begin to put yourself under the guidance of the teacher to learn, and as late as you can, from the teacher you leave". And a century later, in full Renaissance, Lorenzo Ghiberti completes the concept saying: "It is convenient that the artist is expert of writing and trained in geometry and diligently has heard philosophy [...] and has heard astrology and is taught in perspective and still is most skilled at drawing [...] who has also seen the works of the ancients [...] rightly I think that there cannot be professed artists except those who from very young age are trained by similar degrees of discipline and fully familiar with the science of letters" (*I commentari*, I, 2). In the sixteenth century AD, the mercantile ideology contributes significantly to the decadence of the corporations. By then the great merchant companies have more power than the old arts and a clear separation between artist and craftsman comes about. The apprenticeship is less regulated and can be carried out freely by the teacher who considers himself better or more famous. It is no longer necessary to be registered members of a corporation to practice the trade. Benvenuto Cellini for example never registered with the goldsmith's guild: he preferred, still a young boy, to wander around Italy looking for a good teacher. In Pisa, near the Ponte di Mezzo, attracted

by a goldsmith's shop, he was invited to enter and "immediately [the goldsmith] gave me to work [...] silver gold and joys and the first day provided, in the evening he brought me to his house [...] with great love he came to see me at my room that he had given me, seeing that I spent all my hours virtuously, he gave me his love like a father" (*La vita*, X). Cellini stayed there for one year (he was 15). The eighteenth century sees the end of the guilds: in Tuscany they were abolished in 1770 by the Grand Duke Pietro Leopoldo and replaced by an Office of Manufactures. Machines and workers replace shops and craftsmen, there are still small workshops as family units, but the apprenticeship is no longer the exclusive prerogative of craftsmen. In fact, the nineteenth century sees the spread of royal and stately schools, shops of goldsmiths collectors (as the *Castellani* in Rome), of artisans (entrepreneurs for themselves) and technical schools (established by cultural associations, rural and craft banks, worker's leagues). The quality of the teaching however was however high and the same techniques of previous centuries were preserved, with the drawing always at the basis of the work. A couple of centuries later, under Fascism, on February 5, 1934, a law on corporations was promulgated: "The corporate principle consisted in the subordination of special interests to the national interest, conceived as the superior interest of production" (chapter VIII). Pope Pius XI re-proposes the corporations in the encyclical *Quadragesimo anno* of May 15, 1931: "It happens by natural impulse that [...] those who devote themselves to an art form colleges or social bodies; so that these corporations, with their own right, by many are said to be, if not essential to civil society, at least natural" (84). "It is possible to apply to the professional corporations what Leo XIII taught about the form of the political regime, i.e. the choice of the most suitable form is free, provided that justice as well as the common welfare is respected" (87). In those days one could still enter a workshop in the young age and traditional craftsmanship allowed to live in dignity. Over the centuries the sacred prerogatives and the magical potentials went lost, but the craftsmanship still remains an activity protected by our Constitution in the articles 35: "The State takes care of the training and the professional development of the workers" and 45, paragraph 2: "The law provides the protection and development of the crafts". This protection exists only on paper, because in reality the new global economic and cultural forms in Italy have literally disintegrated it. The main causes were new regulations that prevented apprenticeship directly in the workshop, whilst other serious obstacles are due to the incorporation of artisan laboratories in the industry, with an unbearable legislation for the artisans in terms

of safety at work and taxation. Various attempts to recover the teaching of artisanal crafts to young people through courses managed by various bureaucratic agencies and financed as projects proved to be a failure.

CONCLUSIONS

The splitting of the transmission of art crafts, which has affected some generations of Italians and Europeans in the second half of the twentieth century, has led to the irreversible loss of most of the ancient craft techniques, including those of the goldsmiths. In recent years, the *coup de grace* has been given by technologies based on computerized systems, combined with new products of chemical synthesis, of which the artisans can neither control the origin nor modify the physico-chemical characteristics, if not in a very limited way. The use of these techniques and these materials can only disrupt the very nature of the craft. These new technologies are no longer linked to the culture of the community or to the history of the territory, nor to any liturgical or ritual form of manual labor, therefore they are compatible with an individualistic vision of work, much less with a shared vision. Although it seems that there is no link between scientific research and traditional craft, we must consider the fact that the discovery of synthetic materials and the invention of technologies for serial production inevitably resulted in the destruction of a working method. This method had existed for centuries, above all the crafts, but now it may end up being relegated to private hobbies or to the amusement of a few enthusiasts, completely emptied of any socio-cultural value, included the fundamental pedagogical one. The freedom of

research and experimentation of the scientist, the chemist, should be limited by the awareness that some operations can be harmful to the environment and to society. This limit must be placed by the inventor and not by those holding political and economic power.

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