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The Contribution of Archaeological Surveys on the Perception of Cultural Heritage: Cilicia As a Case Study

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ABSTRACT

In archaeology, the primary contribution of surveys to cultural heritage is that it provides an alternative to excavation. Thus, it ensures that the destruction of cultural heritage by excavation is avoided. This study first addresses the relationships between archaeology and cultural heritage. A description of archaeological information on the history of surveys are made. Furthermore, the contributions of surveying to cultural heritage are conveyed. Cilicia Region is the geographical limitation of the research. The material of the study is diversely selected from surveys carried out in the Cilician Region. Interdisciplinary works contributing to archaeological surveys are also presented. Many of them such as geography, geology, hydrology, Geomatics Engineering, epigraphy contribute to this research. In addition, common application methods (GIS, 3D Modelling, Photogrammetry etc.) of this studies are also discussed in this study. The implications of all these studies for cultural heritage are given. Temporally, the study covers the Hellenistic, Roman and Byzantine Periods. The final section concludes the study by providing a general framework for the benefits of surveys for cultural heritage.

1. INTRODUCTION

Research Article

In this study, first of all, the relationships between archaeology and cultural heritage, which form parts of a whole, are handled. A description of surveying in archaeology and information about the history of surveying is undertaken. Furthermore, the contributions of surveying on cultural heritage are conveyed. The geographical limitation of the research area is the Cilicia Region. The material of the study is variously selected

from surveys undertaken in the Cilician Region (Figure 1).

Interdisciplinary works contributing to archaeology surveys are also presented. The implications of all these studies for cultural heritage are specified. Temporally, the study covers the Hellenistic, Roman, Byzantine Periods. The final section concludes the study by providing a general framework for the benefits of surveys on cultural heritage.

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Figure 1. Location of Cilicia in Anatolia (Digital atlas of the Roman Empire)

1.1. The Relationship between Cultural Heritage, archeology, and surveys

It is clear that in the last years of the 21st century, cultural heritage is nourished by interdisciplinary studies. These studies focus on the use of cultural heritage. In these studies, the term "cultural heritage" is explained as a cultural and social construction process and economic resource in relation to contemporary times. In this, the economic, social, and cultural contributions of cultural heritage and resources to contemporary countries are considered. In this context, archaeology becomes a political and scientific tool for countries on the subject of cultural heritage and heritage tourism (Simsek 2014; Smith 2010). Until today, cultural heritage is very important for civilizations and societies that exist in history. However, it is a phenomenon that is subject to destruction at the hands of people. For example, it can be seen that terrorist organizations benefit economically and ideologically from the destruction and smuggling of historical artifacts during the wars in Iraq and Syria. Moreover, the bombing of the historic city of Nimrud in the south of Mosul by the United States in 2003 has damaged not only the Middle East, Iraq, but also the cultural heritage and memory of humanity (Özyıldırım & Kaplan 2016). Destruction of cultural heritage causes a country to lose its historical roots by erasing, selling, looting, or changing hands. Many examples of cultural heritage that must remain and be preserved in the country where it was born are now exhibited by Western countries and in this context, tourism creates an economic contribution. Thus, archaeology is one of the most important sciences that allows the protection, study, and recording of cultural heritage so important to a country and subject to destruction.

Cultural heritage and archaeological science are parts of two wholes that complement each other. A new perspective on cultural heritage has emerged. This is clearly reflected in the second clause of the Faro

Convention. According to it, "cultural heritage is defined as a set of resources derived from the past and perceived by people as an anonymous expression and reflection of their ever-evolving values, beliefs, knowledge and traditions..." (Şimşek 2014). Archaeology, which has emerged as a new value of the globalizing world, has the task of being the indicator of common values that carry humanity to this day. Archaeology has been assigned the function of ensuring the protection of local identities that form the combination of these common values and explaining them scientifically (Özdoğan 2006). When we look at this definition and the functions of archaeology, it becomes clear that archaeology is a science that evaluates the material culture and heritage of humanity from the past by reflecting on it. In this study, the impact and contributions of surface research, which is another investigative technique like excavation of the archaeology science, which is a part of cultural heritage, on cultural heritage will be discussed.

Surface prospecting is the preferred practice in archaeology to provide a preliminary analysis for excavation before or during excavation (Kipfer 2000). Archaeological survey involves the recognition, identification, and documentation of materials and remains of people who lived in the past (White & King, 2016). The main idea of surveying is based on the prediction that if people lived somewhere, although their remains are underground, their traces will be seen on the ground, thus the surveys, the production technologies of the pieces collected from the surface and their formal characteristics will be the indicators of time and cultures of these artifacts. (Özdoğan 2011b). Cultural heritage, on the other hand, is an anonymous expression and a reflection of people's ever-evolving values, beliefs, knowledge and traditions as defined in the study. The surveys revealed that the cultural heritage of mankind emerges on the surface and below the ground¹ is a method that allows the scientific tracking of residues within a given system.

¹ The action of animals such as grub the soil, plant roots, mole, erosion of the slopes of multi-layered hills by natural conditions such

as water or wind, etc., which is the main cause of the cultural heritage of mankind. For detailed information, see

1.2. History of the Surveys and Their Contribution to the Cultural Heritage

This title intends to explain the history of surveys in archaeology. These are journeys and researches carried out in different regions of the world between the 17th and 21st centuries. The contributions of these studies to cultural heritage will also be explained.

Surveys are not as early or common in archaeology as excavations. Until the 19th century, Greek and Latin works were translated into European languages in the West. Interest in the sites in these texts increased during this century, and the reports, plans, and maps made by travellers produced the earliest surveys and their dates (Koparal 2020). The antecedents of surveys in the history of archaeology are not systematic. Rather, they should be understood as travel notes. Travelers are of great importance in publicizing eastern cities, especially in the western world. For example, in 1611, the British merchant J. Cartwright organized trips to the cities of Babylon, which remained within the borders of Iran and the Ottoman Empire, and Persepolis, which attracted attention, especially in Europe. He collected and published information about these settlements (Özdoğan 2011a). Although it was not systematic in the 17th century, they are preliminary examples of recording cultural heritage in ancient settlements.

The importance of the publications of travellers in the 19th century to the city of Soloi-Pompeiopolis in the region of Cilicia may be cited as an example. Sir Francis BEAUFORT was sent out by the British Board of Lords in 1811-1812 with the ship called H.M.S Frederikssteen to make a map of the south coast of Asia Minor. He came to this town to determine the topographical structure and marine resources of the coasts and islands. As for many ancient settlements on the coast, he prepared and published a detailed town plan of 1/500 yards for Soloi Pompeiopolis. The ancient city harbor, which has not survived to the present day, is included in Beaufort's plan with its elongated oval structure (Beaufort 1818). In fact, the elongated oval harbor is not to be seen in the plan today because it is not protected, and Beaufort's plan is still used today in scientific researches in archeology and underwater archaeology² This demonstrates the importance, if not systematic, of the 19th century traveler's survey records. This is a 19th-century method of transportable and non-transportable cultural artifacts that have been damaged over time into scientific records.

Since the middle of the 20th century, surveys in archaeology seem to have become more systematic. In 1948, A. H. Detweiler documented the architectural remains on the surface for most of the publications. He evaluated the architectural structures revealed during the excavations in a holistic structure. He explained how to locate the sites geographically on the map when there is no Global Positioning System (GPS) (Koparal 2020). In the 20th century, modern urbanization narrowed the areas of cultural heritage. Surveys in the first half of this

century were able to determine and protect the location of these areas by recording them prior to excavation.

Cultural heritage does not encompass one civilization in one geography. Their existence and relationship to each other, as well as their lore, constitute the whole. In this regard, the surveys conducted by J. Garstang in 1906 in central and Southern Anatolia in Anatolia are significant in history. The researcher documented the distribution of Hittite settlements and published his source called "The Land of Hittites" (Koparal 2020). Anatolia is an area of different civilizations through the centuries. From this point of view, it is not surprising to see the Hittite, Greek and Roman Periods in Anatolia. This research contributes to the cultural heritage by documenting the spread of the Hittite civilization in this geography, its differences, and its relations with other civilizations.

In the second half of the 20th century, surveys become more systematic. It is possible to increase the number of research examples. Among them are those that use aerial photography to conduct studies on ancient hydrology. With these applications, Diyala-Uruk Surveys showed in 1956-1975 that the semi-arid Mesopotamian settlements did not spread in a line along the riverbed. " The Surveys of Viru Valley ", conducted by G. Willey in Peru in South America in the 1950s, is another important example in the history of surveys. The research focused not only on the distribution of settlements but also on their physical size, population function, and sociopolitical structures³. From these examples, it can be seen that surveys are not a method that only look for traces of transportable and non-transportable cultural heritage. They are considered to be a method that contributes to cultural heritage, material culture, geography, settlement relationship, urban landscape and sociological aspects.

Turkey's intervention in the man-made nature of birth always expressed results, made great contributions to the survey said that their cultural heritage is provided. Examples are GAP and Keban Project, Karkamış-Ilısu project. TAY and Tay-Ex, TASK -history projects in which the data of these projects are collected and protected can be called TÜBA- KED journal (Koparal 2020). These studies are studied in terms of their contribution to cultural heritage through GAP and Tay-Ex.

The Firat- Dicle Basin is included in the framework of Southeast Anatolia Project (GAP). Here, Keban Dam Project was realized in 1968 by Istanbul University, Middle Technical University, Historical Environmental Studies and Evaluation Center. With this project, comprehensive and interdisciplinary research methods, archaeological excavations, ethnographic researches and geophysical studies were carried out for the first time in Turkey. In addition, another project was carried out in Karkamıs- Ilisu Regions in the 1990s in cooperation with the Ministry of Culture and Tourism, State Hydraulic Engineering and Middle East Technical University and Historical Environmental Research and Evaluation Center. In 1998, 4 rescue excavations and 9 archaeological surveys documented 250

 $^{^{2}}$ Scientific researches including the plan can be increased. For some of them see: Aşkın, 2006 $\,$

³ For detailed information on the Boeotian Survey in Greece, Laconia Survey, Hatay Amik Plain Survey, Antikythera Survey, see. Koparal, 2020

archaeological sites that will be affected by the dam, including 26 archaeological surveys in 2002 (Koparal 2020). Based on this data, it can be said that modern projects are causing destruction in the archaeological field. However, it is important to support surveys by the government to protect and document data. In this way, human-caused destruction of cultural heritage is minimized and resources are protected and documented across a broad geography.

Archaeological Settlements of Turkey (TAY) has been spread in the world of Open Access which is one of the pioneers of the application. It aims to document sites and create databases. In 2005, the Tay-Ex enabled the creation of protection status, reports of settlements in large areas and the verification of archaeological data (Koparal 2020). In addition to the data, a bibliography on cultural heritage remains can be searched on the online site TAY⁴. Survey reports are also published by TÜBA-Ked (Journal of the Academy of Sciences of Turkey Cultural Inventory) between 2003-2011, including cultural heritage and urban planning studies by 9 TÜBA-Ked. The most conspicuous of these publications is the one of the Ministry of Culture and Tourism. Excavations

and surveys conducted nationally and internationally throughout Turkey are reported in the 'Symposium Excavation Results'⁵ and 'Research Results' publications⁶. All researches conducted are available online at given sites. Turkey has one of the most attended symposia and publication networks in the world, which allow the recording and protection of cultural heritage. Thus, with the participation of national and international scholars, archaeologists contribute to the cultural heritage of the country.

2. ARCHEOLOGICAL SURVEYS and CULTURAL HERITAGE CONTRIBUTIONS of THE CILICIAN REGION.

Under this title, interdisciplinary methods used in surveys are discussed with examples. Their contribution to cultural heritage is assessed. In addition, selected samples from surveys in the Cilician Region and their contribution to cultural heritage are explained (Figure 2).



Figure 2. Location of selected ancient settlements for surveys and multidisipliner works in Cilicia

Surface research uses a variety of methods across disciplines. Many sciences such as geography, geology, hydrology, Geomatics Engineering, epigraphy contribute to this research. Their application methods are used in surveys. Thus, they contribute to the preservation and recording of cultural heritage through surveys.

The transmission of cultural heritage is not only a matter of material. At this stage, some scientific researches in archaeology use surface exploration techniques. Among them, one of the most important inter-scientific supports of archaeology is epigraphy. Surveys and archaeological excavations in the Cilician Region, are a great opportunity to "Epigraphy and Historical Geography Research in Cilicia" lead by Prof. Dr. Hamdi Sayar. The research conducted by Sayar in 1999 is handled here: There is a proposal for a village settlement

dated to the end of the Roman Period, in the hill between Adana Karataş district (Mallos) and Yeşimli village within the boundaries of the Cilician Region. An inscription on a statue base, which was used as a spolia here, was probably brought from Mallos. It was transcribed and published. According to it, the inhabitants of the town of Mallos worshipped the philosopher named Gaius Iulius Proclus. Moreover, he acted as a demiurgos (mayor) and as a gymnasian, who was responsible for the education of the youth in this city (Sayar 2000). From the data of such epigraphic researches many information such as, for whom the statue was erected, the task of this person, other duties, the way the city was governed, the education system and the order in the city can be gathered. This situation shows how epigraphy feeds its cultural heritage. Movable

⁴ for detailed information and data see: http://tayproject.org/veritab.html

⁵ see obtain all meeting results is https://kvmgm.ktb.gov.tr/tr-44760/kazi-sonuclari-toplantilari.html)

 $^{^6}$ for the full meeting results see: https://kvmgm.ktb.gov.tr/tr-44761/arastirma sonuclari-toplantilari.html

or immovable cultural objects, material identity definition, socio-cultural and socio-political aspects can be gathered by surveys.

Spatial data are quite abundant in archaeological studies. The step of collecting them and reaching results is very important. One of the most important systems used to reach the raw data, to read the data repeatedly and understand the data in terms of quality and quantity is possible by the 'Geographic Information Systems' (GIS) (Kalaycı 2020). The archaeologically important feature of GIS is its ability to comprehensively create new data layers. It does not only do this with map data. Additional data types can also be aerial photographs or satellite images (Maschner 1996).

The mutual support of Geomatics Engineering and archaeology will now be explained with examples. Geographic information systems and 3D modelling techniques in surveying offer a versatile way to preserve, document, conserve and present archaeological heritage. At the same time, geographic information systems as an important resource provide easily accessible and storable information instead of applications such as restoration and restitution, which are burdensome in terms of cultural heritage protection. As an example on this topic, a study can be cited that uses archaeology in the field of topographic engineering. Prof. Dr. Murat Yakar and Inst. Yusuf Doğan created a geographic information system database in the ancient region of Silifke (Seleucia ad Calycadnum), which contains boundary, road and settlement networks and their relationships. They also carried out 3D modeling with photogrammetric surveys using Mezgit Kale as an example. Thus, they enabled the creation of architectural details of the building that are difficult to see by eye and created information systems for the cultural heritage data of the Silifke region (Yakar and Doğan 2018).

The "Boğsak Island Surveys" carried out by Prof. Dr. Günder Varinlioğlu has benefited from photogrammetric and aerial photography studies. This situation can be cited as an example of the inter-scientific study of surveys with topographic engineering applications. In 2011, an aerial mosaic of the southern part of the island was created using the Adobe CS 5 program. This situation provides researchers with important information about the structure density and distribution (Varinlioğlu 2012). In 2013, there were problems arising from the size of the area for the building remains in the eastern part of the island. Here, the use of laser scanners was preferred instead of terrestrial photogrammetric techniques. This technique has been shown to give an effective result for small building remains (Varinlioğlu 2014). As a result, it can be seen that movable and immovable cultural heritage remains are recorded and scientifically studied in archaeological surveys using inter-scientific approaches.

Geography and geographic information about the area being surveyed are of great importance in surveys. For example, common geographic features are found in locations chosen for city foundations in ancient times. To give an example, almost all Aiolian, Ionian and Dorian

cities (city-states) in the Aegean Region are founded on the peninsula (Akurgal 2005).

It is also known that large cities in the Cilician Region are founded either on the coast or on the rivers connected to the coast. One of them is the city of Corycus. Between 2004-2011, archaeological research was conducted here under the direction of Prof. Dr. Serra Durugönül. During the research, various ruins such as the temple area of the Roman period, the columned street, the public building, the bath, the city wall and the tombs in the necropolis were investigated. In order to obtain more data, plant cleaning was carried out at certain points such as in the temple area, the colonnaded Street and the public building. In addition to the work in the city center, many settlements in the hinterland were also investigated to reveal the connection of Corvcus with its immediate surroundings7. This situation shows the importance of a large-scale and regional preliminary investigation in a given geography. Here, the distribution of settlements and the distribution of architectural spaces in the settlement provide information on the presence of cultural heritage in the hinterland of the settlement. With this information, the location of cultural heritage in relation to the city and architectural structure can be determined, documented and researched.

When surveying, archaeologists use remote sensing GNSS (CORS), which is often used in Geomatics Engineering. The Archaeological Survey of Tarsus Hinterland was launched in 2016 under the direction of Assoc. Prof. Dr. Deniz Kaplan. The contributions of the GNSS (CORS) device used in his research are clear. The CORS device is used to determine the location of the settlement or roads in international coordinates. Moreover, the plans of the settlements are prepared and the settlement area is revealed. He conveyed the information that important results have been obtained in terms of reading building plans and layout of floor plans. The device also reveals the relationship between the settlements and the street. The information obtained in this layer is transferred to the Autocad software. He also explained that the Geographic Information System was provided with Cors to see all the specified features of the research from a broad perspective on the physical map. Thus, the use of these devices in surveys allows the settlement, which is the cultural heritage itself, and store it in international geographic information systems (Kaplan et al. 2018; Kaplan et al. 2020).

The sciences of geography and geology, which contribute to archaeology in surveys in an interdisciplinary way, have been conveyed in the study where it provides information on structuring, settlement, and city foundation. Moreover, the geographical and geological features have shaped the places of worship of the ancient people. In 2008, under the direction of Prof. Dr. Emel Erten Olba Surveys were conducted and they can be cited as examples. The Şeytanderesi valley, which is located in Olba, is a geologically carstified rocky area. Therefore, the valley slopes were used as rock cult areas. The rock pillar located in this cult area, in which the rock on the western slope of the valley is carved, is a

⁷ for detailed information on the studies of the ancient city of Corycus see https://kvmgm.ktb.gov.tr/tr-44761/arastirma sonuclari-

toplantilari.html, and the 23rd-29th presentations of the 'Research Results' meetings of the Ministery of Culture and Tourism

"baitylos"8. In addition, many animal bones were found on the surface of the rock indentation. Along with these finds, it is stated that a sacrificial ritual took place here. The study indicates that this sacred site in Olba is a place of worship related to the religious tradition of Zeus Olbios in the region. This belief also portrays that its roots are based on the Luwians and its relationship goes back to the storm / Weather God Tarhunt (Erten et al. 2009). These findings in the Olba studies show that the cultural heritage in the Cilician Region root in the continuity of belief from the Hittite Period to the Roman Period. Moreover, in accordance with the geological possibilities and geographical conditions, it shows the continuity of cultural heritage by demonstrating the transmission of the similar religious cultural heritage of different societies that have lived in Olba for centuries and the evidence for it.

Olba Surveys are important because it is an urban survey in the Cilician Region. Surveys also contribute to the preservation of cultural heritage by preparing excavations and minimizing excavation damage. Dr. Murat Özyıldırım and Assoc. Prof. Dr. Sibel Ünalan conducted surveys in the Olbaian Monastery. In the process, the burial room, the cult room, the atrium in the northwest, the cistern in the southeast and the chapel in the southeast corner were noticed and identified for the first time (Özyıldırım & Ünalan 2011). With this research, which was conducted before the excavations in Olba, the identification of the cultural heritage was documented. Architectural differences and additions are revealed. As building sites were determined for the excavation of the monastery, destruction was minimized.

The results of the archaeological investigations also allow the recording of important data such as industrial activities, production facilities and capacities, settlement and structural models resulting from production, distribution of agricultural land in the areas where the cultural heritage is preserved. As an example, the "Urbanization and Rural Settlements in Mountainous Cilicia Research" conducted by Assoc. Prof. Dr. Ümit Avdınoğlu can be mentioned. The research on urbanization and agricultural organization between Erdemli and Silifke in the Hellenistic and Roman Periods documents numerous archaeological evidences such as farms, peasant villas and workshops that belong to the agro-architectural arrangement, which appeared as another element of the regional settlement arrangement and show the functional differences with the periodic development (Aydınoğlu 2010; Aydınoğlu 2020). Thus, the purpose of use of the immovable cultural assets, the economic aspect of the period and its impact on the and architectural remains settlement comprehensively evaluated.

It is clear how important the cultural heritage is for today's countries. Archaeology is one of the sciences that protect cultural heritage. In archaeology, the primary contribution of surveys to cultural heritage is that it provides an alternative to excavation. Thus, it ensures that the destruction of cultural heritage by excavation is avoided. It also ensures that cultural heritage is scientifically recorded and evaluated. As a result of the study, it is concluded that archaeological investigations have an interdisciplinary approach in the investigation patterns selected in the Cilician Region. Cultural heritage and its transportable or non-transportable cultural objects are revealed reveals, the definition of material identity, socio-cultural and socio-political aspects by Epigraphy With the application of Geomatics Engineering sciences, cultural heritage settlements, settlement areas can be seen and stored in international geographical information systems. As a result of the surveys conducted at the Cilician Region, it is ensured that heritage in relation to the city and architectural structure is determined, documented and researched. In addition, the studies highlight the functional differences of the buildings with periodic developments such as the Greek-Roman and Byzantine Period. As a result, archaeological studies are important for the protection of cultural heritage, the relationships of ancient settlements housing cultural heritage, architectural features, street and urban structures, road networks, trade relations and urban life.

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term aniconic (representation of a god without description) in Near Eastern cultures, see also: Gaifman, 2008

^{3.} CONCLUSION

⁸ term for the stones formed in the cult areas, which are considered to be the house of the god or deity according to the beliefs of the time. For detailed information on the use and development of the

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