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VALUE CREATION IN JEWELLERY FABRICATION TODAY: EXPLORING THE INTERRELATIONS OF CRAFTS AND INNOVATION THROUGH THE CASE OF THE GRAND BAZAAR OF ISTANBUL

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ABSTRACT

The Turkish jewelry sector has developed globally within the past two decades and has gained power as a global supplier, ranking second after Italy. The majority of jewelry production takes place in İstanbul within the district of the Grand Bazaar and in the clusters of workshops around the complex known as khans. The Grand Bazaar and the khans around it operate on a network-based model of clustering that has endured since the fifteenth century. Based on micro-scale firms, the Grand Bazaar reflects a unique contemporary center of jewelry production which relies on a structure that can be characterized as a creative cluster. Jewelry production revolves around high quality craftsmanship and the transmission of knowledge in this system is based on the passing down of tacit knowledge gained through experience. This inter-disciplinary research project approaches the Grand Bazaar from the perspective of the preservation of traditions and the cultural heritage of craftsmanship, and offers an evaluation of products in terms of their creativity and innovation potential for the discipline of industrial design. As such, the aim is to reveal the potential of innovation within traditional models and techniques for the jewelry sector as part of the luxury consumption phenomenon. This article also offers projections as regards the following issues: How will this 500 year-old traditional creative cluster model endure the technological shifts in fabrication? And, how can this tacit knowledge nurture research for new modes in contemporary design? The paper aims to introduce the process, methods and preliminary findings of this qualitative research project that was funded by the Scientific and Technological Research Council of Turkey.

Keywords: jewelry design, innovation, intangible heritage, crafts, Grand Bazaar of İstanbul

1 INTRODUCTION

*"The hand is the window on to the mind"
I. Kant (cit. Sennet, 2008, p.149)*

Since the 2000s, the jewelry industry in Turkey has taken on a leading position in the world, second only to Italy. The most significant driving force behind this success is know-how about working precious metals, and this is the product of the multi-layered cultural heritage of Turkey which has been built upon and passed on by the many civilizations that have existed in the area. The success of the last twenty years is based on jewelry production in the Grand Bazaar and in khans¹ around Nuruosmaniye (one of the main districts of the historical center of

¹ Khan is a word of Persian origin designating on the one hand a staging-post and lodging on the main communication routes, on the other a warehouse, later a hostelry in the more important urban centers.

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Istanbul). The Grand Bazaar has remained the center of precious metal work outside the palace since imperial times. Jewelers coming from different parts of the empire had stalls in the Grand Bazaar and in adjacent khans, and this played a major role in the historic development of the Grand Bazaar's identity (Küçükerman and Mortan, 2010). The historical roots of jewelry fabrication in the Ottoman milieu were augmented with the involvement of several sultans who were jewelers themselves. The head jewelry masters employed at the palace were generally Armenian or Greek, which was also reflected in the ethnic composition of jewelers in the Grand Bazaar. In the 18th century, jewelry masters from Constantinople were in the same league with their British and French counterparts.

Jewelry design in general has been an area of study for art historians and its place in literature has been with traditional handcrafts. In Istanbul, the 550 year-old traditional jewelry production techniques, particularly those of the Grand Bazaar, have been treated in the historical context on the outskirts of style and as part of the tangible heritage of the Ottoman Empire (İrepoğlu, 2000, İrepoğlu, 2002, Savaşçın, 1990b, Savaşçın, 1990a, Türkoğlu, 1988, Ülgen, 1999).). In the 21st century, this craft-based traditional form of production has become an evolving sector and taken on an important commercial character, and it has acquired international recognition and competitive capacity (Armatlı Köroğlu et al., 2009, Coşkun Orlandi, 2009). With the progress of computer technologies, traditional hand production techniques are shifting towards machine-based production bereft of human touch. In order for Turkey to maintain the competitive capacity that it has acquired over the last 20 years as an exporter of jewelry, there is a need to identify its advantages in terms of competitiveness. The results of this research show that in order to be competitive with innovative design strategies and authentic design, authentic production techniques and the cultural accumulation that forms the tradition, all of these need to be treated as a strategic resource (Armatlı Köroğlu et al., 2009, Coşkun Orlandi, 2009). From this perspective, it can be seen that the historical trajectory of the 550 year-old tradition of production has been directly affected by social economic and political change and that there have been discontinuities and ruptures in traditional authentic production skills in the past as well as today. It is well-known that this multi-ethnic milieu of production has exported some of its mastery to various countries like France, the UK and the USA, and that some well-known artisanal masters in these countries are Greek and Armenian goldsmiths from Istanbul. At the same time, it is known that Grand Bazaar-based jewelry production has gained importance due to its quality of workmanship and authentic production forms, but it is also known that this skill is also vulnerable because of changing demographics, as has been emphasized by workshop owners.

Since it depends on a raw material as a trade asset, the jewelry industry has a particular character as regards production processes and the milieu of production. While it functions within a network of entrepreneurship-mastership-design, it relies as a whole on the existence of one master, known as the

In the case of Istanbul, urban khans were used for commercial purposes as well for manufacturing, especially around Kapalıca. These building typically have courtyards surrounded by rooms on two stories, each room belonging to one merchant and used as a workshop and storage.

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*sadekâr*². This production network, which is based on the mastery of different producers, cannot be standardized. The transmission of knowledge in this system is based on the passing down of tacit knowledge gained through experience (Forsman and Solitander, 2004)) and it represents a valuable resource in terms of the inventory of "living human treasures" in the framework of an intangible cultural heritage.

The inter-disciplinary research project conducted by the authors of this paper approaches the Grand Bazaar from the perspective of the preservation of tradition and the cultural heritage of craftsmanship, as well as the evaluation of products in terms of their creativity and potential for innovation in the discipline of industrial design. It aims to reveal the potential for innovation through traditional models and techniques in the jewelry sector as part of the luxury consumption phenomenon.

2 DEVELOPMENT OF THE TURKISH JEWELRY INDUSTRY AND THE GRAND BAZAAR OF ISTANBUL

2.1 STRUCTURE OF THE TURKISH JEWELRY SECTOR

As reported by the World Gold Council, Turkey is second only to Italy in the global export of gold jewelry. This international success of the jewelry sector, which developed especially after the liberalization of the Turkish economy in the 1980s, is undoubtedly indebted to the strong metalsmithing traditions of past civilizations that existed in the area. The jewelry sector, with its history established through the Grand Bazaar, represents an original structure of production that is rooted in this tradition. Based on micro-scale firms, the structure of production in the Grand Bazaar represents the traditional model of a craft cluster. Indeed, the Grand Bazaar is the only center of jewelry production in Turkey which relies on a structure that could be characterized as a cluster (Armatlı Köroğlu et al., 2009, Coşkun Orlandi, 2009).

Two distinct paths can be observed regarding the dynamics behind the success that Turkey has achieved in jewelry fabrication and in the gold sector in the last twenty years. The first is a series of economic decisions and transformations that occurred together with the liberalization of the economy in the 1980s. In that process, the black market for gold was eliminated, and the import and export of gold was legalized by the Central Bank of Turkey in 1989 (Anonymous, 2003). Success in gold exports gained pace starting in the middle of the 1990s following the inauguration of the Istanbul Gold Market. The unofficial import of gold was banned and the gold exchange is now registered, and the purity of imported gold is now guaranteed and standardized (Anonymous, 2003). Moreover, because it is now possible to purchase gold at prices like those in the world market, jewelry production became competitive and production capacities increased. Interviews with the authorities in the sector have revealed the motivations behind these successes and how the jewelry sector has been established (Coşkun Orlandi, 2009), and these are as follows: *i) Liberalization of the import/export of gold, ii) obtaining machinery from Italy, iii) obtaining product catalogues from international fairs, iv) providing low cost production in the global market.* Today, the structure of the jewelry sector is largely based on

² Translates as *metalsmith* in English.

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micro firms which employ less than 10 employees. Corporate SME's have grown through this period of industrialization. Recent research (2013) carried out by the Turkish Exporters Assembly indicated that there are 20 corporate jewelry firms listed among the top thousand exporters (TİM, 2013).

2.2 PROBLEM AREA: DESIGN

Almost every civilization that existed in the geographical area of Turkey left behind an important heritage of goldsmithing. All the civilizations that existed in mainland Anatolia since the early Bronze Age were known for their use of precious metals in the production of jewelry. The cultural heritage of metalsmithing (gold, silver, bronze) in the area can be dated back 5,000 years. A more recent significant heritage in jewelry fabrication was the imperial goldsmithing of the Ottoman period. The global success of jewelry fabrication in Turkey today can be traced through the historical transformations of the Grand Bazaar, which inherited the heritage of the Ottoman guild system in which taste and style were driven by the imperial palace. In addition to that geographical multicultural tradition, Turkish jewelry consumption hasn't demonstrated any significance in terms of product identity driven by any particular traditional design. In parallel with the period of industrialization, copyright problems have arisen, both at the national and international levels. In turn, this inadequacy has brought about design sensitivity issues. Since the industry achieved a breakthrough as a global supplier, the increasingly competitive market has created a demand for branding and product differentiation. Design has long been deemed a powerful tool for making significant contributions to resolving some of the issues the industry faces. Among more than a thousand jewelry companies, only a decennium can be considered to have achieved recognition for good design.

2.3 THE GRAND BAZAAR AS A JEWELRY CLUSTER

The Grand Bazaar and its surroundings remained an unchanging center of the most refined hand production of jewelry prior to the industrial revolution and it adapted to the changes that emerged following the industrial revolution through a model of clustered professionals under the patronage of the *Ehl-i Hiref*³ (Küçükerman and Mortan 2010, 90). Based on information obtained from the Grand Bazaar Labor Association, currently there are around 1,800 jewelers and workshops in operation. These workshops have different production patterns because of their scale and production networks. Customized unique products that are not slotted for serial production are produced by a limited number of jewelers using traditional techniques bolstered by new technologies. Although the *sadekâr* exists at the center of the production network, micro-production units also play a role in shaping the production of jewelry from precious metals. From traditional times up until today, collaboration among specialized micro-production units have displayed a clustering structure which is based on trust (Coşkun Orlandi, 2009). While the dynamics among workshops shape and define human relationships, it also emerges as a source of innovation.

2.3.1 Historical Background

³ Name given to the craftsmen association during the Ottoman period.

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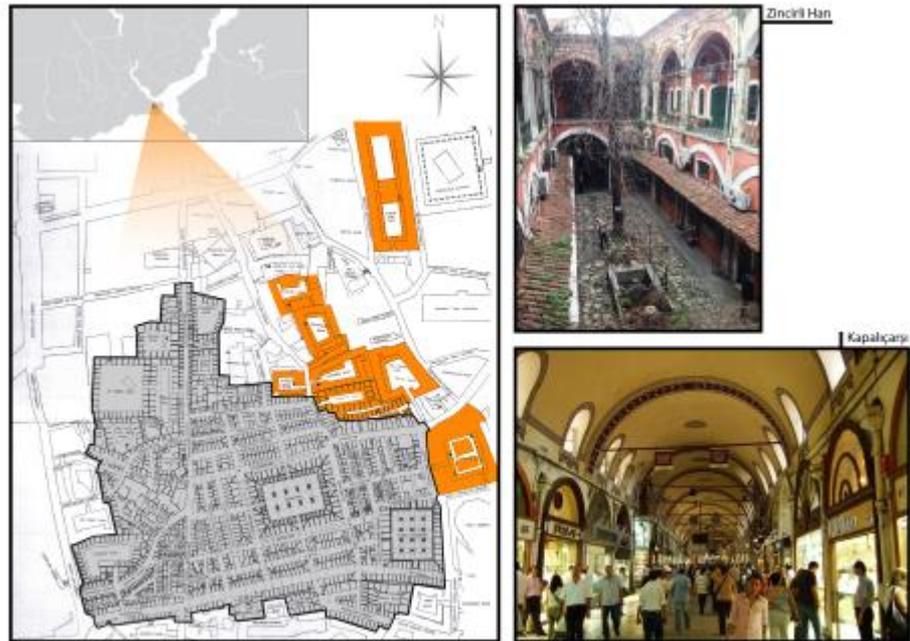
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The oldest parts of the Grand Bazaar - namely the two masonry *bedestans* - were endowed by Fatih Sultan Mehmed the Conqueror in the 15th century in order to provide a source of income for the newly converted Hagia Sofia Mosque. In due time, the open markets surrounding these structures were roofed over, eventually forming the Grand Bazaar. It is believed that the same market replaced an open market of Byzantine origin. Following a devastating fire in the 17th century, the wooden roofs were replaced with masonry vaults. The Grand Bazaar is surrounded by khans, some of which have entrances only accessible from the Grand Bazaar, while others have independent entrances. Currently the Grand Bazaar covers 30.7 hectares and has 61 alleys (Gülersoy, 1994, p.424). The traditional allocation of the specialized use of alleys for different guilds was abandoned after the 1894 earthquake. Existing street names highlight some of the varieties of specialization within the jewelry sector. The guild system, which is believed to have started in the 15th century, was abolished in 1914, and it evolved into labor associations which still operate under the patronage of the Chamber of Commerce (Gülersoy, 1994, p.423). The jewelry district of the Grand Bazaar was not only for display but at the same time it was the very heart of production. However, present-day observations reveal that the production of jewelry has moved out of the Grand Bazaar, which now has a primary role in retail sales. This shift has changed the spatial use and ownership



status of the shops. The shops originally belonged to a waqf, and in time they became private property. The organizational structure, which has its roots in the guild system, led to the present-day network based on a model of clustering which has endured since the fifteenth century. The continuity of the craft was guaranteed through a model in which there was a master, foreman and apprentice. Currently, there are not enough apprentices and hence the knowledge transfer is shrinking, threatening this 500 year-old tradition and giving way to serial manufacturing.

3 RESOURCES OF INNOVATION IN JEWELRY DESIGN AND FABRICATION

The need for innovation dates back to Joseph Schumpeter (1943), his arguments greatly influenced theories of innovation (OECD, 2005). Today the role of innovation is vital for any micro and macro scale economic activity. Even though innovation has been directly related to technological development, the boundaries between design and innovation has blurred significantly in the 2000s. Up until the 1980s technical innovation and styling has been kept apart in theoretical and applied fields. Increasing demand for novelty and new strategies for product differentiation, the context of innovation has kept a close link to design and design thinking (Gurria, 2007, Hirsch-Kreinsen and Jacobson, 2008, Howlett, 2010, Moalosi et al., 2006, Mozota, 2006, Stoneman, 2010, Tresserras, 2006, Utterback et al., 2008, Verganti, 2009). Concepts and terms such as design driven innovation, innovation without R&D or cultural innovation keep expanding the theoretical and applied ground. Oslo Manual barely distinguishes four types of innovation: *product innovations, process innovations, marketing innovations and organizational innovations* (OECD, 2005). The context of innovation mention in this article refers to product and process innovation.

Jewelry as a major luxury signifier is impacted by traditional socio-cultural behavioral codes and in socio-economic terms it bears symbolic value in terms of economic value, aesthetics value, symbolic value and the communication of status. The consumption value of jewelry varies according to the given culture and time, and concepts of fashion and trends parallel this variability. Jewelry consumption in the 21st century carries value on numerous levels such as; i) *Material value, which is derived from the intrinsic value of the object's precious materials, ii) Status value, as a showcase of economic wealth which is related to theory conspicuous consumption, iii) Social status value, which is related to multiple issues such as fashion, trends, and brand values, iv) Emotional value, which is related to aesthetic value conveyed through design* (Carcano et al., 2005, Catalani and Capello, 2005). With reference to the diverse functions that a jewel complies, there is a massive ambiguity in understanding the real dynamics which embody value brought to the contemporary world. Questions such as; *is jewelry art, fashion or design? Which skills, disciplines and knowledge does it contain? One-of-a-kind or in series? Industry or handcrafts?* remain unanswered in both lexical and semantic terms. Cappellieri (2010) claims that the ambiguity emerges from the symbolic, social and material changeability of jewelry, which weavers between an investment and a talisman, a durable product and a fashion accessory, a sculpture and an ornament, a gadget and a souvenir, a status symbol and a sign of beauty, in well-lit and multi-hued intertwining of values and meanings. Albeit this complex ambiguity, the global jewelry market is estimated to be worth €34 billion including both branded and non-branded items (Chevalier and Mazzalovo, 2012).

On the other hand, innovation in the field of jewelry fabrication is based on expertise and knowledge with a strong focus on multiple cultural inputs, including those derived from technological progress and those based on the evolution of taste and a culture of ornament. Italian researchers have noted that the major sources of innovation for the jewelry sector are concentrated on the product itself with an emphasis on materials, the production process and distribution channels (Carcano et. al., 2005, p. 44). Innovation is driven from knowledge and multiple cultural inputs as well as applied research, taste and the

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evolution of culture of ornament (Coşkun Orlandi, 2009). Jewelry as a luxury commodity has been identified firmly with Western lifestyle and image of the Western woman. Branded high-end luxury producers have strong traditional bonds in terms of cultural heritage. Therefore the brand image is closely related to authenticity and culture. Today it is almost impossible to detach the perception of luxury out of the brand world (Chevalier and Mazzalovo, 2012).

"The luxury goods business, like almost every other, has become commoditized. So it's only natural that an object created in a cramped atelier by the sure and nimble fingers of a skilled craftsman should be prized for its purity." (Tungate, 2009)

Major jewelry operators in the sector are in high percentage Western brands with a historical background in expertise which bear a crafts authenticity and excellence as an extensive value e.g. *Cartier (France, est. 1847) Tiffany & CO. (USA, est. 1837), Bulgari (Italy, est. 1884), Chopard (Switzerland, est. 1860), Van Cleef and Arpels (France, est. 1896), Damiani (Italy, est. 1924), Buccellati (Italy, 1919), Boucheron (France, 1858)*. This output offers us a valid research ground for exploring the interrelations of traditional crafts and innovation.

3.1 INNOVATION CRITERIA FOR JEWELERY IN CONTEMPORARY CONTEXT

With reference to the theoretical background discussed above and within the scope of our field research on craftsmanship at the Grand Bazaar established a series of measurable criteria were established for innovation in contemporary jewelry fabrication:

1. Unique, one-of-a-kind piece
2. Product complexity (in terms of technical skills)
3. Quality of workmanship
4. Conveyance of highly symbolic and emotional value
5. Product Identity: proposing new trends and styles by design approaches
6. Ability in research and development, utilizing traditional fabrication techniques in search of new contemporary design languages
7. Self-expression of creativity with reference to outside inputs such as market and consumer research
8. Conveying contemporary design languages (research and trial of new form-material-usage relations in which the traditional fabrication techniques *don't* identify the final product)

4 QUALITATIVE FIELD RESEARCH ON THE INNOVATION POTENTIAL OF THE CULT OF THE GRAND BAZAAR

4.1 METHODOLOGY

The bazaar and the khans around it have a clustering model due to their structures of networks. To date, the Grand Bazaar and khans where jewelry

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production is carried out have been studied within the fields of urban planning, architectural history, art history and civil engineering, but no research studies have been done through documentation or archival work either by academics or sectoral NGOs from the perspectives of authenticity and innovation context. To fill this void, we are carrying out qualitative field research to determine the extent to which craft-based jewelry tradition demands innovation skills. The research project has a term of two years, during which time data is being collected on *i) products, ii) spaces, iii) human capacity and iv) table-equipment* utilizing qualitative research methods. The research officially commenced in May of 2013 and the anticipated date of completion is May of 2015. This period will be dedicated to the active collection of data, the sources of which are provided in Table 1, along with the valorization methods we used.

SOURCE OF DATA AT THE SITE	DATA COLLECTION METHOD	DATA VALORIZATION METHOD
Product (product- intermediary product- element – workmanship per workshop)	Observation Photo Video	1. Valorization of group A parameters of the product 2. Valorization of group B parameters of the product
Space (Characteristics and location of the production space)	Observation Photo Video Behavior maps	To determine the production behavior maps through GIS of the location of the workshop versus the order of production in a comparative way
Table-equipment (Technical equipment employed per workshop)	Observation Photo Video	Valorization of level of specialization of the technical equipment used in the production through a polarized chart in continuum scale
Human capacity (Master and apprentice working the product)	Observation Semi-structured interview: audio recording	1. Valorization of group A parameters of the human factor in production 2. Valorization of group B parameters of the human factor in production

Table 1- Source of information, data collection and valorization methods utilized in the research project

The valorization of the group A parameters of the product include the material qualitative features of a product such as surface finish and the precision of the shape to measure the excellence in workmanship, whereas the group B parameters of the product include complexity in workmanship. For the assessment of the human factors, a three-part semi-structured questionnaire was developed along with field visits and those contain a mixture of closed quantitative and open-ended qualitative questions. The questionnaire was designed to gather information about the history of the know-how of the master, his craftsmanship, the importance of the locality (the Grand Bazaar), the design and fabrication techniques used and research for novelty (both unintentional and intentional). The raw material itself being the capital of the business, the jewelers' community tends to be closed which demands extra work in

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ethnographic data mining. To overcome this issue, a snowball sampling technique was seized.

4.2 STATISTICS OF FIELD DATA AND PRELIMINARY FINDINGS

Data collection was actively carried out between October of 2013 and September of 2014. 50 workshops were visited, and data was collected from 47 master jewelry makers utilizing all of the data collecting methods. 14,255 (raw and compressed) images were captured to record the products, the production process, the space and the masters' portraits. The total time of the interviews came to 35 hrs 43 min, in parallel to 12 hrs 7 min of video recordings of interviews and the production process. It was found that knowledge transfer master to apprentice is only occurring in 16 workshops visited within the scope of this project. Based on the interviews made with the remaining jewelry masters, it is anticipated that traditional jewelry production will cease in a decade.

4.2.1 "LIVING HUMAN TREASURES" OF THE GRAND BAZAAR

Jewelry as a craft is among one of the richest intangible components of society. The role of masters as teachers is significant in keeping this tradition alive, as they are the carriers of traditional forms of production. One other objective of this project, which took up the interface between industrial design and cultural heritage, was to identify master jewelers who use traditional production techniques and nominate them for the UNESCO Intangible Cultural Heritage Inventory. Doing so makes it possible to document the characteristics of local production and provide the grounds for the registration of a technique/design as a geographic indication. In this way, the research project sought to document those remaining master jewelers who use traditional techniques so that they can be identified as nonrenewable human resource. Additionally, it is rewarding to map the qualitative capacity of traditional jewelry production versus innovation capacity, as the authors believe that innovation capacity is the only way to ensure the livelihood of traditional production in Grand Bazaar and its vicinity in the face of serial production.

In the past decade, UNESCO has expanded the definition of cultural heritage and embraced the intangible heritage that is inclusive of traditional craft knowledge as stated in Article 2.2 of the Convention for the Safeguarding of Intangible Cultural Heritage in 2003. In addition to public recognition, the system includes measures for the provision of, for example, special grants/subsidies to designated Living Human Treasures so that they can assume their responsibilities for the safeguarding of intangible cultural heritage. The criteria for being placed in the Living Human Treasures program have been defined with a state regulation. Based on the requirements, such a person or group of people should have the following qualities (ARGEM 2014): *i) Display excellence in the application of particular knowledge and skills, ii) display great dedication, iii) be able to further develop his/her knowledge and skills and, iv) be able to pass on his/her knowledge and skills to trainees.* The preliminary findings reveal that among the 47 jewelers recorded, 24 meet the criteria of Living Human Treasures of UNESCO (Figure 2).

4.2.2 HANDCRAFT VS. MACHINERY

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The workmanship of handcrafting masters has been replaced by technicians who are equipped by technology. Jewelry fabrication as a profession has kept the tradition alive by utilizing traditional production techniques and networks. However, today to a great extent these techniques have given way to serial production, shunting aside masters and their knowledge transfer systems based on tacit knowledge. In recent times, the ability to appreciate the added value of handcrafted products has weakened, leading to the hegemony of a profit-based approach. On-site observations testify to the fact that the market is increasingly geared towards profit, and thus serial production has increased. Goods produced for the domestic market differ from those destined for the foreign market, indicating a difference in the homogeneity of the quality of workmanship, authenticity and good design.

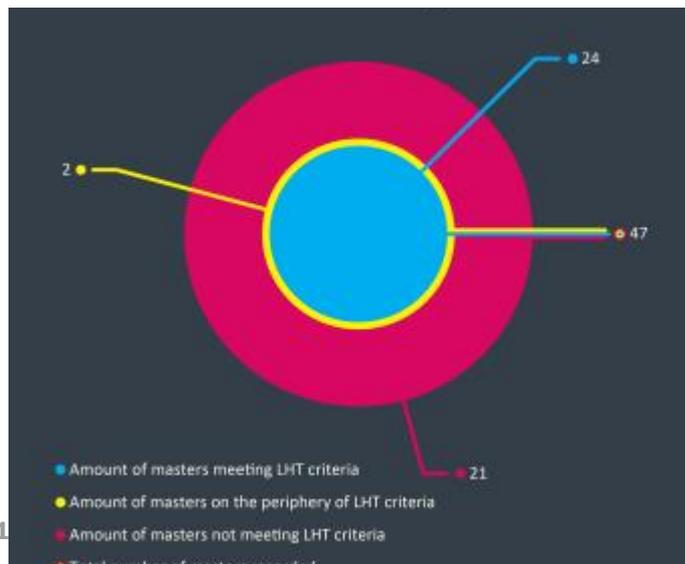
4.2.3 **CLOSED STRUCTURE: PHYSICAL AND INTERPERSONAL**

The jewelers’ community tends to be closed, which places greater demands on the researcher during ethnographic data mining. One micro-scale piece of jewelry is sent from one workshop to another and may be a bling. Therefore, partnerships and collaboration are a sensitive issue. Family ties are an important ethnographic factor which likely is involved with issues of trust. To overcome this issue, a snowball sampling technique was used. The key contact persons led to incremental contacts which exemplify what could be called a hidden treasure. The snowball sampling technique was an accurate technique that helped our understanding of this group of people with rare skills. Initially starting with the 4 researchers’ personal contacts, we contacted 12 masters in the first round, expanded this to 37 in the second round and contacted 47 jewelry masters in total.

4.2.4 **COMPONENTS OF INNOVATION AND THE LIVING HUMAN TREASURES**

An evaluation of the criteria for innovation presented in section 3.1, reveals that those masters who have the potential to be identified as Living Human Treasures (LHT) also have potential in terms of innovation capacity. In such a comparison, those products based on traditional styles without any interpretation were identified as being traditional products, whereas those which did not use traditional production techniques and/or allow for diversification in form, materials and use, were identified as being contemporary products. The evaluation of master jewelers based on the criteria of innovation can be found in Figure 3. The outcomes of the project reveal that those masters who have potentials to be identified as UNESCO “Living Human Treasures” have also have

terms



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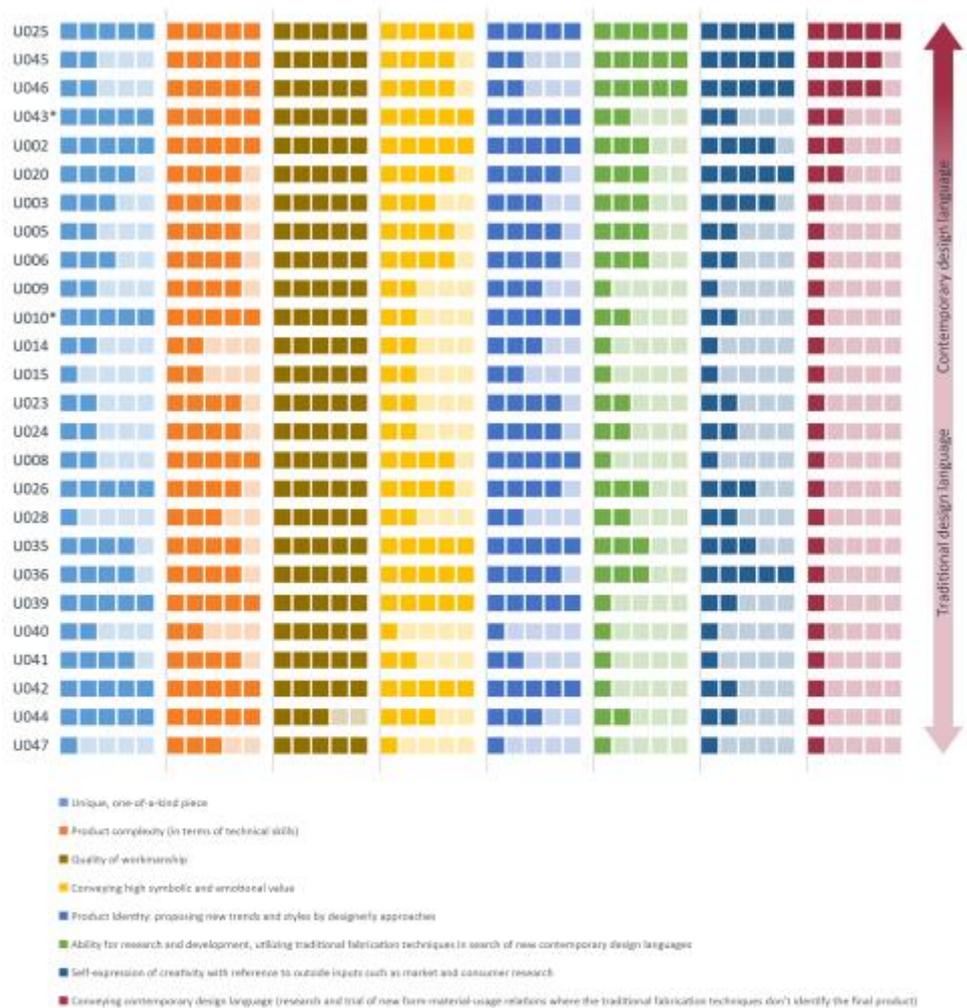


Figure 3- Figure showing masters meeting LHT criteria and their innovation applicability with reference to the innovation criteria mentioned in section 3.1



Figure 2-Product sample which carries high innovation potential among masters meeting LHT criteria with a traditional language

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Figure 3-Product sample which carries high innovation potential among masters meeting LHT criteria with a contemporary language

5 CONCLUSION

The global success of jewelry fabrication in Turkey today can be traced through the historical transformations of the Grand Bazaar, which inherited the heritage of the Ottoman guild system in which taste and style were driven by the imperial palace. In addition to that geographical multicultural tradition, Turkish jewelry consumption hasn't demonstrated any significance in terms of product identity driven by any particular traditional design. Yet, the industry developed a hybrid structure: *neither industrial in terms of machinery investment and R&D, nor a corporate structure nurturing new product development regarding competitiveness*. Whereas contemporary rivals gain competitive advantage with a historical background in expertise which bear a crafts authenticity and excellence as an extensive value.

The traditional structure of fabrication has shown a capacity for innovation which was verified with the data gathered in the field research, though remains hidden. The interviews testify to the indispensable character of the Grand Bazaar and the historic peninsula of İstanbul as a production center and a well-established locale for innovative production that is bolstered by collaboration and its structure, which is based on flexible production. The model of production in the Grand Bazaar demonstrates the physical organization of production networks and the forms and processes of production rituals. The traditional roots of this innovative milieu carry the potential for the perpetuation of cultural heritage. At the center is the master jeweler, and identifying him as an intangible source of cultural heritage and merging traditional craft production with contemporary design concepts represent significant contributions to the field of product design as well as cultural heritage. One of the most remarkable findings of the field research was that the master jewelers identified as qualifying as Living Human Treasures of UNESCO also displayed a high capacity for innovation. Nevertheless the technical excellence and fabrication skills fall short of conveying a contemporary design language.

Even though there is historic evidence that the multi-ethnic milieu of production around the Bazaar has exported some of its mastery to various countries like France, the UK and the USA, and that some well-known artisanal masters in these countries are Greek and Armenian goldsmiths from Istanbul, we cannot

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mention any design value driven by the Bazaar's tradition being reflected onto the contemporary jewelry context. The outcomes of the research indicate the need for further inter-disciplinary strategic research for fostering the interrelations of the crafts tradition as a contemporary design resource.

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