



## Exploring the Caves as Shelters, Sacred Spaces, and Photography Subjects

### Barınaklar, Kutsal Alanlar ve Fotoğraf Özneleri Olarak Mağaraları Keşfetmek

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#### Öz

Yeraltı boşlukları olan mağaralarda jeokimyasal ve tektonik süreçler, su aşındırması, hidrotermal aktivite gibi farklı kuvvetlerin etkisi altında, uzun sürede oluşan, eşsiz yapılar bulunmaktadır. İnsanoğlu mağaraları geçmişten günümüze barınak, zindan, ibadethane, soğuk hava deposu, terapi, solunum yolu rahatsızlıklarının tedavisi, yeraltı sularından yararlanma, turizm, vb. pek çok farklı amaçla kullanmıştır. Mağaralar, korunaklı yerler olduklarından insanoğlunun bilinen en eski sanat çalışmalarının da bulunduğu yerlerdir. Mağaraların bu geniş kullanım alanı, karanlık ve kapalı yapıları ile tarihsel süreçte üstlendiği farklı görevler onların daima merak uyandıran, keşfe davet eden ve sanatsal çalışmaların sürdürüldüğü mekanlar olmalarını sağlamıştır. Bu çalışmada, barınak işlevi gören mağaralar, insan yaşamındaki rolleri, uyandırdıkları duygular, kutsal mekân statüleri ve fotoğraf aracılığıyla temsil edilmeleri açısından incelenmiştir.

**Anahtar Kelimeler:** Mağara, fotoğraf, barınma, sanat

#### ABSTRACT

Caves are underground cavities with unique structures that form over time due to various forces, including geochemical and tectonic processes, water erosion, and hydrothermal activity. From past to the present humans have used caves for many different purposes such as shelter, dungeon, place of worship, cold storage, therapy, treatment of respiratory diseases, use of underground water, tourism, etc. Since caves are protected places, they are also the places where the oldest known works of art of mankind are located. The wide range of uses of caves, their dark and closed structures, and the different roles they have played throughout history, have always made them places of curiosity, discovery, and artistic creation. In this study, caves, which serve as shelters, were examined in terms of their role in human life, the emotions they evoke, their status as sacred places, and their representation through photography.

**Keywords:** Cave, photography, shelter, art

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## INTRODUCTION

Caves are generally formed because of karst dissolution. They constitute one of the most unique shapes of karst topography in terms of size and formation characteristics. Caves are among the most remarkable landforms with groups of different sizes and types. They are formed by chemical dissolution and partly mechanical erosion of water (Özdemir, 2011). These landforms have geological, hydrographic, and climatic data. In addition to their natural features (Kopar, 2008; Zaman et al., 2011), they have been used by people for different purposes since ancient times and have been the subject of various studies with the opportunities they offer (Güldalı, 1983; Uzun, 1991; Uzun and Zeybek, 1996; Doğaner, 2001); Ceylan and Demirkaya, 2006; Karadeniz et al., 2009; Semenderoğlu and Aytaç, 2011, Özşahin and Kaymaz, 2014).

Caves which have been actively used by humans as their shelters are very important places for socio-cultural development and activities. Since prehistoric times, mankind has been exploiting caves for (1) shelter and refuge, (2) dungeon, (3) hunting, (4) place of worship, (5) cold storage, (6) protection of animal and agricultural products, (7) various economic activities, (8) therapy, (9) treatment of respiratory diseases, (10) energy extraction from the cave rivers, (11) a natural laboratory for sciences such as Geology, Geomorphology, Geography, Anthropology, Archaeology, Biology, Ecology and Speleology, (12) a military logistics site, (13) security, (14) agricultural production (cultivation of mushrooms, cheese, etc.), (15) storage and ripening of food such as cheese and oil, (16) supply of bat guano, (17) natural gas, (18) LPG and fuel storage, (19) groundwater utilization, (20) tourism, etc. due to the beauty of the dripstones and the microclimatic characteristics of the cave air different from the free atmosphere conditions. The temperature (17-24 °C) and humidity (40-80%) of the caves do not change much throughout the year, giving them a microclimate feature. In this respect, caves are also important in terms of health tourism (Özdemir, 2011; Sever, 2011; Koçan, 2012; Özşahin and Kaymaz, 2014; Şengün et al., 2022).

In terms of interaction, these many uses of caves interact in complicated ways, influencing one another and contributing to the multidimensional role of caves in human society. For example, the use of caverns for shelter and refuge has traditionally been linked to their roles in agriculture, economic activity, and even military logistics, demonstrating how caves have been vital to many facets of human life. Furthermore, caves' therapeutic and medical applications, such as respiratory disease treatment and therapy, show a symbiotic link with human health. Furthermore, caves' status as natural laboratories for scientific disciplines highlights their importance in increasing knowledge and understanding across multiple professions.

In addition to these, caves, which have become centers of attraction in terms of tourism, attract people not only because of their physical splendor but also because of their historical, cultural and scientific importance. This interconnection of cave usage emphasizes the complexities of their influence on human cultures, as well as the importance of gaining a thorough grasp of their impact on psychology. By addressing this requirement, this study helps to close the gap in our understanding of how caves shape human behavior and psychology.

The transformation from the industrial revolution to post modernism has brought about a new way of life in the world today, hence resulting in change of values and priorities. In the past, there has been a shift from traditional focus on acquiring wealth among early postmodern societies to an urge to have experiences. This is escalated by various reasons including social, cultural, economic and technological innovations that have taken place. Therefore, compared to previous generations, people living in the present day are blessed with a greater quantity of leisure time. This surplus of free time facilitated by aspects like education levels, culture and income levels encourages inclusive learning processes aimed at extending beyond routine activities (Yozcu, 2017; Kaya et al., 2019). Consequently, indulging into recreation including caving has become one popular pastime amongst others on earth today.

In parallel, the impact of photography on art and perception has played a significant role in shaping this newfound emphasis on experiences. Photography, with its ability to capture and preserve moments in time, has expanded memory and perception, allowing individuals to transcend the confines of their immediate surroundings. Susan Sontag eloquently describes how photography alters our perception by broadening our perspectives on what is worthy of attention and observation (Sontag, 2008). This transformation in perception, catalyzed by photography, has reshaped the way we interpret visual stimuli and has contributed to the exploration and appreciation of experiences beyond the material realm (Tekin, 2018).

Understanding the subjective nature of perception, particularly in the context of environmental perception, highlights the intricate relationship between personal experience, emotions, and the interpretation of space. This perspective, rooted in experience and personality rather than analytical or rational thought, underscores the subjective nature of perception. Consequently, individuals' subjective perceptions not only shape how they view the environment but also influence the emotions they experience within a particular area, adding an additional layer to the environmental experience (White, 1999; Zarkhah et al., 2022).

In the realm of cave photography, visual experiences dominate, providing a rich context for the production and analysis of visual data. Photography's close relationship with representation, paralleled with other visual representational arts like painting, leads to the multidisciplinary nature of related theories and concepts. The veracity of photographic images often positions them as faithful representations of reality, making representation more crucial than ever. When photographs are closely linked to reality, they serve as evidence of what existed in front of the lens, solidifying the connections between photography, science, and nature. However, when a photograph transcends its real-world definition, it opens the door to subjective interpretation, influenced by the cultural and personal backgrounds of both the viewer and the photographer (Dave, 2018). This newfound freedom in interpretation underscores the dynamic relationship between photography, representation, and individual perception, highlighting photography's role in shaping our understanding and appreciation of the world around us.

The aim of this study is to investigate caves as shelters, focusing on their multifaceted roles in human life, the emotions they elicit, their status as sacred spaces, and their representation through the medium of photography. To achieve this, the study employs a comprehensive approach that encompasses various aspects of cave exploration.

## **MATERIALS AND METHODS**

This study employs a qualitative approach that explores the emotional responses of individuals, particularly cavers, who have firsthand experience with caves. By capturing these nuanced perspectives, the research aims to shed light on the significance of caves in human life and culture, as well as the diverse range of emotions and experiences associated with cave exploration. Visual materials, including the author's cave photographs, serve as crucial representations of these experiences.

Additionally, the study undertakes an intensive assessment of current literature on caves, encompassing articles, books, and different relevant resources. This complete literature evaluation serves to contextualize the empirical findings inside the broader body of knowledge surrounding caves and their ancient and current roles as shelters and cultural symbols.

## **LIFE AND EMOTIONS IN CAVES**

In recent years, there has been a trend where individuals seek out dangerous, risky, and recreational activities to influence, mature, create, or renew their personalities (Photo 1). Exploring caves, which

boast visual allure, evoke feelings of excitement, curiosity, and adventure, and were historically utilized primarily as shelters, constitutes a unique active experience, encompassing before, during, and after the exploration (Kaya et al., 2019). Cave exploration can thus be regarded as both a sport and recreational activity, often leaving participants with positive memories, revitalization, and a desire for repetition.

The primal instincts inherent within humans often harbor irrational fears, particularly regarding darkness and being underground, stemming from a perception of caves as harboring malevolent forces. The fear of solitude, entrapment, and even water is prevalent. However, cave explorers willingly confront these fears by their own volition (Whitaker, 2022).



Photo 1. Kocain Cave, Antalya/Türkiye



Photo 2. Tabak-1 Cave, Antalya/Türkiye

The significance of caves in ancient Turkish culture is profound. Among certain Turkish tribes (such as the Tukis, Tabgaçs, etc.), caves symbolize the birthplace and the locus of life for successive generations. These tribes would pilgrimage to sacred caves, offering sacrifices for rebirth, and maintaining regular visits. This belief system has fostered an association between caves and the maternal womb, as evidenced in oral folklore alongside symbols of dampness and darkness (Roux, 2012; Bars, 2017). Given the typically wet, dark, silent, and enclosed nature of caves, they bear a resemblance to the maternal womb. Ironically, perhaps, humans' attraction to caves (Photo 3) stems from a longing for the trouble-free comfort of the womb, despite its inherent dangers.



Photo 3. Maslahaltı Cave, Konya/Türkiye

While caves envelop explorers in darkness upon entry, emerging from them allows one to reexperience the moment of birth, embracing the vast expanse of the sky and the verdant greenery of nature (Photo 4) (Sağlamtimur, 1997).



Photo 4. Maslahaltı Cave, Konya/Türkiye

Photography within cave environments holds special significance and value. It offers a unique opportunity to unveil the beauties concealed by Mother Nature from sunlight and from us, even if only on a two-dimensional plane. Cave photography requires meticulous preparation, including careful selection and waterproofing of materials. Essential equipment includes a waterproof bag, wide-angle lens, flashes, cable shutter release, and tripod. Patience and cooperation from models are paramount, often necessitating moments of breath-holding and stillness during the shoot (Sağlamtimur, 1996a, b).

"I ignite the illumination device on my helmet. The distinctive scent of acetylene gas suddenly ignites into a flame, illuminating my surroundings. The fear of darkness transforms into a desire for exploration with the warm light from my helmet. Now, I can move forward effortlessly, within the womb, amidst nature... We navigate inclined surfaces, constantly in contact with damp ground during ascents, as though touching the internal organs of nature" (Sağlamtimur, 1996a) (Photo 5).



Photo 5. Tuluntaş Cave, Ankara/Türkiye

### CAVES AS SACRED PLACES

Caves have been revered as sacred spaces where the divine is believed to manifest, offering pathways from Earth to otherworldly realms. In shamanic practices, caves serve as gateways for spiritual journeys, symbolizing a passage between worlds for Shamans as they navigate through subterranean landscapes. Over time, humanity has bestowed upon caves various meanings, transforming them into symbolic entities that represent the essence of existence. Serving as the core of human experience, caves host individuals on journeys of self-discovery, facilitating transformative experiences and a reconnection with one's identity (Çetindağ, 2007; Bars 2017). As Sağlamtimur (1996a) eloquently describes, "From time to time it is necessary to crawl on muddy ground. The floors are cold and the ceilings are cramped; but it's all very impressive" (Photos 6, 7).



Photo 6. Kocain Cave, Antalya/Türkiye



Photo 7. Tuluntaş Cave, Ankara/Türkiye

One such legendary cave is home to Shahmaran, a mythical creature blending elements of fish, snake, and human. Known as the "queen of snakes" in some accounts, Shahmaran is said to reside in a lofty cavern nestled amidst the vineyards of Siirt, Turkey. This cavern, adorned with thousands of wells, poses a mysterious allure. Yet, those who venture into its depths in search of Shahmaran are warned of perilous wells that swallow all who dare approach. Despite the dangers, within the cave lies a knee-deep, chilling puddle believed to possess miraculous healing properties, offering solace to those afflicted by illness (Karakaş, 2013; Ercan 2018).

In the realm of cave exploration, adventurers encounter diverse challenges and experiences. Some caves boast large puddles and ponds, obstacles to be overcome with determination and resourcefulness. As explorers pump their boots and navigate through these watery passages, they confront the physical demands of their environment (Photo 8). Yet, other caves present even greater trials, with steep descents that require a surrender to the unknown. Here, adventurers rely on

specialized equipment such as bolts, bolt hangers, carabiners, and sturdy ropes with an 11 mm diameter crafted specifically for the rigors of caving (Photo 9).

Within the cavern's confines, explorers encounter both physical obstacles and spiritual revelations. Negotiating through pools and ponds, they overcome challenges as they delve deeper into the earth's embrace. Some caves demand surrender to the unknown, as adventurers descend into the abyss with only a rope and a prayer, entrusting their safety to the equipment designed for such treacherous terrain. Amidst the cold, cramped confines of these underground sanctuaries, there is a profound sense of awe and wonder, transcending the physical discomforts to reveal the mysteries that lie hidden within.



Photo 8. Balatini Cave, Konya/Türkiye

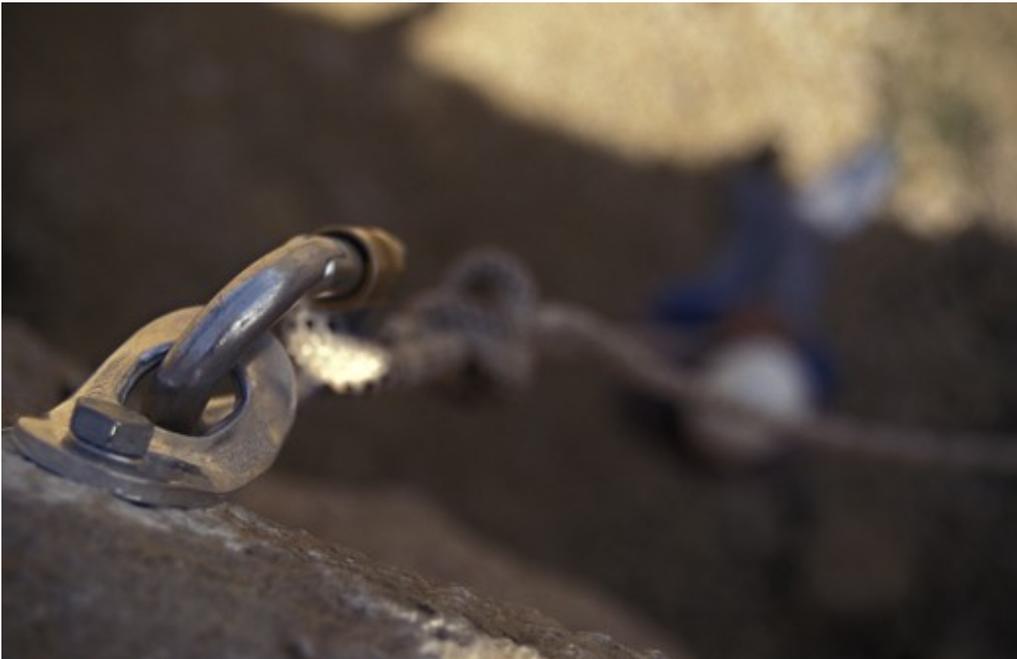


Photo 9. Sütlük Cave, Adana/Türkiye

Caves, as the first abodes of humanity, offer vast underground expanses within mountains, rock formations, and other natural structures. These subterranean spaces, whether natural or artificially formed, encompass a variety of cells and galleries, inviting exploration and discovery (Garofano and Govoni, 2012). The enchanting ambiance of caves is often attributed to geological formations like stalactites and stalagmites, created through the dissolution and re-precipitation of carbonate and sulphate rocks by groundwater. For cavers, the allure of caves lies in the thrill of the unknown, darkness, and challenges they present (Cross, 2004; Yozcu, 2017).

Amidst the depths of these underground realms, cavers navigate through a myriad of obstacles and terrains, embracing the adventure that lies ahead. "Constantly crawling... On stony ground, on wet rocks, on travertines, in mud, in the cold, in narrow spaces, in the dark..." (Sağlamtimur, 1996a) (Photo 10).



Photo 10. Tabak 2 Cave, Antalya/Türkiye

As one progresses through the cavernous pathways, light sources cast illuminations, giving rise to intricate formations of shadows from various angles. Throughout history, shadows have captivated the minds of many artists, particularly in the realm of painting. It is theorized that the genesis of cave wall paintings may have stemmed from observations and interpretations of these shadows. Ancient civilizations imbued shadows with significance, attributing personal qualities to them and linking them symbolically to the soul. By tracing the outlines of shadows cast upon cave walls, they rendered depictions of both living beings and inanimate objects, immortalizing them as permanent records (Uludağ Eraslan, 2020).

Among these enduring records is a photograph capturing a caver's sentiment: "Fortunately, our flying friends are always around us, it makes us happy to see them," alongside its accompanying shadow (Sağlamtimur, 1996a) (Photo 11).



Photo 11. Egyptian Fruit Bat, Mersin/Türkiye

“It is not always possible to reach the campsite at the cave entrance during the day. Sometimes departure occurs in the evening hours. After all these activities, the fire lit by those waiting for us outside and the hot soups warm us up.” (Sağlamtimur, 1996a) (Photo 12).



Photo 12. Kocain Cave, Antalya/Türkiye

## RESULTS

Caves are considered as the first example of urbanization and have been indispensable to human life throughout history. They have met various human needs, including providing shelter, which is a necessity, and have played a significant role in the formation of social culture. In ancient times, some cities were built underground and consisted of caves. These caves served various purposes, including cold storage, worship, therapy, protection, product storage and maturation, utilization of underground water, laboratory opportunities for basic sciences, and production feasibility.

Caves can also be utilized for tourism purposes. Additionally, sportive developments have led to an increase in caving activities. Some cavers, equipped with technical gear, take photographs in the challenging atmosphere of these underground formations. Cave photography demands technical knowledge, experience, and equipment, and is considered an art form that requires objectivity and precise word choice.

Emotional changes occur in caves that are different from those felt on earth. Especially for a caver interested in art, the perspective, interpretation and meaning of the world is incomparably more intense in these spaces than above ground, free from external contexts and ethereal/eternal. According to Confucius, 'Cheerful people should go to the waterside, people who want to have fun should go to the mountains, and those who want to be virtuous should go to the caves'. Throughout the history of mankind caves are considered as portals to higher dimensions. Photography in these dark environments requires skilled techniques, as photographers must master both light and dark equally well. In terms cinematography, it is important to use chiaroscuro technique effectively to achieve the desired lighting and shadow effects.

The term 'photography' refers to drawing with light. As light is the foundation of this art, it is crucial to properly control lighting in cave environments. Due to inadequate or absent light conditions in caves, 3D perception of the environment can be challenging in complete darkness. Therefore, the photographer should first explore the space and light every feature inside the cave to gain a better understanding of the environment. After mapping the 3D environment in their brain, the photographer needs to evaluate the photographic composition and technique. It is critical to use the appropriate light source and techniques for correct exposure, as well as to control the view angle and depth of field. Photographing inside a cave is a challenging process due to the combination of these photographic factors and darkness. The techniques used in cave photography include long exposure using natural or artificial light, such as flash or carbide lamp light. In narrow cave environments, it is recommended to use super wide-angle or wide-angle lenses to properly capture the scene. Manual exposure and shooting methods are preferred over automatic features of the camera, as they often do not work well in achieving the desired artistic image. These methods include manual focusing, manual white balance adjustment, and manual aperture selection. Although the aperture varies depending on the desired field width and exposure value, it is recommended to use medium to low values (f/5.6-8) or sometimes open aperture values (f/1.4-4). Achieving the correct exposure value in these conditions requires experience and trial and error. During exposure, the cavers/models should hold their breath to avoid blurring the photograph. Additionally, the camera should be mounted on a tripod and the exposure should be initiated with a radio or cable shutter. The composition should be set correctly. Cave photography requires teamwork. By working together harmoniously and patiently, appropriate photographs can be obtained.

The caves have played a vital role in the human history for long time, their usefulness is not limited to the primary functions of housing, storage, and are carried out various functions like worship and laboratory opportunities. Humanity not only came to see caves as a place for lodging but as a place to be counted among significant cultural and social objects. Caves, however, still satisfy human twofold interests for firstly survival and making markets secondly tourism and caving activities.

One aspect of cave exploration that has gained prominence is cave photography, considered both a technical skill and an art form. Photographers equipped with specialized gear venture into the challenging underground environment to capture the unique atmosphere and beauty of caves. In these dark and ethereal spaces, emotional experiences are heightened, offering a perspective and interpretation of the world that is incomparable to above-ground settings.

Confucius's assertion that caves are portals to higher dimensions underscores their significance throughout human history. To effectively capture the essence of caves through photography, mastering techniques such as chiaroscuro becomes crucial. Chiaroscuro technique, the mastering and manipulation of light and shadow, allows photographers to create dramatic and visually striking compositions.

However, cave photography presents numerous challenges due to the absence of adequate natural light. Photographers must meticulously control lighting conditions and carefully plan their shots to convey the depth and texture of the cave environment. This often involves using long exposure techniques and specialized lighting equipment, such as flash or carbide lamps.

Manual adjustments, including focus, white balance, and aperture selection, are essential to achieving the desired artistic effect in cave photography. Working in collaboration with cavers and models, photographers navigate the complexities of the cave environment, relying on teamwork and patience to capture stunning images.

To a great extent, such traces of photos prove to be a blend of technical skills, creative vision, and team cooperation intended to reflect the mysteriousness and dazzling beauty of underground wonders. However, a camera would rather be used by a talented photographer, caves become eternally attractive for everybody around. As a result, one gets a feeling of wonder and amazement when looking at the photos.

Ultimately, the understanding of caves and human influence we want to attain requires the use of both scientific and creative approaches. This knowledge will be crucial in the sense that human beings will not see caves as just standing place which is entirely made up of stones but also a part of them and they will not be just source of intellectual growth but their physical body as well. This study shed light on shelter in caves throughout their history, culture and emotional point of view, as well as representation in photography. In such a way the exploration of the themes allows the researcher to gain a deeper awareness of the caves as the peculiar and diverse places that had been a more and more enthusiastic exploring object by humanity during the whole course of history.

### ***Compliance with Ethical Standard***

***Author Contributions:*** *This article is single-authored.*

***Conflict of Interest:*** *The author(s) declare that they do not have a conflict of interest with themselves and/or other third parties and institutions, or if so, how this conflict of interest arose and will be resolved, and author contribution declaration forms are added to the article process files with wet signatures.*

***Ethics Committee Approval:*** *In this article, ethics committee approval is not required, and a consent form affirming that a wet-signed ethics committee decision is not necessary has been added to the article process files on the system.*

## REFERENCES:

- Bars, M. E. (2017). Türk Destanlarında Mağara Kültü Üzerine Bir Değerlendirme. *Uluslararası Sosyal Araştırmalar Dergisi*, 10(52), 75-82.
- Ceylan, S., & Demirkaya, H. (2006). Dim Mağarasının (Alanya) Kaynak Değerleri, Turizmde Kullanımı ve Sürdürülebilirliği. *Doğu Coğrafya Dergisi*, 15, 199-223.
- Cross, G. S. (2004). *Encyclopedia of Recreation and Leisure in America*. Thomson Gale.
- Çetindağ, G. (2007). Türk Kültüründe Mağara Motifi, 38. *ICANAS Uluslararası Asya ve Kuzey Afrika Çalışmaları Kongresi, 10-15 Eylül Ankara, Bildiriler. Cilt I*, 443-455.
- Dave, M. (2018). *The phenomenon of emotion within a photograph*. [Canterbury Christ Church University (United Kingdom)]. ProQuest Dissertations Publishing.
- Doğaner, S. (2001). *Türkiye Turizm Coğrafyası*, İstanbul: Çantay Kitabevi.
- Ercan, N. G., (2018), Türk Kültüründe Analık ve İz Bırakan Analar. Niğde Ömer Halisdemir Üniversitesi, *Sosyal Bilimler Enstitüsü, Avrasya Araştırmaları ABD*, Niğde.
- Garofano, M., & Govoni, D. (2012). Underground Geotourism: A Historic and Economic Overview of Show Caves and Show Mines in Italy. *Geoheritage*, 4, 79-92.
- Güldalı, N. (1983). Oluşumları, Gelişimleri ve Ekonomik Değerleriyle Mağaralar. *TÜBİTAK Bilim Teknik Dergisi*, 188, 1-4.
- Karadeniz, V., Çelikoğlu, Ş., & Akpınar, E. (2009). Gökgöl Mağarası ve Turizm Potansiyeli. *Turkish Studies International Periodical for the Languages, Literature and History of Turkish or Turkic*, 4/8, 1621-1641.
- Karakaş, R. (2013). Siirt Efsane ve Halk İnanışlarında Yılan Miti. *Folklor/Edebiyat Dergisi*, 19(73), 49-62.
- Kaya, F., Yozcu, S., & Çetin, G. (2019). Görsel Mağaracılık Deneyimine Yönelik Bir Araştırma: Karaca Mağarası. *IWACT'19 International West Asia Congress of Tourism Research*. Van, Türkiye.
- Koçan, N. (2012). Karaca Mağarası'nın (Gümüşhane) Alternatif Turizm Kapsamında Değerlendirilmesi. *Mehmet Akif Ersoy Üniversitesi Fen Bilimleri Enstitüsü Dergisi*, 3(1): 37-44.
- Kopar, İ. (2008). Elmalı Mağarası (İspir-Erzurum). *Fırat Üniversitesi Sosyal Bilimler Dergisi*, 18(2), 71-90.
- Özşahin, E., & Kaymaz, Ç. K. (2014). Gilindire (Aynalığöl) Mağarası'nın Turizm Potansiyeli (Aydıncık, Mersin). *Doğu Coğrafya Dergisi*, 19(31), 145-166.
- Özdemir, Ü. (2011). Mencilis Mağarası. *Doğu Coğrafya Dergisi*, 10(13), 135-150.
- Roux, J-P. (2012). Eski Türk Mitolojisi (Çev. Musa Yaşar Sağlam), Ankara: BilgeSu Yayıncılık.
- Sağlamtimur, B. (1996a). Mağara Fotoğrafçılığı (1. bölüm). *Fotoğraf Dergisi*, 6, 38-39.
- Sağlamtimur, B. (1996b). Mağara Fotoğrafçılığı (2. bölüm), *Fotoğraf Dergisi*, 7, 80-83.
- Sağlamtimur, B. (1997). Yeraltında Olmak. *İçel Sanat Kulübü Bülteni*, 55, s35.
- Sever, R. (2011). Polat Mağarası ve Turizm Potansiyeli. *Doğu Coğrafya Dergisi*, 13(19), 251-266.

- Sontag, S. (2008). *On photography*. Penguin Modern Classics.
- Şengün, M. T., Kılıçarslan, M., & Göktaş, Y. (2022). Birkleyn Mağaraları (Diyarbakır) ve Turizm Potansiyeli. *Mavi Atlas*, 10(1), 219-234.
- Tekin, A. (2018). Yapay Zeka Kullanımının Sanata Etkileri. *Kent Akademisi Dergisi*, 11(4), 692-702.
- Uludağ Eraslan, R. (2020). Sanat Tarihinde Gölgenin Yanıltıcı Özelliği ve Platon'un Mağara Alegorisi. *Ulakbilge*, 44, 99-108. doi: 10.7816/ulakbilge-08-44-10
- Uzun, A. (1991) Karaca Mağarası (Torul-Gümüşhane), Atatürk Kültür, Dil ve Tarih Yüksek Kurumu, Coğrafya Bilim ve Uygulama Kolu. *Coğrafya Araştırmaları Dergisi*, 3, 15-24.
- Uzun, A., Zeybek, H. İ. (1996). Akçakale Mağarası (Gümüşhane). *Türk Coğrafya Dergisi*, 31, 39-55.
- Whitaker, R. W. (2022). *Shibumi*. e-Press.
- White, E. T. (1999). *Path, portal, place: Appreciating public space in urban environment*. Architectural Media Ltd.
- Yozcu, S. (2017). Mağaraların Rekreasyonel Kullanımı ve Mağaracılık Motivasyonları: Ayvaini Mağarası Örneği, Doktora Tezi. *İstanbul Üniversitesi, Sosyal Bilimler Enstitüsü, Turizm İşletmeciliği Anabilim Dalı*.
- Zaman, M., Şahin, İ. F., & Birinci, S. (2011). Çal Mağarası (Düzköy-Trabzon) ve Çevresinin Ekoturizm Potansiyeli Açısından Önemi. *Doğu Coğrafya Dergisi*, 26, 1-23.
- Zarkhah, S. A. A., Ultav, Z. T., & Ballice, G. (2022). The Importance of 'Meaning' as a Component of Place Identity in Public/Urban Interiors: Kızlarağası Inn, İzmir. *Kent Akademisi Dergisi*, 15(4), 2025-2048.