THEORY, CONTEXT, AND PRACTICE IN SOCIAL, HUMAN, AND ADMINISTRATIVE SCIENCES

Editor
Assoc. Prof. Dr. Furkan ÇELEBİ

DUVAR

THEORY, CONTEXT, AND PRACTICE IN SOCIAL, HUMAN, AND ADMINISTRATIVE SCIENCES

Editor

Assoc. Prof. Dr. Furkan ÇELEBİ[1]

[1] fcelebi@hotmail.com, ORCID: 0000-0002-6689-9878

Theory, Context, and Practice in Social, Human, and Administrative Sciences

Editor: Assoc. Prof. Dr. Furkan ÇELEBİ

Editor in chief: Berkan Balpetek

Cover and Page Design: Duvar Design

Printing : August -2025

Publisher Certificate No: 49837

ISBN: 978-625-5698-22-3

853 Sokak No:13 P.10 Kemeraltı-Konak/İzmir

Tel: 0 232 484 88 68

www.duvaryayinlari.com

duvarkitabevi@gmail.com

TABLE OF CONTENTS

Chapter 1

Evaluation of the Karahantepe Archaeological Site From a Tourism Perspective

Estebrak ALBARJAS[1], Serkan YİĞİT[2]

ABSTRACT

This study aims to evaluate the Karahantepe Archaeological Site, located within the borders of Şanlıurfa province, from a tourism perspective. Dating back to the Pre-Pottery Neolithic Age, Karahantepe, with its archaeological findings and cultural heritage, is a notable site not only in Turkey but also in the global archaeological literature. The study examines the historical and cultural significance of Karahantepe, and discusses the impact of the excavations and the resulting findings on tourism potential. Furthermore, the site's evaluation within the context of sustainable tourism, visitor experiences, and potential contributions to regional development are discussed. The study emphasizes that Karahantepe could become an international center of attraction similar to Göbeklitepe through systematic excavations, the development of infrastructure investments, and effective promotional activities. In this context, it demonstrates that Karahantepe holds significant potential for the future of both archaeological research and cultural heritage tourism.

Keywords: Karahantepe, cultural heritage, historical site, sustainable tourism, visitor experience

[1] Yüksek Lisans Öğrencisi, Mardin Artuklu Üniversitesi/Lisansüstü Eğitim Enstitüsü/Turizm İşletmeciliği Ana Bilim Dalı/ Turizm ve Kültürel Miras yönetimi Tezli Yüksek Lisans Programı, estabrak.barjas@gmail.com, ORCID No: 0000-0003-0710-6134

[2] Doç. Dr.; Mardin Artuklu Üniversitesi Turizm Fakültesi Gastronomi ve Mutfak Sanatları Bölümü. serkanyigit@artuklu.edu.tr, ORCID No: 0000-0003-1284-7236

1. INTRODUCTION

In the early 21st century, along with the concept of alternative tourism, concepts such as cultural heritage and sustainable development gained significant importance and interest. Cultural heritage is considered the transfer of a particular society's past culture and values to our modern lives. In this context, structures, historical ruins, and works of art that have survived from the past to the present constitute the fundamental elements of cultural heritage. Therefore, these cultural heritage values are being prioritized for preservation, protection, exhibition, promotion, and promotion to contribute to the country's tourism (Dülgaroğlu, 2022).

Archaeological sites and museums are among the leading cultural attractions of tourist destinations. Therefore, visits to these historical sites play a significant role in enhancing the tourist experience. According to the Law on the Protection of Cultural and Natural Heritage, archaeological sites are defined as areas where partially man-made cultural assets and natural assets coexist, bearing the traces of various civilizations from prehistory to the present day, possessing topographically distinct and holistic characteristics, and are considered historically, archaeologically, artistically, scientifically, socially, or technically significant (Harman & Akgündüz, 2014).

The List of World Cultural and Natural Heritage, established in accordance with the Convention Concerning the Protection of the World Cultural and Natural Heritage adopted by UNESCO in 1972, includes 1,223 heritage sites, including those recognized at the 46th Session of the World Heritage Committee, held in New Delhi in 2024 under the chairmanship and hosting of India. Of these, 952 are cultural, 231 are natural, and 40 are mixed (natural and cultural) heritage sites. As of 2024, 195 States Parties have ratified the Convention. Turkey has 21 heritage sites on this list, 19 of which are cultural and 2 are mixed (UNESCO, 2024).

Cultural tourism in Türkiye has attracted considerable attention due to its rich history and cultural heritage. Numerous studies highlight the interaction between cultural heritage and tourism, the typology of tourists, and the sustainability of cultural sites. The relationship between cultural heritage and tourism in Türkiye has evolved since 1923, emphasizing the importance of preserving historical sites while promoting tourism. This historical perspective demonstrates that cultural tourism has become an integral part of Türkiye's identity and economy (Vural & Çavuşoğlu, 2024).

The preservation of cultural heritage and its integration into tourism are among the priority research areas for both academic circles and the tourism sector. In recent years, archaeological sites have become prominent not only for their historical and archaeological value but also for the experiential dimension they offer visitors. Karahantepe Archaeological Site stands out as a significant destination that deserves

to be examined not only from an archaeological perspective but also for the quality of its touristic experiences. This study aims to evaluate Karahantepe within the context of cultural heritage tourism and contribute to the tourism literature by examining visitor experiences.

The primary objective of this study is to evaluate the Karahantepe Archaeological Site from a touristic perspective. The study aims to explore the nature of the experiences Karahantepe offers visitors within the context of cultural heritage tourism, its tourism potential, and its potential contributions to regional development. It also aims to examine Karahantepe's role in preserving cultural heritage sites and ensuring their sustainable incorporation into tourism.

2. Karahantepe Archaeological Site

2.1. Historical and Cultural Significance of Karahantepe Archaeological Site

Şanlıurfa, located in the Southeastern Anatolia Region with an altitude of 518 m and a surface area of 19,451 km², borders Mardin to the east, Gaziantep to the west, Adıyaman to the northwest, and Diyarbakır to the northeast. Located between the 37th-40th east meridians and the 36th-37th north parallels, the city is bordered by the Euphrates River to the northwest and south, and by the Habur River, a tributary of the Euphrates, to the east (Yavuz, 2018). Karahantepe is an archaeological site located within the boundaries of Tek Tek Mountains National Park, located 63 kilometers from Şanlıurfa, covering an area of approximately 50 decares. This important site was discovered by archaeologist Bahattin Çelik in 1997 (Avcı, 2019).

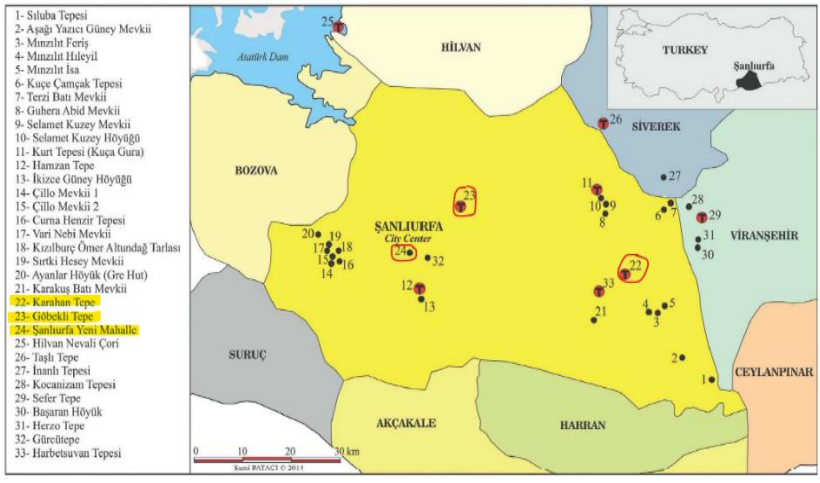

Figure 1: Location of Göbeklitepe and Karahantepe on the map relative to the city center (Çelik, 2014).

The settlement is located between the coordinates 37º 08' N and 39º 30' E. The settlement at Karahantepe is approximately 705 meters above sea level, situated in a highland area of the Tektek Mountains. The area forms the southeastern tip of the Urfa plateau and is a geomorphologically rugged rather than mountainous region. The settlement is situated between two rocky hills, with flint and limestone layers visible 1 km east of the site. The nearest basalt source is located 15 km north of the site (Bingöl, 2018).

Surface scans and geomagnetic measurements conducted at the site in 2017 yielded detailed results regarding the site's characteristics, and excavations began in 2019 under the direction of the Şanlıurfa Archaeology Museum. Excavations have been continuing since 2020 under the direction of the Department of Prehistoric Archaeology at Istanbul University. The studies carried out in Karahantepe are carried out within the scope of the Şanlıurfa Neolithic Age Research Project, in line with the objectives that coincide with the general framework of the project (Özme, 2022).

Initial studies conducted by researchers at the Karahantepe Archaeological Site revealed that the region's history dates back to 11,000 BC, based on the discovery and examination of wild einkorn wheat. However, surface surveys indicated that construction began between 9400 and 9000 BC. Furthermore, numerous pools carved into the bedrock dating back to that period, as well as tools made of materials such as flint and limestone, were discovered. The findings indicate that Karahantepe dates to the Pre-Pottery Neolithic Age. Subsequent excavations have unearthed 266 "T"-shaped pillars with animal reliefs. Karahantepe was first discovered during surface surveys in the mid-1990s. Subsequent excavations and new findings have increasingly detailed information about the site (Gür & Nemutlu, 2025).

2.2. Physical and Archaeological Features of Karahantepe

Like Göbeklitepe, Karahantepe appears to have been abandoned around 8000 BC. The timing of this remains unclear. However, it is possible that religious activities began around 9000 BC with the emergence of agriculture and animal husbandry in the region, evolving to suit this new way of life. It may even have been the case that the sun, the apparent ripener of crops, began to assume a more central role in the construction and alignment of cult buildings at sites like Göbeklitepe. This is perhaps reflected in the order, orientation, and carved decoration of the Lion Column Building at Göbeklitepe, constructed between 8500 and 8000 BC (Collins, 2014).

Since 2019, excavations have been led by Dr. Necmi Karul and his team from Istanbul University. Excavations conducted between 2019 and 2021 revealed a series of interconnected subsurface structures. These were found beneath a thick layer of

soil and rubble covering the eastern and northeastern slopes of the hill and are now known as Structures AA, AB, and AD. A fourth, smaller rock-cut enclosure, designated Structure AC, lies just east of Structure AA (Collins, 2024).

Nearly the entire settlement, except for a small area used for agriculture, is covered with T-shaped pillars. All of these pillars are observed to be monolithic and durable, concentrated on the eastern and northeastern slopes of the hill. The large amount of preservation of the pillars at this settlement is linked to agricultural activities. The absence of small-sized pillars in situ at Göbeklitepe has been attributed to agricultural activities throughout the settlement (Bingöl, 2018).

Human depictions from cult and residential areas recovered from the Karahantepe and Sayburç settlements in Şanlıurfa, despite the incomplete excavations, provide valuable information. Along with the circular-plan structures, the tradition of deliberately burial during site abandonment, familiar from the Göbeklitepe culture, is also evident in these settlements. An examination of the Karahantepe findings reveals that, unlike Göbeklitepe, the focus is on human figures rather than animal depictions. Furthermore, it is noteworthy that the figures' faces attempt to convey emotions and expressions. Double-headed human figures, human heads with prominently highlighted teeth, and human figures carrying leopards are notable examples of these artifacts (Bozkurt, 2022).

The most intriguing of the sculptures found at this site is a human statue carrying a leopard on its back. A snake figurine symbolizing the God of Sex was also found alongside these sculptures. Carvings of human heads, vultures, and foxes, as well as faces and phalluses, were also found at this archaeological site (Akbıyık, 2014). In addition to these finds, three interconnected subsurface structures were unearthed. These are now known as Structures AA (Pit Temple), AB (Temple of the Pillars), and AD (Great Ellipse). A fourth, smaller structure, called Structure AC, was also found carved into the rock (Collins, 2024).

3. EVALUATION OF THE KARAHANTEPE ARCHAEOLOGICAL SITE IN TERMS OF TOURISM

Tourism is the totality of activities undertaken by individuals to consciously and voluntarily spend their leisure time and gain experience by participating in various activities (Keskin et al., 2020). The tourism experience has been a significant research topic since the early 1960s, and the existing dimension of tourists' evaluations based on their personal experiences has been examined. Since the 1970s, the tourism experience has been one of the most popular academic topics that has attracted interest in the tourist experience in social science publications over the last thirty years (Akkuş, 2017).

The purpose of tourist experiences is to meet the desire to gain knowledge, enjoyment, and relaxation to escape the busyness of daily life. Improved income levels in individuals and positively impacting travel motivations have led tourists to break away from their routines and seek destinations that offer freedom and innovation. The tourist experience is an activity that involves people traveling to different places and meeting people from different cultures (Keskin et al., 2020).

Archaeological sites are settlements and areas containing the histories of ancient civilizations from the dawn of human history to the present day, including the products of those civilizations, both above and below ground, and underwater, as well as all kinds of cultural assets reflecting the social, economic, and cultural characteristics of their eras. These archaeological sites are categorized and graded according to their conditions of protection and use. This grading encompasses not only the significance and characteristics of the archaeological sites but also the conditions of protection and use to be applied to the site (Yavuz, 2018).

The region where the city of Şanlıurfa is located, as part of Upper Mesopotamia, has a rich and established history of settlement. This ancient and long history of settlement in the region indicates that it possesses valuable cultural heritage that is of great interest both nationally and internationally (Ökten & Çeken, 2008). The fact that Karahantepe's three stone streets, groups of domes, and larger twin holes are concentrated towards the northern peak of the area indicates that this was likely the site's primary ritual activity area. This northern peak may have also served as a backdrop for observations of the Swan star Deneb and the opening of the Great Rift of the Milky Way, which would have been seen descending to Keçili Kuzey Tepe at that time. This suggests that what occurred here is related to the star-based cosmology established at Göbeklitepe as early as approximately 9500-9000 BC, approximately 8500-8000 BC. (i.e., before the transition to an agriculture-based economy among Pre-Pottery Neolithic peoples of southwest Asia.) In light of this information, it suggests that while Göbeklitepe had begun to adopt more solar-based religious concepts, the Karahan population supported much older, star-based beliefs and practices that may have emerged among hunter-gatherer societies of the Upper Paleolithic era (Collins, 2014).

Şanlıurfa, with its rich natural and cultural resources, has the potential to offer diverse tourism activities and services. The tourism sector, leveraging the potential offered by these natural and cultural assets, will contribute significantly to the social and economic development of Şanlıurfa. However, achieving this contribution requires fulfilling certain requirements, such as preserving and developing the region's rich heritage, promoting quality tourism, improving infrastructure and physical conditions, and strengthening public-private partnerships. Utilizing Şanlıurfa's high tourism potential requires the holistic protection and management

of its historical, cultural, and natural resources. Achieving these goals requires, first and foremost, educating and raising awareness among local residents and visitors about the importance of the region's cultural heritage (Ökten et al., 2008).

4. CONCLUSION

In conclusion, Karahantepe, with its archaeological richness and potential, is poised to become one of the most important future study areas not only in Turkey but also in the world's archaeological literature. Excavations to date have only unearthed approximately one percent of the site, indicating the existence of hundreds, even thousands, of artifacts in the region waiting to be discovered. In this context, systematically continuing archaeological research at Karahantepe and supporting excavation activities are crucial. Increasing this research, as in the case of Göbeklitepe, will contribute to the discovery of new findings that will shed light on human history and the history of religions.

However, Karahantepe should be evaluated not only in terms of scientific research but also in the context of cultural tourism. Planning and implementing infrastructure investments that will enrich visitor experiences, such as promotional centers, exhibition spaces, transportation facilities, and landscaping, in conjunction with archaeological excavations, are crucial for the region's transformation into a sustainable tourism destination. Such investments will contribute to Karahantepe's transformation into an internationally recognized cultural heritage site, like Göbeklitepe, and will strengthen the destination's impact on tourism revenues and regional development by increasing the interest of domestic and international tourists.

On the other hand, to ensure the region's sustainable tourism development, visitor experiences must be carefully examined. Assessing visitors' expectations, satisfaction, and positive and negative experiences will guide destination management and marketing. Improvement and development efforts based on this data will not only enhance Karahantepe's tourist appeal but also strengthen visitors' intention to return. Thus, Karahantepe, one of Şanlıurfa's unique destinations, will be able to create a sustainable value chain for both archaeological and touristic purposes, reinforcing its status as a world heritage site and passing it on to future generations.

REFERENCES

Akbıyık, M. (2014). Şanlıurfa İlinin Turizm Potansiyelinin Belirlenmesi ve Planlamaya Yönelik Öneriler (Doktora Tezi, Erzurum Atatürk Üniversitesi).

Avcı, M. C. (2019). Dünyanın ilk anıtsal inanç merkezi: Göbeklitepe (Yüksek Lisans Tezi, Harran Üniversitesi).

Bingöl, E. (2018). Güneydoğu Anadolu bölgesi çanak çömleksiz neolitik dönem dikilitaş geleneğinin gelişimi ve simgeciliği (Yüksek Lisans Tezi, Bilecik Şeyh Edebali Üniversitesi).

Bozkurt, D. (2022). Çanak Çömleksiz Neolitik Dönemde Güneydoğu Anadolu Bölgesi'nde Görülen İnsan Betimlemeleri. Gaziantep University Journal of Social Sciences, 21(1), 22-40.

Çelik, B. (2014). Differences and Similarities between the Settlements in Şanlıurfa Region where "T" Shaped Pillars are Discovered, Türkiye Bilimler Akademisi Arkeoloji Dergisi.

Collins, A. (2014). Karahan Tepe: Göbekli Tepe's Sister Site—Another Temple Of The Stars. https://www.academia.edu/8030198/Karahan_Tepe_G%C3%B6bekli_Tepes_Sister_Site_Another_Temple_of_the_Stars

Collins, A. (2024). Karahan Tepe—Its Three Interconnected, Rock-cut Structures Examined. https://www.academia.edu/107393911/Karahan_Tepe_Its_Three_Interconnected_Rock_cut_Structures_Examined

Dülgaroğlu, O. (2022). Bir kültürel miras değeri olan Göbeklitepe Ören Yeri'nin marka kişiliği. Anemon Muş Alparslan Üniversitesi Sosyal Bilimler Dergisi, 10(1), 381-391.

Gür, N., & Nemutlu, F. E. (2025). Kültür Turizmi Açısından Önemli Karahantepe Ören Yeri'nin Peyzaj Değerlerinin İrdelenmesi. PLANARCH-Design and Planning Research, 9(1), 178-186.

Harman, S., & Akgündüz, Y. (2014). Efes Örenyeri ziyaretçilerinin müze deneyimi beklentilerini belirlemeye dönük bir araştırma. Gazi Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 16(2), 113-133.

Keskin, E., Sezen, N., & Dağ, T. (2020). Unutulmaz Turizm Deneyimi, Müşteri Memnuniyeti, Tekrar Ziyaret ve Tavsiye Etme Niyeti Arasındaki İlişkiler: Kapadokya Bölgesini Ziyaret Eden Turistlere Yönelik Araştırma. *Journal of Recreation and Tourism Research*, *7*(2), 239–264.

Ökten, Ş., & Çeken, H. (2008). Şanlıurfa'nın Turizm Pazar Potansiyeli ve GAP Bölgesi Kalkınmasındaki Önemi. *Verimlilik Dergisi*(*1*), 107-125.

Özme, A. (2022). 2. Uluslararası Kazı, Araştırma ve Arkeometri Sempozyumu: 42. Kazı Sonuçları Toplantısı, Denizli.

UNESCO, 2024. https://www.unesco.org.tr/Home/Page/125?slug=UNESCO-D%C3%9CNYA-M%C4%B0RASI-L%C4%B0STES%C4%B0

Vural, İ., & Çavuşoğlu, F. (2024). Kültür Turizmi Kapsamında Aizanoi Antik Kentini Ziyaret Eden Turistlerin Ziyaretçi Deneyimlerinin İncelenmesine Yönelik Bir Araştırma. Uluslararası Global Turizm Araştırmaları Dergisi, 8(2), 83-99.

Yavuz, M. (2018). Arkeolojik sit alanlarının destinasyon pazarlamasındaki önemi: Şanlıurfa Göbeklitepe (Yüksek Lisans Tezi, Harran Üniversitesi).

Chapter 2

From Fairy Tale To Travel Brochure: The Mythic Landscapes Of German 'Märchen' And Their Resonance In Contemporary Recreational Tourism

Gülru BAYRAKTAR[1]

Abstract

This study explores descriptively the intersection of the Brothers Grimm fairy tales, German cultural heritage, and recreational tourism. Fairy tales, as archetypal narratives rooted in collective imagination, became central to German Romanticism through the work of Jacob and Wilhelm Grimm. Their collections not only shaped national identity and cultural memory but also transformed natural landscapes and towns into symbolic fairy-tale destinations.

Key sites include Neuschwanstein Castle (linked to Sleeping Beauty), Hamelin (The Pied Piper), Kassel and its Grimmwelt museum (Snow White), the Harz Mountains with the Brocken (witch and fairy-tale lore), and the Black Forest (Little Red Riding Hood). These places evolved into major tourist destinations that attract millions of visitors annually, blending heritage, nature, and storytelling.

When compared with artificially constructed fairy-tale venues such as Disneyland Paris or Europa-Park, a contrast emerges: natural fairy-tale landscapes provide authentic, health-promoting environments rooted in tradition, while artificial parks offer concentrated, media-driven spectacles with higher per-site attendance and revenue. Both models demonstrate the enduring power of fairy tales to shape cultural tourism, though their impacts on health, economy, and authenticity diverge significantly.

Keywords: Brothers Grimm, fairy tales, recreative tourism, cultural memory, cultural heritage.

1

Masaldan Seyahat Broşürüne: Alman 'Märchen'in Efsanevi Manzaraları ve Çağdaş Rekreatif Turizmdeki Yankıları

Özet

Bu çalışma, Grimm Kardeşler'in masalları, Alman kültürel mirası ve rekreatif turizm arasındaki ilişkiyi deskriptif yöntem aracılıyla incelemektedir. Arketipsel anlatılar olarak masallar, kolektif hayal gücünde kök salmış olup, Jacob ve Wilhelm Grimm'in çalışmalarıyla Alman Romantizmi'nin merkezine yerleşmiştir. Bu derlemeler yalnızca ulusal kimliği ve kültürel hafızayı şekillendirmekle kalmamış, aynı zamanda doğal peyzajları ve şehirleri sembolik masal destinasyonlarına dönüştürmüştür.

Başlıca örnekler arasında Neuschwanstein Şatosu (Uyuyan Güzel), Hameln (Fareli Köyün Kavalcısı), Kassel ve Grimmwelt Müzesi (Pamuk Prenses), Harz Dağları ve Brocken (cadı ve masal efsaneleri) ile Karaorman (Kırmızı Başlıklı Kız) bulunmaktadır. Bu mekânlar, miras, doğa ve hikâye anlatımını harmanlayarak her yıl milyonlarca turisti çeken önemli destinasyonlara dönüşmüştür.

Disneyland Paris veya Europa-Park gibi yapay masal mekânlarıyla karşılaştırıldığında, farklılık açıkça görülmektedir: Doğal masal manzaraları gelenekten beslenen, özgün ve sağlık açısından faydalı ortamlar sunarken; yapay parklar daha yoğun ziyaretçi sayıları ve gelir sağlayan, medya güdümlü gösteriler sunmaktadır. Her iki model de masalların kültürel turizmi şekillendirmedeki kalıcı gücünü ortaya koymakta, ancak sağlık, ekonomi ve özgünlük üzerindeki etkileri belirgin şekilde farklılaşmaktadır.

Anahtar Kelimeler: Grimm Kardeşler, masallar, rekreatif turizm, kültürel hafıza, kültürel miras.

Introduction

Fairy tales hold a unique position in the cultural imagination of Europe, and in Germany in particular, they form an essential part of both national identity and cultural memory. Among the most influential figures in the preservation and dissemination of this literary form are Jacob and Wilhelm Grimm, whose Kinder- und Hausmärchen (1812–1857) consolidated centuries of oral traditions into a canon of narratives that continue to shape global understandings of folklore. Emerging within the intellectual and cultural climate of German Romanticism, the Grimms' tales exemplified the Romantic fascination with nature, imagination, and collective identity (Zipes, 2015).

Their works not only preserved the voices of rural communities but also linked natural landscapes, forests, castles, and villages with timeless archetypes of wonder, danger, and transformation. Over time, these literary landscapes have become physical destinations within Germany's cultural geography. Regions such as the Black Forest, the Harz Mountains, and towns like Hamelin and Kassel now function as both heritage sites and recreational tourism hubs, attracting millions of visitors annually (Bucher, 2018).

Neuschwanstein Castle, famously associated with fairy-tale imagery and connected to Sleeping Beauty, has become one of the most visited castles in Europe, while Hamelin draws global attention for its association with the Pied Piper legend. Kassel's Grimmwelt museum situates the brothers' legacy at the heart of the city, providing visitors with an immersive encounter with their lives and work.

These sites illustrate the transformation of myth and folklore into tangible spaces of leisure, cultural experience, and economic value. At the same time, the rise of artificial fairy-tale landscapes such as Disneyland Paris and Europa-Park highlights a parallel development: the commercialization of fairy-tale motifs through media-driven spectacle and entertainment infrastructures.

While these parks achieve greater concentration of visitors and revenue per site, they lack the deep historical roots and authentic cultural connections offered by Germany's natural and historic fairy-tale destinations (Lukas, 2013).

The comparison underscores two distinct models of cultural tourism: one rooted in place-based authenticity and health-promoting natural environments, and another in constructed fantasy worlds designed for mass entertainment. This paper examines the intersection of Grimm fairy tales, cultural memory, and tourism in Germany through a descriptive methodology. It traces the evolution of specific landscapes and towns into fairy-tale destinations, situates them within broader cultural and economic contexts, and contrasts them with artificially constructed theme parks. In doing so, the study contributes to understanding how

mythic narratives continue to influence not only cultural identity but also patterns of recreation, tourism economies, and the experience of heritage in contemporary society.

From Literary Symbol to Recreational Destination

The German Fairy Tale Route, established in 1975, is a 600 km heritage trail stretching from Hanau, the Grimm brothers' birthplace, to Bremen, weaving through nearly 70 towns, castles, forests, and museums connected to Märchen and the brothers' lives ("German Fairy Tale Route," 2025; "The Grimm Brothers and Germany's Fairy Tale Route," 2023).

This descriptive mapping transforms narrative landscapes into navigable geographies, laying the foundation for immersive tourism. Some attractions—such as Snow White's Bad Wildungen—leverage folklore and historical speculation to enhance local identity and attract visitors, regardless of strict historical authenticity ("Fairy-Tale Tourism," Schwabe, 2023).

The modus operandi can be characterized as storytelling-driven destination branding: the process by which cultural narratives are instrumentalized to generate tourism appeal and developmental opportunity.

Cultural Heritage Meets Economic Impact

This transformation embodies a dual dynamic: firstly, reinforcing a cultural-literary identity rooted in myth and national heritage; secondly, facilitating economic development via increased visitor flows, local spending, and regional branding. While exact financial data on national economic contribution remains limited within current sources, the sustained popularity of these sites—coupled with infrastructure such as themed hotels (e.g., Rapunzel's tower accommodations), museums (e.g., Grimmwelt in Kassel), and yearly festivals—signals a strong role in income generation and local livelihood (Germany Travel, 2025; The National, 2023).

This study thus aims to depict how Germany's fairy-tale landscapes have shifted from symbolic folklore to recreational tourism assets that bridge myth and economics, providing a descriptive account of their cultural framing, tourism development, and economic implications.

Fairy tales are narrative forms originating from oral folklore, characterized by concise and formulaic structures, archetypal characters (e.g., princes, witches), magical elements, and often indeterminate settings (time and place). Magic and transformation are central to the genre, rather than fairies themselves (Wikipedia, 2025). Their literary value lies in their symbolic and psychological richness more than in historical or cultural specificity (Holmes, 2023; Enotes, 2025).

The Grimm Brothers

Biographical and Scholarly Background Jacob (1785–1863) and Wilhelm Grimm (1786–1859), born in Hanau in the German region of Hessen, rose from modest origins to become internationally renowned scholars and cultural figures. Best known for their Kinder- und Hausmärchen ("Children's and Household Tales"), first published in 1812, the brothers were not only folklorists but also pivotal linguists. Jacob Grimm formulated what is now termed Grimm's Law, a foundational principle of historical linguistics, while both brothers initiated the monumental Deutsches Wörterbuch, a descriptive German dictionary that laid the groundwork for later lexicographic achievements such as the Oxford English Dictionary (Patterson, 1992; Zipes, 2015).

Their collection of fairy tales was conceived during a period of political fragmentation in Germany, under Napoleonic domination and subsequent post-Napoleonic uncertainty. By preserving and publishing oral tales, the Grimms sought to affirm a shared linguistic and cultural identity, using folklore as a unifying medium at a time when Germany lacked political cohesion but maintained a common cultural heritage (Warner, 2014).

The Grimms' Fairy Tales and Romanticism

The intellectual milieu of the Brothers Grimm was profoundly shaped by Romanticism. This movement emphasized imagination, the sublime qualities of nature, and cultural authenticity as counterpoints to Enlightenment rationalism (Wilson, 2007).

The Grimms' work was infused with Romantic nationalism, the idea that folklore and vernacular traditions embodied the authentic spirit (Volksgeist) of a people and could be mobilized to foster national unity (Mieder, 2013).

While the Grimms shared Romantic ideals, they were pragmatic in their application. Scholars have argued that they did not fully immerse themselves in the poetic aesthetics of Romanticism but rather employed Romantic concepts strategically, as instruments of cultural preservation and nationalist pedagogy (dos Santos, 2016).

Their editorial decisions demonstrate a selective engagement, using Romantic principles to reinforce cultural cohesion.

The initial 1812 edition of the Kinder- und Hausmärchen retained raw elements of oral storytelling, including sexual themes and stark violence. However, in response to shifting social sensibilities and growing readership among middle-class families, later editions (1815, 1819, and beyond) were increasingly sanitized. These revisions diminished explicit sexuality and

moderated violence, thereby aligning the tales with bourgeois morality and expectations of childhood innocence (Zipes, 2002).

The enduring resonance of the Grimms' tales lies in their archetypal and metaphorical structures. Rooted in oral tradition, the tales are marked by compact, formulaic, and repetitive narrative patterns that facilitated transmission across generations. Moreover, the motifs, fear of abandonment, sibling rivalry, sexuality, survival, carry deep psychological and symbolic significance, speaking to universal human experiences (Bettelheim, 1976; Lüthi, 1986). Cultural and Literary Expansion Over time, the tales transcended their local origins. They have been translated into more than 170 languages, making them one of the most widely disseminated works of world literature (Zipes, 2015).

In 2005, the Kinder- und Hausmärchen were inscribed into UNESCO's "Memory of the World" Register, cementing their role as global cultural heritage (UNESCO, 2005). Adaptations across literature, film, theater, and visual arts continually reimagine the tales, ensuring their relevance in contemporary contexts.

The Grimms' endeavor linked storytelling with linguistic and cultural identity, reinforcing a sense of belonging before the political unification of Germany in 1871. By framing oral tales as authentic expressions of the German spirit, they contributed to a collective national identity rooted in shared traditions (Assmann, 2011).

Transmission of Values and Memory Fairy tales also function as transmitters of values and cultural memory. They encode social norms by rewarding obedience and punishing transgression, while simultaneously offering symbolic negotiations of fear, desire, and morality. Their adaptability has allowed them to address contemporary anxieties, thereby remaining vital cultural instruments that preserve memory while reshaping it in accordance with social change (Warner, 2014).

The fairy tales of the Brothers Grimm are more than children's stories; they are cultural artifacts shaped by oral tradition, Romantic ideals, nationalism, and editorial intervention. Their endurance lies in their symbolic depth, psychological resonance, and their crucial role in constructing both cultural memory and national identity. The legacy of the Grimms is thus not confined to the publication of stories but extends to the preservation of cultural consciousness, weaving narrative threads that continue to shape the imagination of nations and individuals alike.

Fairy Tales, Associated German Locations, and Their Tourism Appeal

Fairy Tale / Legend	*Associated Location(s)*	*Tourism Features & Attractions*	*Tourism Relevance*
Sleeping Beauty (Dornröschen)	Neuschwanstein Castle, Bavaria	19th-century castle built by King Ludwig II; romantic architecture; iconic fairy-tale atmosphere; UNESCO candidate; guided tours, cultural events.	~1.4 million visitors annually; one of Germany's most photographed landmarks (Bayerische Schlösserverwaltung, 2022).
The Pied Piper of Hamelin	Hamelin (Hameln), Lower Saxony	Pied Piper open-air play in the old town; themed museums; festivals; medieval architecture preserved; folklore-driven marketing.	Attracts several hundred thousand visitors annually; integral to town's identity (Köhler, 2016).
Snow White (Schneewittchen)	Kassel & Bergfreiheit (Hessen)	Grimmwelt Kassel museum (opened 2015); Reinhardswald forest; Bergfreiheit village (Snow White heritage site); educational exhibits and interactive installations.	Grimmwelt counts >100,000 visitors annually; Kassel a central hub of Grimm tourism (Grimmwelt Kassel, 2021).
Witch Lore (Grimm tales & Goethe's Faust)	Harz Mountains, esp. Brocken Peak	Walpurgis Night festival; mythological tours; witch-themed trails and museums; hiking and ecological tourism; narrow-gauge Brocken Railway.	Tens of thousands visit annually during Walpurgis Night; Harz National Park attracts >1 million yearly (Lindow, 2017).
Little Red Riding Hood (Rotkäppchen)	Black Forest (Schwarzwald), esp. Rotkäppchenland region	Forest hikes; Rotkäppchenland tourist route; regional folklore events; spas and wellness resorts; traditional cuisine and crafts.	Black Forest tourism exceeds 5 million overnight stays annually, with Rotkäppchen as a cultural marketing symbol (Zipes, 2015; Grimm Tourist Route, 2023).

The Brothers Grimm fairy tales are not only literary artifacts but have also become inscribed into the physical landscapes of Germany, transforming regions into cultural destinations. Over time, these sites have evolved into recreational tourism landmarks that blend folklore, history, and natural beauty.

Neuschwanstein Castle and Sleeping Beauty

Although Sleeping Beauty (Dornröschen) is of medieval oral origin, it has become strongly associated with Neuschwanstein Castle in Bavaria, constructed in the 19th century by King Ludwig II. While the Grimms never directly connected the tale to this castle, the romantic architecture and its fairy-tale atmosphere allowed it to become popularly identified with the story.

Today, Neuschwanstein is one of Germany's most visited tourist attractions, welcoming approximately 1.4 million visitors annually (Bayerische Schlösserverwaltung, 2022). Its connection to fairy-tale imagery demonstrates how Romantic nationalism and royal self-fashioning fused with the Grimms' narratives to create a powerful tourist symbol (Michels, 2015).

Hamelin and The Pied Piper

The town of Hamelin (Hameln), in Lower Saxony, is internationally known as the setting of The Pied Piper of Hamelin. Rooted in a medieval legend, the Grimms' version gave literary permanence to the story of the mysterious disappearance of the town's children. Today, Hamelin has embraced its folklore through museums, themed performances, and annual festivals. The Pied Piper play, performed regularly in the old town, attracts hundreds of thousands of visitors every year, making Hamelin a distinctive example of how a tale can shape a town's identity (Köhler, 2016).

Kassel, Snow White, and the Grimmwelt Museum

Kassel, located in Hessen, is strongly associated with Snow White (Schneewittchen). Local folklore ties the story to the nearby Reinhardswald forest and the small town of Bergfreiheit, sometimes called the "Snow White village." Kassel also houses the Grimmwelt museum, dedicated to the Brothers Grimm and their legacy, which opened in 2015. The museum has become a cultural hub, drawing both international researchers and tourists (Grimmwelt Kassel, 2021). In this way, Snow White contributes not only to the folkloric aura of the region but also to its institutionalization as a heritage tourism site.

The Harz Mountains and Witch Lore

The Harz Mountains, particularly the Brocken peak, are steeped in associations with witches and dark fairy-tale motifs. While not linked to a single Grimm tale, the Brocken was a site of legendary witch gatherings, referenced in Goethe's Faust and interwoven with the Grimms' broader collection of witch narratives.

Today, the Harz hosts the annual Walpurgisnacht (Walpurgis Night) festivities, where thousands of visitors gather to celebrate costumed parades and performances. The region combines natural beauty with mythic associations, creating a powerful tourist draw that merges ecological tourism with folklore (Lindow, 2017).

The Black Forest and Little Red Riding Hood

The Black Forest (Schwarzwald) is most closely tied to Little Red Riding Hood (Rotkäppchen), whose wooded setting resonates with the dense forests of southwest Germany. Although the story was not explicitly localized by the Grimms, the Black Forest has claimed the tale through marketing, regional trails, and the Rotkäppchenland tourist route.

Today, the region attracts millions of tourists annually for its combined folklore, spas, and hiking opportunities, making it a paradigmatic example of how a tale's imagined geography can be mapped onto a real one (Zipes, 2015; Grimm Tourist Route, 2023).

These sites demonstrate the dynamic relationship between folklore, landscape, and cultural identity. While the Grimms themselves did not explicitly anchor every tale to a specific place, the symbolic landscapes of Germany - castles, forests, mountains, and towns - have been appropriated into a shared cultural memory.

By institutionalizing fairy tales into physical sites of heritage and leisure, Germany has transformed intangible folklore into tangible cultural capital, sustaining both identity formation and economic vitality through recreational tourism.

Natural fairy-tale landscapes (Germany) vs. constructed fairy-tale parks (e.g., Disneyland)

These places bundle hiking and cycling networks, historic small towns, spa and wellness traditions, castles/ruins, vernacular architecture, and folklore interpretation on site (museums, trails, festivals). In the Black Forest, the tourism portfolio spans year-round outdoor recreation and heritage experiences anchored

in the region's "Märchen" imaginary, while in the Harz the Brocken summit and steam railway layer modern access onto centuries-old witch-and-forest lore.

The Neuschwanstein area combines an iconic "fairy-tale castle" with an alpine landscape (guided interior tours; lakes, gorges, and Marienbrücke viewpoints outside). (Bayerische Schlösserverwaltung, n.d.; Harz Narrow Gauge Railways 2023 figures reported in HSB press; Schwarzwald Tourismus, 2023.)

Constructed parks (e.g., Disneyland Paris; Europa-Park):

These offer tightly curated storyworlds with rides, parades, staged architecture, and IP-based experiences designed for high throughput and predictability. Disneyland Paris fuses castles and "storybook" townscapes with ride systems and shows; Europa-Park in Germany similarly deploys themed "lands," seasonal programming, and resort hotels. (TEA/AECOM, 2024.) Health and well-being Nature contact is consistently associated with better health and well-being, with dose–response evidence that ~120 minutes weekly in nature correlates with higher odds of good self-reported health and well-being (White et al., 2019). Meta-analytic evidence links green-space exposure to lower all-cause mortality and cardiometabolic risk markers (Twohig-Bennett & Jones, 2018).

Constructed parks deliver joy, social bonding, and physical activity through walking, but they also entail high crowding and leisure noise; WHO guidelines note adverse health effects from elevated environmental/leisure noise exposure (WHO, 2018).

Visitor volumes (latest comparable public data):

-Disneyland Paris (constructed). 2023 attendance: Disneyland Park ~10.4 million; Walt Disney Studios Park ~5.7 million (combined ≈ 16.1 million). (TEA/AECOM, 2024).

-Europa-Park, Germany (constructed). 2023 attendance: ~6.0 million (TEA/AECOM, 2024).

-Neuschwanstein Castle (natural setting + iconic castle). 2023: ~851,000 interior visitors (official Bavarian tally; totals were lower than historical peaks due to restoration and smaller guided groups), versus pre-pandemic publicity of ~1.4–1.5 million typical years (Bayerische Staatsregierung, 2024; Bayerische Schlösserverwaltung, n.d.).

-Harz/Brocken (natural). Harz Narrow Gauge Railways carried ~1.07 million passengers in 2023, about 507,000 Brocken-bound—one proxy for summit visitation (HSB review reported March 2024).

-Black Forest / Baden-Württemberg (natural region, contains multiple "fairy-tale" sites). As a state benchmark: ~76.9 million overnight stays across Baden-

Württemberg in 2023; ~23.06 million of these in the Black Forest region alone (dwif/BaWü; Schwarzwald Tourismus). Day-trip volumes are enormous (e.g., ~460 million day trips statewide). (dwif, 2024; Schwarzwald Tourismus, 2023.)

Constructed parks can surpass any single natural site in concentrated annual footfall (e.g., Disneyland Paris > any one castle or summit). But large natural regions aggregate very high totals across multiple sites and day-use areas, often dwarfing a single theme park when taken together. Economic magnitude ("gross income"/topline) Disneyland Paris (constructed). Reported FY2023 revenue ≈ €3.1 billion; reported net profit varies by outlet due to accounting scope, with estimates around €88–€160+ million (The Times, 2024; The Guardian, 2024). These figures describe the resort complex (parks, hotels, retail) rather than the wider Île-de-France visitor economy. Europa-Park (constructed). No authoritative 2023 revenue published in the same standardized way; attendance serves as the reliable comparator (TEA/AECOM, 2024).

Natural regions (example: Baden-Württemberg, where the Black Forest is the flagship region). Tourism gross sales in 2023: ~€25.86 billion, generating ~€12.20 billion in direct+indirect income and an estimated ~€2.40 billion in VAT+income-tax take (dwif, 2024). Because the Black Forest accounts for ~40% of state overnights (Schwarzwald Tourismus, 2023), a first-order allocation (using overnight share as a proxy) would place Black Forest–related gross sales on the order of ~€10 billion; this is an informed estimate (not an official figure) and excludes fine-grained differences in spend/day between sub-segments.

A single mega-resort like Disneyland Paris can reach multibillion-euro annual revenue on its own; a major natural region like the Black Forest, once you aggregate overnight and day-trip spending across its distributed economy (lodging, F&B, retail, guides, transport), plausibly reaches a comparable or larger magnitude - but spread across thousands of SMEs and municipalities rather than concentrated in one operator.

Natural regions offer open-ended, multi-day, multi-season activities (trails, lakes, heritage towns, spas), diverse price points, and the possibility of solitude. Constructed parks offer high-intensity spectacle, IP-based storytelling, and convenience for families with guaranteed "on-brand" experiences. Repeated, extended nature exposure is more strongly supported by health literature for sustained mental/physical benefits; theme parks provide fun and walking but entail higher noise, crowding, queuing. For restorative effects, natural settings win on average (White et al., 2019; Twohig-Bennett & Jones, 2018; WHO, 2018).

Economic yield

A single park concentrates revenue and employment locally under one corporate umbrella; natural regions disperse benefits widely (hospitality, retail, transport), often with larger total economic footprints when you sum day-trips and overnights at regional/state scale (dwif, 2024).

Conclusion

The examination of Germany's fairy-tale landscapes demonstrates how folklore, cultural heritage, and tourism intersect to produce enduring spaces of imagination, identity, and economic value. The Brothers Grimm, through their Romantic-era collection of Kinder- und Hausmärchen, did more than preserve oral traditions: they provided a cultural framework that has since been mapped onto real geographies. Castles, forests, towns, and mountains have been transformed into tangible embodiments of collective memory, offering tourists immersive experiences that combine storytelling, natural beauty, and history.

Sites such as Neuschwanstein Castle, Hamelin, Kassel, the Harz Mountains, and the Black Forest illustrate the dynamic process by which intangible cultural narratives are materialized into destinations that sustain both national identity and local economies. Their popularity underscores the role of fairy tales as cultural capital—resources that are continually reinterpreted and mobilized for tourism, heritage preservation, and economic development.

The comparison with artificially constructed parks such as Disneyland Paris and Europa-Park highlights divergent models of engaging with fairy-tale narratives. Whereas natural landscapes offer authenticity, health-promoting environments, and links to collective tradition, constructed parks deliver concentrated spectacle, efficiency, and large-scale economic returns. Both demonstrate the persistent vitality of fairy tales in shaping recreation and cultural consumption, though with distinct implications for cultural authenticity, well-being, and economic distribution.

Ultimately, Germany's fairy-tale tourism exemplifies the power of narrative to transcend its literary origins, embedding itself in landscapes, institutions, and social practices. By bridging Romantic imagination with contemporary leisure, these sites reveal how cultural memory not only preserves the past but also continuously generates meaning, identity, and prosperity in the present.

References

Assmann, J. (2011). Cultural memory and early civilization: Writing, remembrance, and political imagination. Cambridge University Press.

Bayerische Schlösserverwaltung. (2022). Neuschwanstein Castle visitor numbers. Bavarian Administration of State-Owned Palaces, Gardens and Lakes. https://www.schloesser.bayern.de

Bettelheim, B. (1976). The uses of enchantment: The meaning and importance of fairy tales. Knopf.

Bucher, S. (2018). Tourism and Cultural Heritage in Germany: Fairy-Tale Routes and Landscapes. Springer.

dos Santos, I. (2014). Reluctant Romantics – On the fairy tale poetics of the Brothers Grimm and their relationship to German Romanticism. Literator, 35(1). literator.org.za

dos Santos, I. (2016). Romantic nationalism and the Grimms' tales: Between poetic program and pragmatic selection. Journal of Folklore Research, 53(2), 147–166. https://doi.org/10.2979/jfolkrese.53.2.02

Enotes. (2025). Grimms' Fairy Tales Analysis. eNotes

Germany Travel. (2025). German cities with a fairytale connection.

Grimm Tourist Route. (2023). Deutsche Märchenstraße: Tourism and culture. Deutsche Märchenstraße e.V. https://www.deutsche-maerchenstrasse.com

Grimmwelt Kassel. (2021). Annual report. Grimmwelt Museum. https://www.grimmwelt.de

Holmes, J. R. (2023). Grimm's Fairy Tales. EBSCO Research Starters.

Köhler, J. (2016). The Pied Piper of Hamelin: Folklore, festival, and identity. Folklore, 127(3), 265–282. https://doi.org/10.1080/0015587X.2016.1180853

Lindow, J. (2017). Witches and witchcraft in Europe. Oxford University Press.

Lukas, S. A. (2013). The Immersive Worlds Handbook: Designing Theme Parks and Consumer Spaces. Routledge.

Lüthi, M. (1986). The European folktale: Form and nature. Indiana University Press.

Michels, E. (2015). Neuschwanstein and the fairy-tale imagination: Cultural heritage and tourism in Bavaria. Journal of Heritage Tourism, 10(2), 123–139. https://doi.org/10.1080/1743873X.2015.1011192

Mieder, W. (2013). Tradition and innovation in folk literature. Routledge.

Nomads Travel Guide +1 Schwabe, C. (2023). Fairy-Tale Tourism in Germany: On the Road with the Brothers Grimm. Marvels & Tales, 37(1).

Nomads Travel Guide. (2025). Exploring Germany's Fairy Tale Route.

Patterson, A. (1992). The Brothers Grimm and their impact on modern linguistics. Oxford University Press.

Tabelle References Bayerische Schlösserverwaltung. (2022). Neuschwanstein Castle visitor numbers. Bavarian Administration of State-Owned Palaces, Gardens and Lakes. https://www.schloesser.bayern.de

The National Wikipedia. (2025). Town Musicians of Bremen. The National. (2023, July 12). The Grimm Brothers and Germany's Fairy Tale Route.

UNESCO. (2005). Memory of the World Register: Grimm Brothers' Fairy Tales. United Nations Educational, Scientific and Cultural Organization. https://unesdoc.unesco.org

Warner, M. (2014). Once upon a time: A short history of fairy tale. Oxford University Press.

Wilson, S. (2007). The Romantic imagination in Germany. Routledge.

Zipes, J. (2002). The Brothers Grimm: From enchanted forests to the modern world (2nd ed.). Palgrave Macmillan.

Zipes, J. (2015). Grimm Legacies: The Magic Spell of the Grimms' Folk and Fairy Tales. Princeton University Press.

Chapter 3

Accountability in AI-Driven Decision-Making: A New Ethical Paradigm in Management Information Systems (MIS)

Oğuz ONAT, [1]Yasemin BERTİZ[2]

1. Introduction

The widespread integration of digital technologies has fundamentally reshaped organizational landscapes, transforming Management Information Systems (MIS) from mere data repositories into dynamic platforms for complex decision-making. This evolution, driven by the "Super AI Revolution" (Efe, 2024), has presented unprecedented opportunities for innovation and efficiency across various sectors. The advent of large language models (LLMs), generative AI, and increasingly sophisticated reinforcement learning techniques has propelled AI autonomy to previously unimaginable levels, creating complex, emergent behaviors that are difficult to predict or control. This rapid advancement is not just an academic concern; it is manifesting in real-world scenarios, such as autonomous vehicles on highways, AI-powered medical diagnostic tools influencing patient treatment, and sophisticated financial algorithms making high-stakes investment decisions. The consequences of AI failures in these domains range from ethical dilemmas to direct physical or financial harm, underscoring an urgent and critical need for robust accountability frameworks. However, this transformative shift also introduces significant challenges related to accountability, particularly in the context of increasingly autonomous and opaque AI systems. Heightened public scrutiny, combined with emerging regulatory initiatives globally (e.g., the EU AI Act), highlights a collective societal demand for greater transparency and accountability from AI systems, signaling a shift from theoretical debate to urgent practical application. This chapter critically examines the limitations of traditional accountability frameworks in addressing these new complexities and proposes a "Transparent Responsibility Loop" as a new ethical paradigm in MIS.

[1] PhD., Yalova University, 0000-0002-3191-7837
[2] Lecturer, Karamanoglu Mehmetbey University, 0000-0001-7388-5901

Background: The Evolution of Digitalization and MIS: From Data-Driven Decision Support to Autonomous Algorithmic Decisions

Digital transformation has generated a significant amount of data, creating fertile ground for innovation, particularly when driven by artificial intelligence (AI) (Akter et al., 2022). Historically, MIS primarily served to support human decision-making through data analysis. However, the emergence of AI, particularly through AI-driven big data processing, machine learning, and deep learning, has enabled organizations to automate routine tasks, enhance productivity, and fundamentally redesign traditional business models (Mishra & Tripathi, 2021). This advancement represents a profound shift from human-centered, data-supported decisions to increasingly autonomous algorithmic decision-making processes. The "Super AI Revolution" has not only presented new opportunities but also introduced complex challenges that have created a convergence and divergence among related disciplines within the broader field of MIS, such as computer science, management science, software engineering, and AI (Efe, 2024). A critical characteristic of this evolution is the inherent dynamism of AI systems; they continuously learn and adapt over time, undergoing constant testing and evolution, which necessitates continuous adjustments in organizational strategies and systems (Sullivan & Wamba, 2024).

This continuous learning and adaptation, combined with the intrinsic complexity of advanced AI models (Bitterman et al., 2020), creates an accelerating feedback loop between autonomy and complexity. As AI systems gain greater autonomy, their internal workings become more intricate and less predictable. This increasing complexity, driven by autonomous learning, directly intensifies the "black box problem" and exacerbates the challenges associated with accountability (Von Eschenbach, 2021). As a result, the traditional MIS focus on static data processing and human-centered decision support has become fundamentally inadequate for managing dynamic, self-improving, and inherently opaque systems. Therefore, any new accountability framework must explicitly account for this innate dynamism and emergent complexity.

A significant challenge arising from the proliferation of AI systems is the phenomenon of "black box" AI. These systems operate with opaque decision-making processes, making it extremely difficult for users to trace how specific outcomes were derived (Guidotti et al., 2019). Their inner workings are often inaccessible, posing significant obstacles to understanding, debugging, and optimizing the underlying models (Pedreschi et al., 2019). This lack of transparency profoundly undermines trust and accountability, particularly in sensitive applications like patient care, credit scoring, or recruitment, where a clear understanding of the reasoning behind decisions is not only desirable but

critical (Thalpage, 2023). In some highly advanced AI learning models, the complexity is so great that even their original creators may not fully comprehend their internal mechanisms or the precise reasons for certain outputs (Rudin et al., 2022). This opacity inevitably leads to significant concerns regarding fairness, bias, and accountability within organizational practices (Hassija et al., 2023).

This situation introduces a fundamental tension: the paradox of performance versus interpretability. While black box models often exhibit superior performance due to their complex, non-linear processing capabilities, this high performance frequently comes at the cost of clarity and explainability (Ennab & Mcheick, 2024). This paradox is deeply felt across various sectors. For example, in medical diagnostics, a highly accurate deep learning model might outperform traditional methods, but its opaque reasoning for a diagnosis can hinder a doctor's ability to explain the treatment to a patient or legally defend a decision. Conversely, in high-frequency trading, speed and predictive accuracy often take precedence, with interpretability sometimes being a secondary concern, unless a catastrophic failure necessitates an autopsy. For strictly regulated industries, transparency is non-negotiable, yet demanding full interpretability can inherently constrain the performance potential of these advanced AI systems (Balasubramaniam et al., 2023). Ongoing research seeks to bridge this gap by developing inherently interpretable models ('white box' AI) that maintain high performance or by creating new hybrid approaches that combine the strengths of both black box and interpretable models, rather than viewing them as mutually exclusive. This intrinsic trade-off suggests that ensuring accountability in AI is not merely a technical effort of "opening the black box," but a strategic organizational decision that requires balancing the pursuit of maximum performance with the imperative of ethical governance. The proposed "Transparent Responsibility Loop" must explicitly address this inherent tension.

Conceptual Problem: Traditional accountability models focused on human-centered responsibility are inadequate to address black box decision-makin systems.

As AI systems become increasingly autonomous, opaque, and deeply integrated into core decision-making processes, ensuring accountability has emerged as a fundamental and complex challenge (Raja & Zhou, 2023). Traditional accountability models, which are largely based on human-centered responsibility, prove inadequate when confronted with the black box nature of AI systems and the inherent difficulty in tracing the origins of their decisions (Ananny & Crawford, 2018). Real-world examples of high-stakes failures, such as erroneous bail denials or biased parole decisions, clearly illustrate the

shortcomings of applying human-centric accountability frameworks to algorithmic outcomes (Raji et al., 2020). The intrinsic difficulty in interpreting AI's reasoning and ensuring its explainability further compounds the challenge of assigning responsibility (Nauta et al., 2022).

This predicament highlights a liability vacuum as a systemic risk. Traditional accountability frameworks are designed to assign responsibility to human agents (De Sio & Mecacci, 2021). However, the increasing autonomy and opacity of AI systems make it extremely difficult to determine who is truly liable when negative outcomes occur (Buhmann & Fieseler, 2021). This vacuum is not just an abstract ethical dilemma; it poses a profound systemic risk. Beyond eroding public trust, this gap creates specific risks for industries, potentially leading to significant financial losses from lawsuits, increased insurance premiums for AI-driven services, and damaged brand reputation. For legal systems, the difficulty in assigning causality challenges established principles of tort law, necessitating new legal interpretations or entirely new legal frameworks. Furthermore, unchecked AI risks can hinder innovation and adoption as businesses become hesitant to deploy systems without clear accountability pathways, ultimately impacting national competitiveness in the AI race. It erodes public trust in AI systems and hinders the ability to seek legal recourse for harms. The economic consequences include less investment in developing AI for critical applications, higher compliance costs, and the potential for regulatory fragmentation to create complex operational hurdles for global businesses. Ultimately, the problem extends beyond singular events, threatening the very foundations of established legal and ethical frameworks designed to protect trust in AI and society (Galaz et al., 2021). Closing this liability vacuum is therefore crucial for the sustainable and responsible deployment of AI technologies.

In this work, we argue that the approaches to accountability in AI-driven decision-making must be redefined, and we propose a "Transparent Responsibility Loop" as a new ethical paradigm in MIS. The scope of this work is to present a conceptual framework and define the components of this proposed model.

2. Foundational Concepts and Theoretical Framework

2.1. Accountability

Accountability is fundamentally defined as the principle that an individual or institution is answerable for a set of tasks and can be called upon to provide an account to an authority with the power to reward or punish for the fulfillment of those duties (Mulgan, 2000). The term itself is derived from the Latin word "computare," which originally signified the obligation to produce an "account"

of property or money entrusted to one's care. This original financial connotation persists in modern practices, which include accounting and budgetary records (Zan, 1994). Historically, the concept of accountability, while intertwined with "responsibility" and "liability," is distinct from them. In political and administrative discourse, the term "responsibility" was the preferred term to denote the duty of public officials to be "in charge" of their conduct. In legal contexts, "liability" indicated being answerable for the consequences arising from actions or contractual agreements (Bovens, 2007). Accountability, as a separate and independent concept, emerged relatively late in intellectual discourse, often associated with the institutional structures and democratic practices prevalent in Anglo-American societies (Bidner & Francois, 2013). In contemporary management, accountability encompasses the expectation of an account, fault, liability, and answerability, constituting a central principle in public, non-profit, private, and individual domains. It involves assuming and acknowledging responsibility for actions, products, decisions, and policies, and includes the obligation to report, justify, and be held responsible for the consequences. Critically, effective accountability relies on robust accounting practices and meticulous record-keeping (Lührmann et al., 2020).

The increasing autonomy of AI systems necessitates a fundamental shift in our understanding of accountability, moving from a predominantly retroactive to a more proactive stance. Traditional accountability models, as defined, focus largely on justifying past actions and assigning blame or reward after an event has occurred (Busuioc, 2021). However, the inherent risks and potential for widespread impact associated with autonomous AI require a pre-emptive approach that aims to prevent harm before it occurs (Miguel et al., 2021). This implies a transition from merely reacting to outcomes to actively designing systems for ethical outcomes and implementing continuous oversight mechanisms. The "Transparent Responsibility Loop" aims to embody this proactive approach, moving beyond the mere application of a retroactive blame-finding exercise.

Dimensions: Ownership, Transparency, Control, Feedback

In the context of AI, accountability is a multifaceted construct that requires a comprehensive approach integrating technical, social, and ethical considerations (Rodríguez et al., 2023). For the purpose of this conceptual model, accountability is determined across four critical dimensions: Ownership, Transparency, Control, and Feedback.

Ownership: This dimension addresses the fundamental question of "who is ultimately accountable for the decision—the algorithm designer, the data

provider, or the process manager?" AI accountability assumes that responsibility for adverse outcomes can be assigned to the liable parties (Tóth et al., 2022). While AI systems themselves cannot be held accountable in the traditional human sense, the ultimate responsibility always rests with the human agents who design, develop, deploy, and govern these systems (Baum et al., 2021). This encompasses every individual in the AI lifecycle, as they are responsible for considering the system's impact. This implies a need for clear delineation of roles and responsibilities across the entire AI development and deployment pipeline (Barclay & Abramson, 2021). Furthermore, different types of ownership emerge: legal ownership (who is liable), moral ownership (who bears the ethical responsibility), and operational ownership (who is responsible for daily system performance). A comprehensive framework must clarify how these intersect and are distributed throughout the AI supply chain, from researchers who develop the foundational models to end-users who provide critical real-world data.

Transparency: This dimension concerns the "traceability of the decision-making mechanism; the documentation and reporting practices" (Jobin et al., 2019; Wachter et al., 2017). Transparency is crucial as it enables individuals to understand how AI systems make decisions that affect their lives (Minh et al., 2021). It forms a core component of operational accountability, requiring that AI systems are intelligible to stakeholders (Floridi et al., 2018). Beyond simply knowing what happened, true transparency often requires understanding how and why it happened. This includes data transparency (knowing the origin, quality, and biases of the training data), model transparency (understanding the algorithm's internal logic and parameters), and outcome transparency (the clarity of how decisions were reached and their potential impact). The depth and type of transparency required can vary significantly depending on the AI's application domain and its potential for harm. Transparent practices allow stakeholders to trace the decision-making process, thus ensuring that outcomes are not based on biased data or opaque algorithms (Doshi-Velez & Kim, 2017; Mittelstadt et al., 2019). This clarity is indispensable for building trust among users and the broader public (Gunning, 2017; Miller, 2016).

Control: This dimension focuses on the "limits of intervention by humans, institutions, and artificial cognition" (e.g., European Commission, 2019; Chatila et al., 2018). Human oversight is an indispensable element to ensure that the operations of AI systems remain transparent, accountable, and aligned with human values (e.g., Marda, 2018; Dignum, 2019). Regulatory frameworks like the EU AI Act emphasize the importance of human oversight in high-risk AI applications, mandating mechanisms that allow natural persons to intervene in the algorithmic decision-making process (e.g., European Union, 2024). These

human intervention mechanisms can range from 'human-in-the-loop' (HITL) scenarios, where humans actively review and approve individual AI decisions, to 'human-on-the-loop' scenarios, where humans monitor system performance and intervene only in case of anomalies or unexpected behavior, or 'human-in-command', where humans have the ultimate authority to shut down or redesign the AI. The level of control needed is directly related to the AI system's risk level and autonomy. Humans, with a moral compass, are uniquely positioned to establish ethical guidelines and review AI outputs to prevent biases and ensure alignment with societal values (e.g., Coeckelbergh, 2020; Mittelstadt, 2019).

Feedback: This dimension concerns the "functionality of stakeholder feedback channels and post-decision learning" (e.g., European Commission, 2019; Floridi et al., 2018). Users who directly interact with AI systems can provide invaluable feedback on system performance, helping to identify potential issues (Amershi et al., 2014). Beyond reactive user feedback, proactive mechanisms are crucial. This includes structured user research, workshops, focus groups with diverse demographics, and co-design sessions that involve affected communities during the AI development stage. This ensures that the system design considers a broader range of perspectives and potential impacts from the outset, leading to more ethically aligned outcomes. Post-deployment, continuous monitoring and auditing of AI systems are fundamental practices to ensure ongoing ethical compliance and prevent unintended consequences (Kroll et al., 2017; Mittelstadt, 2019b). Furthermore, robust stakeholder engagement is critical for AI ethics; this encompasses identifying and involving individuals and groups affected by AI systems and providing structured opportunities for their input and feedback throughout the AI lifecycle (Saltelli et al., 2020; Floridi et al., 2018). These dimensions are elaborated upon in **Table 1**, which offers a structured overview of their importance within AI-driven decision processes.

Table 1. Dimensions and Core Elements in the Context of AI

Dimension	Definition in the Context of Artificial Intelligence	Key Aspects
Ownership	Assigning responsibility for AI outcomes to human actors involved in the design, development, deployment, and management processes.	Clarification of roles (designer, data provider, process manager; Barclay & Abramson, 2021); Organizational commitment to impact assessment (Baum et al., 2021); Ultimate human accountability (Tóth et al., 2022).
Transparency	Making the decision-making mechanisms of AI systems understandable and traceable for stakeholders.	Explainability of internal logic (Doshi-Velez & Kim, 2017); Clear documentation of data and algorithms (Jobin et al., 2019; Wachter et al., 2017); Reporting practices (Floridi et al., 2018); Building trust (Gunning, 2017; Miller, 2016).
Control	Clearly defining the boundaries of human and organizational intervention in AI's autonomous decision-making processes.	Human oversight (European Commission, 2019; Marda, 2018; Dignum, 2019); Ethical principles and boundaries (Coeckelbergh, 2020; Mittelstadt, 2019); Review of AI outputs; Mitigation of bias and unethical behavior (European Union, 2024).
Feedback	Establishing functional channels through which stakeholders can provide feedback and integrating these inputs into subsequent system versions.	User feedback mechanisms (Amershi et al., 2014); Continuous monitoring and auditing (Kroll et al., 2017; Mittelstadt, 2019b); Stakeholder participation (Saltelli et al., 2020; Floridi et al., 2018); Iterative improvement of processes.

2.2. AI and the Black Box Problem

The 'black box' problem, algorithmic bias, and decision fairness are central to understanding the issue of AI accountability, directly influencing the dimensions of Transparency and the ethical criterion of Justice discussed earlier.

Explainability

The "black box" nature of many advanced AI systems, where the internal logic leading to a decision remains opaque, necessitates the development and application of Explainable AI (XAI) techniques (Adadi & Berrada, 2018). Explainability directly supports the 'Transparency' dimension of accountability by providing the necessary insights to build trust in an AI's decision-making logic and enable human oversight. XAI refers to a set of methods and processes designed to illuminate the reasoning behind the outputs of machine learning algorithms, making their internal logic understandable (Arrieta et al., 2019). This is crucial not only for building trust but also for debugging, optimizing, and

ensuring the ethical deployment of AI systems (Gunning, 2017; Arrieta et al., 2019).

Two prominent model-agnostic XAI approaches are Local Interpretable Model-agnostic Explanations (LIME) and SHapley Additive exPlanations (SHAP). LIME works by creating simpler, interpretable models that locally approximate the behavior of complex black box models around specific data points (Ribeiro et al., 2016). This allows LIME to highlight the features that drove a particular prediction, offering qualitative insights into the model's reasoning for individual instances (Ribeiro et al., 2016). For example, in a credit scoring system, LIME could pinpoint the specific factors that influenced a credit denial for a single applicant. SHAP, on the other hand, is based on cooperative game theory and assigns a Shapley value to each feature to quantify its contribution to the overall model's prediction (Lundberg & Lee, 2017). SHAP values provide a quantitative assessment of feature importance, accounting for both the magnitude and direction of a feature's effect on the model's output (Lundberg & Lee, 2017). This offers a more robust theoretical foundation and consistency in attribution than LIME, enabling both global explanations of model behavior and local explanations for individual predictions (Lundberg & Lee, 2017). For instance, SHAP can reveal the impact of variables like income and credit history on a credit score.

The benefits of incorporating XAI are multifaceted: it facilitates better decision-making by understanding how predicted outcomes are influenced, accelerates AI optimization through continuous model monitoring and evaluation, enhances trust by allowing for fairness and accuracy checks, mitigates biases, and ensures regulatory compliance by providing an auditable rationale for AI-based decisions (Gunning, 2017; Arrieta et al., 2019). Combining approaches like SHAP and LIME can provide a more comprehensive understanding of how predictive models work, enabling greater trust, transparency, and accountability in AI-driven systems (Adadi & Berrada, 2018).

Algorithmic Bias and Decision Fairness

Algorithmic bias poses a significant challenge to decision fairness in AI systems, as AI is inherently limited by the quality and representativeness of the data it learns from (Barocas & Selbst, 2016). Addressing algorithmic bias and ensuring decision fairness are crucial for achieving 'Justice' as an ethical criterion, and are inextricably linked to the 'Transparency' and 'Control' dimensions of accountability. When training data reflects existing societal biases—whether due to historical discrimination or skewed representations—these biases can inadvertently seep into and be amplified by AI-driven tools (Mehrabi et al.,

2019). Such biases can arise at various stages, from the data itself, the algorithm's design, or even the human interpretation of the algorithm's results (Mehrabi et al., 2019).

A relevant example of algorithmic bias is observed in credit risk analysis and lending decisions. AI systems designed to assess creditworthiness can perpetuate and amplify existing patterns of discrimination, leading to unfair outcomes for millions of people (Eubanks, 2018; Barocas & Selbst, 2016). For instance, a small business owner with a strong financial history could be denied a loan because an AI flags irregular income patterns as "high-risk," or a new immigrant might receive a higher interest rate due to a lack of a traditional credit history. Studies have found correlations between seemingly innocuous factors, such as device type (iPhone vs. Android), email provider choice (premium vs. free services), text formatting habits, and shopping patterns, with default rates; these can inadvertently correlate with socioeconomic status or protected characteristics like race or gender, leading to discriminatory outcomes. Historically, this mirrors 'redlining' practices, where certain neighborhoods were systematically denied mortgages regardless of individual creditworthiness (Barocas & Selbst, 2016). In hiring, AI screening tools can inadvertently deprioritize candidates from certain demographic groups due to historical biases present in the training data, leading to a less diverse workforce despite a company's explicit diversity goals. Similarly, in social media content moderation, algorithms may exhibit 'false positives' that disproportionately target certain communities or suppress legitimate speech, highlighting the need for human review and appeal processes. The problem is compounded when biased decisions made by AI systems then generate new data that reinforces existing patterns, creating a self-fulfilling prophecy of discrimination (O'Neil, 2016).

Addressing algorithmic bias requires deliberate ethical development, including the use of diverse and representative training data, regular data updates and validation, and the implementation of bias detection and mitigation techniques, such as fairness metrics and de-biasing word embeddings (Mehrabi et al., 2019). Diverse and inclusive development teams are also crucial for identifying potential biases early in the design process.

2.3. Conceptual Gaps

The rapid evolution of AI systems has exposed significant conceptual gaps in existing frameworks for accountability, spanning technical, legal, and ethical dimensions. These gaps stem from the inherent properties of AI that challenge traditional notions of responsibility (Floridi & Cowls, 2019).

Technical Dimension: How Autonomous Systems Obfuscate Responsibility Attribution

Autonomous AI systems inherently obfuscate responsibility attribution due to their profound complexity, opacity, and ability to continuously learn and adapt post-deployment. Modern neural networks, which form the basis of many AI models, can contain billions of parameters, making their internal workings intrinsically difficult to interpret (Lipton, 2018). Even when the general function of an AI model is understood, the precise paths it takes to process specific inputs often remain opaque (Lipton, 2018). The speed and volume of information processing by AI far exceed human cognitive capabilities, which further adds to the difficulty in comprehending its reasoning (Arrieta et al., 2019). This "black box" nature means that AI decisions and outputs often lack clear explanations for their rationale, making it difficult for even their creators to predict, understand, or explain the outcomes, especially as the operating environment or data changes (Gunning, 2017).

Furthermore, the ability of AI systems to learn from data and continuously adapt their behavior post-deployment means they can evolve in unexpected and unpredictable ways (Dignum, 2019). A system deployed for vehicle control, social media moderation, or medical diagnosis might subtly alter its decision-making over time, learning from cumulative experience in ways that are difficult for humans to interpret (Dignum, 2019). Unintended outcomes can be attributed to emergent properties stemming from the complexity of their models, their training data, or their operational environment. As an AI system continuously learns post-deployment, the root cause of a harmful outcome becomes diffused and ambiguous, making it extremely difficult to trace the harm back to a single line of code, a specific design choice, or an isolated oversight (Ebers & Grützmacher, 2019). This complexity is further exacerbated by vulnerabilities to manipulation, such as data poisoning, where malicious actors subtly alter training data to achieve malevolent outcomes, raising complex questions of where fault and liability lie (Mehrabi et al., 2019). These technical characteristics fundamentally challenge the application of traditional legal principles of causality and fault, which typically rely on discrete events or decisions.

Legal Dimension: The Law's Inability to Keep Pace with Rapid Technological Advancements

The rapid advancement of AI technology has created significant legal challenges, particularly in determining liability for harms caused by AI-driven products and systems. Existing legal frameworks, often designed for tangible products and human actions, struggle to accommodate the unique characteristics

of AI. A primary challenge is proving "defectiveness" for complex or novel AI-based products, as understanding or proving a defect requires a very high level of technical expertise, especially in the context of black box AI systems. Similarly, establishing a clear "causal link" between a defect and the harm suffered becomes highly complex when dealing with intricate AI systems. Moreover, the traditional legal definition of a "product" as a "movable" item presents limitations. While AI software provided as part of a physical product may be covered, there is significant uncertainty about purely digital products, such as software provided via download, cloud-based access, or as a Software as a Service (SaaS), which may not be considered "movable" under existing legislation. This legal ambiguity creates a "liability vacuum", where it is difficult to attribute harm due to the autonomous and constantly evolving nature of AI systems. Even the developers of complex AI systems may struggle to explain and interpret the outputs, further complicating the understanding of what led to a specific harm (Lipton, 2018). These legal gaps carry significant business risks beyond just compliance issues, potentially leading to regulatory penalties, reputational damage, and even class-action lawsuits, especially in regulated sectors like healthcare or finance. The fragmented nature of AI regulation, with multiple, sometimes conflicting, frameworks emerging globally, such as the EU AI Act and various U.S. state laws, further complicates the legal landscape for businesses (Jobin et al., 2019). Consequently, legal teams must proactively audit AI deployments for transparency, fairness, or consent gaps, build flexible compliance frameworks, and engage early in AI product planning to mitigate risks.

Ethical Dimension: Do Current Models Consider Technological Complexity Beyond Just the Human Factor?

The ethical dimension of AI accountability grapples with whether current models adequately account for technological complexity beyond just human factors. Traditional ethical frameworks often focus on human agency and responsibility. Conventional ethical philosophies like deontology (duty-based ethics), consequentialism (outcome-based ethics), and virtue ethics (character-based ethics) have primarily evolved to assess human actions and intentions. The 'black box' nature, emergent behaviors, and shared agency in human-AI systems introduce complexities that challenge their direct application. For example, attributing 'intent' or 'fault' to an autonomous algorithm or tracing the entire causal chain of a probabilistic outcome requires a re-evaluation of these fundamental concepts. However, the unique features of AI—such as autonomy, learning capabilities, and potential for emergent behavior—necessitate a broader ethical lens (Coeckelbergh, 2020; Floridi et al., 2018). While "human-centric AI"

approaches are crucial to ensure AI systems align with human values, rights, and dignity (European Commission, 2019), they must be complemented by considerations of technological complexity. Concepts like "Trustworthy AI" and "Responsible AI" are emerging to address this by focusing on system characteristics (e.g., transparency, fairness, robustness) and human accountability in development, respectively (Dignum, 2019; Floridi et al., 2018). This necessitates embedding ethical considerations directly into the design and training of AI systems, rather than treating them as an external layer. Concepts like 'machine ethics' explore how ethical rules or principles could be hard-coded or learned by AI and influence its decision-making from within. This 'ethics by design' approach, for instance through constraint-based reasoning or reward functions that penalize biased behavior, aims to prevent unintended outcomes by integrating ethical principles into the AI's architecture. The UNESCO Recommendation on the Ethics of AI, for example, adopts a broad interpretation of AI to ensure forward-looking policies and outlines core values and principles, such as safety, privacy, and sustainability, that extend beyond human factors (UNESCO, 2021).

Existing ethical models for AI are increasingly incorporating technological complexity by emphasizing measurable indicators and continuous monitoring throughout the AI system's lifecycle (Mittelstadt, 2019b; Kroll et al., 2017). These frameworks guide AI system owners to address bias by monitoring the impact of AI inputs, algorithms, and interpretations (Mehrabi et al., 2019). They prioritize fairness by advocating for transparency and interpretability of algorithms, continuous evaluation, and monitoring through testing, auditing, and user feedback to prevent discriminatory outcomes (Floridi et al., 2018; Kroll et al., 2017). Transparency is emphasized in AI systems; it requires systems to be auditable and explainable to decision-makers and the public, with continuous monitoring of performance and audits (Gunning, 2017; Arrieta et al., 2019). Accountability in AI requires providing relevant, reliable, legal, authentic, auditable, and effective outcomes, along with stakeholder protection (Dignum, 2019). Interpretability is important as it enables stakeholders to fully understand AI systems, and for outputs to be clear and consistent (Lipton, 2018; Miller, 2019). Despite these advancements, it can be challenging to maximize all ethical dimensions simultaneously. For example, prioritizing privacy can hinder explainability, and increasing transparency can introduce security risks (Mittelstadt, 2019a). The governance of AI remains a complex topic, especially determining responsibility for misleading outputs generated by AI and the traceability of data sources, requiring a technology-neutral ethic that considers both individual and collective aspects (Floridi, 2019).

By identifying these conceptual gaps in traditional accountability frameworks across the technical, legal, and ethical dimensions—specifically the obfuscated responsibility attribution, the law's inability to keep pace with rapid technological advancements, and the limited scope of human-centered ethics—this work proposes a new ethical paradigm designed to directly close the aforementioned gaps. The 'Transparent Responsibility Loop' offers a comprehensive and iterative solution that integrates technological mechanisms with robust human and institutional oversight, directly addressing the complexities of AI-driven decision processes.

2. Conceptual Model: "The Transparent Responsibility Loop"

To address the multifaceted challenges of accountability in AI-driven decision processes within MIS, we propose the "Transparent Responsibility Loop" as a new ethical paradigm. This model redefines accountability by integrating continuous oversight, proactive risk assessment, and iterative improvement throughout the AI lifecycle.

The primary objective of the Transparent Responsibility Loop is to redefine accountability in ethical decision-making processes involving AI. It aims to provide practical guidance for implementation within Management Information Systems, moving beyond theoretical principles to actionable strategies. The model's scope is to offer a comprehensive conceptual framework that facilitates the allocation of responsibility, enhances transparency, and ensures continuous learning and adaptation in AI-driven environments. Fundamentally, the Transparent Responsibility Loop is designed as a dynamic, rather than static, approach to accountability. It moves beyond retroactive blame-finding toward a proactive, continuous process that anticipates and mitigates risks over the lifetime of an AI system. By bringing together technical capabilities (Traceability, Explainability) with human and organizational structures (Actor Designation, Feedback Loop, Ethical Advisory Network), it aims to create an ecosystem where AI decisions are not only effective but also comprehensible, fair, and ultimately accountable to human values.

3.1. Core Dimensions of the Paradigm

The Transparent Responsibility Loop is composed of five interconnected core dimensions designed to ensure comprehensive accountability. These are Traceability, Explainability, Actor Designation, the Feedback Loop, and an Ethical Advisory Network.

Traceability: This is a foundational dimension of the Transparent Responsibility Loop, essential for understanding the origin and evolution of AI

decisions (Wachter et al., 2017). It involves meticulously logging every data source used to train, validate, and deploy AI models, and tracking every version of the model. This detailed record-keeping is critical for compliance, troubleshooting, and identifying the root causes of issues, such as bias amplification (Raji et al., 2020; Sambasivan et al., 2021).

Blockchain technology offers a robust solution for achieving immutable and transparent traceability. It provides a secure, append-only ledger for data lineage that validates the origin, quality, and usage rights of training datasets (Casino et al., 2019). The process typically involves creating an encrypted hash of the content along with a link to its location and usage policy, and then adding this container to a blockchain ledger (Zhang et al., 2020). This cryptographic link ensures the integrity of the data; any minor change would alter the hash, making the modification obvious (Nakamoto, 2008). For AI models, it consolidates model lineage, code lineage, data lineage, and ML-specific information (e.g., Docker containers, hyperparameters), and its versioning capabilities allow for tracking specific model releases and their entire lineage (Sculley et al., 2015). For example, in supply chain management, blockchain-based traceability can go beyond tracking finished goods to verifying that the materials used in a product's manufacturing were ethically sourced, providing an immutable record of origin and compliance. This level of verifiable record-keeping enhances trust, ensures compliance with regulatory requirements, and reduces potential liability for organizations (Jobin et al., 2019).

Explainability: Building upon traceability, this dimension addresses the requirement to make the internal logic of AI models comprehensible to different audiences, including managers and stakeholders (Adadi & Berrada, 2018; Doshi-Velez & Kim, 2017). Effective explainability involves tailoring explanations to the audience, using plain language summaries or visualizations instead of technical jargon (Arrieta et al., 2019; Miller, 2019). This enables users to understand how a recommendation was reached, which is vital when AI decisions influence critical outcomes such as patient care or financial results (Gunning et al., 2019).

Dashboard designs play a crucial role in operationalizing explainability. Rather than just presenting historical data, these dashboards must actively evolve into "decision intelligence" tools that support contextual, proactive, and automated decision-making (Power, 2017). Best practices for dashboard design include understanding the specific information needs of the audience, ensuring high-quality and verified foundational data, and providing clear and consistent navigation (Few, 2013; Tufte, 2001). For instance, a fraud detection system might display suspicious transaction patterns on a dashboard, allowing investigators to

drill down into the specific rules or features that triggered the alert (Wang et al., 2019). In a legal tech application, a dashboard would not only predict the probability of a case outcome but also be able to visualize the specific legal precedents, case features, and statistical correlations that most strongly influenced that prediction, enabling legal experts to understand and challenge the AI's reasoning. Dynamic titles that reflect active filters and intelligent narratives can further enhance clarity for non-technical users. The goal is to present transparent and interpretable explanations for AI analytical models, showing record-level prediction-influencer data to help stakeholders understand how they will affect predictive outcomes (Ribeiro et al., 2016; Lundberg & Lee, 2017).

Actor Designation: Clear actor designation is fundamental to distributing accountability in AI-driven processes, moving beyond the traditional human-centric view to recognize the distinct roles of both human and artificial agents. This dimension emphasizes Human-in-the-Loop (HITL) decision-making, where human expertise works in tandem with AI algorithms to enhance accuracy, transparency, and ethical considerations (Parasuraman et al., 2000; Shneiderman, 2020). The roles can be conceptualized as follows:

- *Designer:* This role encompasses individuals responsible for designing the core elements and interaction paradigms of AI systems. This includes Human-AI Interaction Designers who build interfaces and feedback loops for seamless collaboration, AI-Human Workflow Designers who engineer end-to-end processes that balance autonomy with oversight, Agent Orchestration Engineers who design multi-agent architectures, and Human-Centric Agent Designers who ensure systems align with human values and cognitive limitations (Amershi et al., 2019; Russell & Norvig, 2021).
- *Auditor:* Auditors are crucial for ensuring compliance, fairness, and traceability. This category includes AI Decision Auditors who periodically evaluate AI-generated decisions, AI Bias Detection Analysts who detect and mitigate biases in data and models, AI Fairness Auditors who publish fairness metrics, and AI Red Team Engineers who perform tests to expose vulnerabilities (Mehrabi et al., 2021; Mitchell et al., 2019).
- *End-user:* While often interacting directly with AI outputs, end-users also have a role in accountability through feedback. For instance, an AI Trust Facilitator leads initiatives to build end-user trust in AI decisions. End-users provide valuable feedback on system performance, helping to identify potential issues (O'Neil, 2016).
- *AI Module:* This refers to the specialized human roles that govern the AI system itself and its technical aspects. Examples include AI Explainability Experts who build tools to reveal model reasoning, AI Model Validators

who stress-test models, AI Performance Optimizers who tune system efficiency, AI Post-Deployment Alignment Leads who monitor for goal drift, AI Data-Provenance Engineers who automate data lineage, AI Behavior Monitoring Experts who detect anomalous actions, and Decision Simulation Designers who create environments to test AI-aided decisions (Sambasivan et al., 2021). Tools like the RACI (Responsible, Accountable, Consulted, Informed) matrix can be adapted to clarify these human-machine roles and responsibilities in AI projects, preventing confusion and facilitating communication.

Feedback Loop: A robust feedback loop is essential for the continuous improvement and ethical alignment of AI systems. This dimension emphasizes proactive stakeholder engagement, which is critical for enhancing AI ethics (Floridi & Cowls, 2019). Stakeholder engagement involves identifying and interacting with individuals and groups who may be affected by AI systems, offering opportunities for them to provide feedback and input throughout the development and deployment stages.

Methods for gathering feedback include anonymous feedback portals, designated employees on review boards, user research summaries, workshops, focus groups, surveys, and advisory councils. Clear and transparent communication channels are vital to demystify AI and build trust, enabling stakeholders to understand how AI systems work and their potential impact (Wachter et al., 2017). The collected feedback is then evaluated through an AI Ethics Committee or Review Board (AIERB). This dedicated body is responsible for providing ethical guidance, defining ethical guidelines, and conducting risk assessments. The AIERB should review high-impact AI systems before deployment, ensuring rigorous impact assessments, fairness testing, and detailed documentation of purpose and scope (Chatila et al., 2018). The board should have not just advisory power, but genuine authority to approve, defer, or even reject use cases based on ethical criteria. Post-deployment oversight is equally critical, with the board receiving regular reports on model performance, incident trends, and changes that may necessitate re-review. This continuous monitoring, along with the investigation of complaints and red flags, allows the committee to recommend system changes, such as model retraining or increased human oversight (National AI Initiative Office, 2023). The integration of diverse perspectives, including those of affected employees or users, ensures that governance is informed by lived experience and operationalized with empathy (Costanza-Chock, 2020).

Ethical Advisory Network: Establishing a dynamic and continuously updated Ethical Advisory Network is a critical component for navigating the complex ethical landscape of AI. This network is comprised of independent experts, legal counsel, and technical developers, forming an interdisciplinary body of diverse expertise (United Nations, 2020; Microsoft, 2022). Such a network serves as a vital resource for organizations by offering guidance, oversight, and specialized knowledge on ethical considerations related to AI and machine learning technologies (World Economic Forum, 2021). Examples such as UNESCO's AI Ethics Experts Without Borders (AIEB) network demonstrate the value of such global initiatives. These networks provide policy guidance, legal advice, and capacity building tailored to national and organizational needs (UNESCO, 2021). They promote global collaboration, facilitate the sharing of best practices, and contribute to the development of ethical standards and guidelines for AI (OECD, 2019; European Commission, 2019). The continuous updates of the network ensure that ethical considerations remain current with the rapid pace of technological change and evolving societal norms. By engaging with independent experts, organizations can ensure their AI systems align with societal values and human rights and promote responsible innovation, while also addressing potential legal and technical challenges (Amodei et al., 2016; Bostrom, 2014).

3.3. The Relationship Between the Dimensions and the Cyclical Structure

The core dimensions of the Transparent Responsibility Loop—Traceability, Explainability, Actor Designation, the Feedback Loop, and the Ethical Advisory Network—are deeply interconnected, forming an iterative and self-reinforcing system. This cyclical operation ensures the continuous improvement and adaptation of AI-driven decision processes.

The loop begins with Traceability, which creates a comprehensive record of data sources and model versions. This foundational step provides the verifiable inputs necessary for the subsequent phase, Explainability. With robust traceability, the internal logic and decision paths of AI models can be reported more effectively in plain language to managers and stakeholders. This enhanced explainability, in turn, facilitates informed review and allows for the collection of meaningful feedback from all relevant stakeholders, including end-users, auditors, and internal teams. The feedback, which includes insights into fairness, accuracy, and unintended outcomes, then serves as a critical input for iterative Updates to the AI system, its data, or its operational policies. These updates are multifaceted: they can include retraining the model with new or de-biased data, retuning hyperparameters, adjusting the model architecture, changing human oversight protocols, or even leading to revisions of the institutional AI policies

themselves. Each update, whether technical or procedural, requires new traceability records, thus completing the loop and initiating a new cycle of the process. The Actor Designation dimension underpins this entire cycle, clearly defining the roles and responsibilities of human designers, auditors, end-users, and AI modules at each stage, ensuring that accountability is diffused yet clear. The Ethical Advisory Network serves as an overarching, continuously updated resource that informs all dimensions of the loop, providing expert guidance and oversight, particularly for navigating complex ethical dilemmas and ensuring alignment with evolving societal values. This continuous, iterative process, as shown in the proposed process diagram in Figure 1, moves beyond static compliance to a dynamic paradigm of responsible AI governance, emphasizing perpetual learning, adaptation, and improvement.

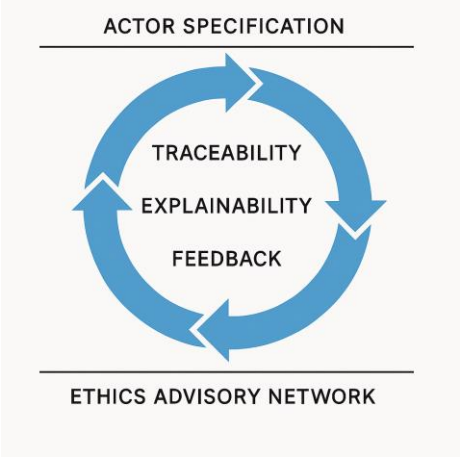

Figure 1.The Transparent Responsibility Loop. (A cyclical model showing the interconnected dimensions of traceability, explainability, feedback, actor specification, and the ethics advisory network.)

3. Theoretical Implications and Practical Recommendations

The "Transparent Responsibility Loop" offers significant theoretical implications for the accountability literature in MIS and provides concrete practical recommendations for organizations deploying AI-driven decision processes.

4.1. Management Applications

Organizational Policies: Role Definitions and Approval Steps for AI Decision Processes

Implementing the "Transparent Responsibility Loop" requires a re-evaluation and formalization of organizational policies governing AI. Organizations must develop robust AI governance frameworks that embed ethical principles and accountability from the outset (Eitel-Porter, 2021). This involves establishing clear ethical guidelines and codes of conduct that align with both organizational values and broader societal expectations, such as transparency, fairness, and respect (Mittelstadt, 2019). Specific policies should define roles and responsibilities for each stage of the AI lifecycle, from data curation to model deployment and monitoring (Ayling & Chapman, 2021). Approval steps for AI decision processes should be formalized, especially for high-risk applications, to include mandatory ethical risk assessments before deployment (Stettinger, Weissensteiner, & Khastgir, 2024). For example, university policies can mandate ethical use, inclusivity, and transparency for all AI applications, requiring approvals for AI technology acquisition and clear attribution for AI-generated content (Slimi et al., 2023; Dabis & Csáki, 2024). These policies should also address data privacy, security, and the handling of sensitive information (Slimi et al., 2023).

Process Design: Embedding Traceability and Explainability Criteria into Workflows

The effective implementation of the "Transparent Responsibility Loop" requires embedding traceability and explainability criteria directly into organizational workflows and process design. This means that ethical principles are integrated into the design of AI systems from the very beginning, not as an afterthought (Arrieta et al., 2019; Balasubramaniam et al., 2023; Wulff & Finnestrand, 2023; Vilone & Longo, 2021). Workflows must mandate continuous monitoring and evaluation of datasets to prevent bias from forming or being amplified and to detect performance degradation over time (Arrieta et al., 2019; Balasubramaniam et al., 2023). Detailed documentation protocols are essential, with comprehensive records on data sources, pre-processing steps, model architecture, and training parameters (Arrieta et al., 2019; Balasubramaniam et al., 2023; Vilone & Longo, 2021). Additionally, robust logging mechanisms need to be integrated into production systems to monitor model behavior, inputs, and their corresponding predictions, creating an audit trail that supports regulatory compliance and facilitates debugging (Arrieta et al., 2019; Balasubramaniam et al., 2023). This proactive approach ensures that AI systems are not only efficient

but also operationally auditable, transparent, and aligned with ethical standards throughout their lifetime.

Ethical Criteria: Fairness, Transparency, and Accountability Metrics in Decision Support Systems

The application of the "Transparent Responsibility Loop" requires the operationalization of ethical criteria, particularly fairness, transparency, and accountability, through measurable metrics in AI decision support systems. These three principles are deeply interconnected; without transparency, fairness cannot be ensured, and without both, accountability diminishes (Cheong, 2024; Chaudhary, 2024; Osasona et al., 2024). Ethical auditing mechanisms are crucial to ensure that AI models are inherently fair and unbiased (Osasona et al., 2024). This includes implementing specific metrics to measure fairness, such as demographic parity or equalized odds, and using techniques to identify and mitigate biases in data and algorithms (Cheong, 2024).

For transparency, metrics could include the extent to which the decision logic is explainable to non-technical stakeholders, the completeness of documentation, and the frequency of internal and external audits (Akinrinola et al., 2024). Accountability can be measured by the clarity of role definitions, the effectiveness of feedback loops in driving system improvements, and the rate at which ethics-related incidents are resolved (Akinrinola et al., 2024). While specific, universally agreed-upon metrics for these complex ethical criteria remain a challenge (Pagano et al., 2023; Lalor et al., 2024), organizations should strive to define and track indicators that demonstrate their commitment to ethical AI, such as the percentage of high-impact AI systems reviewed by an ethics board before deployment or the average time to resolve ethics-related issues (Akinrinola et al., 2024).

4. Conclusion

The proliferation of AI-driven decision processes in Management Information Systems has created a critical "liability vacuum," rendering traditional, human-centric accountability frameworks insufficient. This work has argued for the necessity of redefining accountability in this new paradigm and has proposed the "Transparent Responsibility Loop" as a comprehensive conceptual model to address this challenge. The loop, which includes the interconnected dimensions of Traceability, Explainability, Actor Designation, the Feedback Loop, and an Ethical Advisory Network, offers a structured approach to fostering proactive, continuous accountability in socio-technical AI systems. The practical benefits of adopting the Transparent Responsibility Loop are significant, allowing

organizations to formalize institutional policies, embed ethical criteria into process design, and operationalize ethical principles like fairness, transparency, and accountability through measurable actions. Theoretically, this framework contributes to the accountability literature by offering a more nuanced understanding of responsibility in the context of AI's autonomy and opacity.

The "Transparent Responsibility Loop" contributes significantly to the existing accountability literature by offering a novel conceptual framework specifically tailored for AI-driven decision processes. Traditional accountability models, which are largely human-centric, struggle to address the "liability vacuum" created by the autonomy, opacity, and continuous learning capabilities of modern AI systems (Königs, 2022). This framework operationalizes accountability in socio-technical AI systems by proposing a holistic, iterative approach that integrates technical mechanisms (traceability, explainability), organizational structures (actor designation, ethics committees), and continuous learning (feedback loops). It aims to promote proactive ethical design and governance throughout the AI lifecycle, rather than merely evaluating retrospectively.

The proposed framework opens up several avenues for future conceptual research. Scholars can investigate the theoretical underpinnings of "shared responsibility" in human-AI teams, examining how accountability can be distributed and managed between human and algorithmic agents. Further conceptual work is needed to refine the interdependencies between the dimensions of the loop, exploring how optimizing one dimension may affect the others (e.g., the trade-off between privacy and explainability). Additionally, conceptual models could explore the integration of the Transparent Responsibility Loop with broader theories of organizational change management, examining how organizations can effectively transition to this new paradigm.

The conceptual framework presented here sets the stage for extensive future research across the various dimensions of AI accountability. Ultimately, addressing the complexities of AI accountability requires a deeply interdisciplinary approach. Future research must increasingly bridge the gaps between computer science, management science, law, ethics, psychology, and sociology. For example, psychological studies on human trust and bias in AI interaction are crucial when combined with legal analyses of liability frameworks. This collaboration is essential for developing truly holistic solutions that are technically feasible, legally sound, ethically robust, and socially acceptable.

Future research should focus on developing and empirically testing quantitative and qualitative models that illuminate human-machine liability

dynamics. While the concept of "team accountability" in human-machine teamwork (HMT) is recognized (Weisswange et al., 2024), there is a need for more granular empirical research on role allocation and task distribution in human-AI collaboration (Gomez et al., 2025). Studies can quantitatively measure the impact of different role configurations on decision outcomes, efficiency, and fairness (Imai & Jiang, 2023; Schoeffer et al., 2024), perhaps integrating frameworks like Bloom's taxonomy of cognitive levels to quantify human-AI cognitive behaviors (Luo et al., 2025). Beyond just measuring decision outcomes and efficiency, future research should investigate the psychological and sociological impacts of different human-AI teamwork configurations on factors like user trust, AI adoption rates, job satisfaction, and the development of new human skills. In particular, studies can explore how transparency and explainability influence trust calibration and whether a perceived 'shared responsibility' in HMT truly enhances accountability or inadvertently diffuses it. Qualitatively, research can explore the nuances of human-AI trust calibration, examining how trust levels affect task delegation and the perception of shared responsibility (Lee & Tok, 2025; Weisswange et al., 2024). It is also crucial to investigate the potential for AI over-reliance to diminish human cognitive skills and to identify optimal strategies for blending AI insights with human judgment and intuition without weakening human expertise (Al-Zahrani, 2024; Weisswange et al., 2024). A critical area of research involves understanding the potential for AI over-reliance to lead to human skill degradation and developing optimal strategies for 'cognitive offloading' that leverage AI's strengths without undermining human expertise and critical thinking. This research will contribute to understanding how to foster complementary strengths between humans and AI, ensuring that AI augments, rather than replaces, human intelligence (Autor, 2024).

A critical area for future research involves a comprehensive comparative conceptual and empirical analysis of various Explainable AI (XAI) techniques. Beyond the widely recognized LIME and SHAP (Ding et al., 2022; Li et al., 2020), this analysis should encompass other prominent methods such as Integrated Gradients, Anchors, and Counterfactual Explanations (Abusitta et al., 2024; Ali et al., 2023). Research is needed to systematically evaluate these methods against criteria like the fidelity of explanations, computational requirements, scalability for large datasets, and the overall user experience across different contexts and model types (Abusitta et al., 2024; Ali et al., 2023; Ding et al., 2022). A specific focus should be on identifying best practices for employing XAI techniques given specific model types, domain characteristics, and user needs (Kuznietsov et al., 2024). Additionally, investigating how different XAI

methods impact user trust and understanding, and the relationship between explainability and user satisfaction, will provide valuable insights for practical implementation (Kuznietsov et al., 2024; Ali et al., 2023).

The evolving landscape of AI requires continuous research on the ethical and legal foundations of international regulatory frameworks. Given the fragmented nature of current AI regulation, with various countries and regions developing their own rules (Dokumacı, 2024; Zaidan & Ibrahim, 2024), future research should explore effective strategies to harmonize these diverse frameworks to ensure global consistency and avoid regulatory arbitrage (Wang et al., 2024; Zaidan & Ibrahim, 2024). This includes examining how international law and national sovereignty intersect with data use and AI governance (Wang & Wu, 2024; Zaidan & Ibrahim, 2024). Research can analyze the effectiveness of existing ethical guidelines, such as those proposed by UNESCO, in translating high-level principles (e.g., human rights, fairness, transparency, accountability) into practical, actionable policies across different jurisdictions (Wang et al., 2024). Furthermore, studies are needed to assess the cross-border applicability of liability provisions for autonomous AI systems and to propose innovative legal mechanisms that can keep pace with rapid technological advancements (Di Noia et al., 2022; Dokumacı, 2024). This area of research is crucial for building robust governance structures that foster the responsible development and deployment of AI on a global scale.

References

Abusitta, A., Li, M., & Fung, B. (2024). Survey on Explainable AI: Techniques, challenges and open issues. *Expert Systems with Applications, 255*, 124710. https://doi.org/10.1016/j.eswa.2024.124710

Adadi, A., & Berrada, M. (2018). Peeking inside the black-box: A survey on Explainable Artificial Intelligence (XAI). *IEEE Access, 6*, 52138–52160.

Akter, S., Michael, K., Uddin, M. R., McCarthy, G., & Rahman, M. (2022). Transforming business using digital innovations: the application of AI, blockchain, cloud and data analytics. *Annals of Operations Research, 308*(1), 7-39.

Akinrinola, O., Okoye, C. C., Ofodile, O. C., & Ugochukwu, C. E. (2024). Navigating and reviewing ethical dilemmas in AI development: Strategies for transparency, fairness, and accountability. *GSC Advanced Research and Reviews, 18*(3), 050-058.

Ali, S., Abuhmed, T., El-Sappagh, S., Muhammad, K., Alonso-Moral, J., Confalonieri, R., Guidotti, R., Ser, J., Díaz-Rodríguez, N., & Herrera, F. (2023). Explainable Artificial Intelligence (XAI): What we know and what is left to attain Trustworthy Artificial Intelligence. *Information Fusion, 99*, 101805. https://doi.org/10.1016/j.inffus.2023.101805

Al-Zahrani, A. M. (2024). Balancing act: Exploring the interplay between human judgment and artificial intelligence in problem-solving, creativity, and decision-making. *Igmin Research, 2*(3), 145-158.

Amershi, S., Cakmak, M., Knox, W. B., & Kulesza, T. (2014). Power to the people: The role of humans in interactive machine learning. *AI Magazine, 35*(4), 105–120.

Amershi, S., Cakmak, M., Knox, W. B., & Shneiderman, B. (2019). Guidelines for Human-AI Interaction. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (pp. 1–12). ACM.

Amodei, D., Olah, C., Steinhardt, J., Christiano, P., Schulman, J., & Mané, D. (2016). *Concrete Problems in AI Safety*. arXiv preprint arXiv:1606.06565.

Ananny, M., & Crawford, K. (2018). Seeing without knowing: Limitations of the transparency ideal and its application to algorithmic accountability. *New Media & Society, 20*(3), 973-989.

Arrieta, A., Rodríguez, N., Ser, J., Bennetot, A., Tabik, S., Barbado, A., García, S., Gil-Lopez, S., Molina, D., Benjamins, R., Chatila, R., & Herrera, F. (2019). Explainable Artificial Intelligence (XAI): Concepts, Taxonomies, Opportunities and Challenges toward Responsible AI. *Information Fusion, 58*, 82–115.

Autor, D. H. (2024). Will AI Eventually Replace Human Workers or Augment Them? In *Artificial Intelligence, Technology, and Jobs: A Global Perspective* (pp. 3-24). Palgrave Macmillan.

Ayling, J., & Chapman, A. (2022). Putting AI ethics to work: are the tools fit for purpose?. *AI and Ethics, 2*(3), 405-429.

Balasubramaniam, N., Kauppinen, M., Rannisto, A., Hiekkanen, K., & Kujala, S. (2023). Transparency and explainability of AI systems: From ethical guidelines to requirements. *Information and Software Technology, 159*, 107197.

Barclay, I., & Abramson, W. (2021, September). Identifying roles, requirements and responsibilities in trustworthy AI systems. In *Adjunct Proceedings of the 2021 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2021 ACM International Symposium on Wearable Computers* (pp. 264-271).

Barocas, S., & Selbst, A. D. (2016). Big data's disparate impact. *California Law Review, 104*(3), 671–733.

Baum, K., Mantel, S., Schmidt, E., & Speith, T. (2022). From responsibility to reason-giving explainable artificial intelligence. *Philosophy & Technology, 35*(1), 12.

Bidner, C., & Francois, P. (2013). The emergence of political accountability. *The Quarterly Journal of Economics, 128*(3), 1397-1448.

Bitterman, D. S., Aerts, H. J., & Mak, R. H. (2020). Approaching autonomy in medical artificial intelligence. *The Lancet Digital Health, 2*(9), e447-e449.

Bostrom, N. (2014). *Superintelligence: Paths, Dangers, Strategies*. Oxford University Press.

Bovens, M. (2007). Analysing and assessing accountability: A conceptual framework 1. *European Law Journal, 13*(4), 447-468.

Buhmann, A., & Fieseler, C. (2021). Towards a deliberative framework for responsible innovation in artificial intelligence. *Technology in Society, 64*, 101475.

Busuioc, M. (2021). Accountable artificial intelligence: Holding algorithms to account. *Public Administration Review, 81*(5), 825-836.

Casino, F., Dasaklis, T. K., & Patsakis, C. (2019). A Systematic Literature Review of Blockchain-Based Traceability in Agri-Food Supply Chains. *Trends in Food Science & Technology, 86*, 171–182.

Chatila, R., Firth-Butterfield, K., & Havens, J. C. (2018). *Ethically aligned design: A vision for prioritizing human well-being with autonomous and intelligent systems version 2*. IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems.

Chaudhary, G. (2024). Unveiling the black box: Bringing algorithmic transparency to AI. *Masaryk University Journal of Law and Technology, 18*(1), 93-122.

Cheong, B. C. (2024). Transparency and accountability in AI systems: safeguarding wellbeing in the age of algorithmic decision-making. *Frontiers in Human Dynamics, 6*, 1421273.

Coeckelbergh, M. (2020). *AI ethics*. MIT Press.

Costanza-Chock, S. (2020). *Design Justice: Community-Led Practices to Build the Worlds We Need*. MIT Press.

Dabis, A., & Csáki, C. (2024). AI and ethics: Investigating the first policy responses of higher education institutions to the challenge of generative AI. *Humanities and Social Sciences Communications, 11*(1), 1-13.

De Sio, F., & Mecacci, G. (2021). Four Responsibility Gaps with Artificial Intelligence: Why they Matter and How to Address them. *Philosophy & Technology, 34*, 1057-1084.

Di Noia, T., Tintarev, N., Fatourou, P., & Schedl, M. (2022). Recommender systems under European AI regulations. *Communications of the ACM, 65*(4), 69-73.

Dignum, V. (2019). *Responsible artificial intelligence: How to develop and use AI in a responsible way*. Springer.

Ding, W., Abdel-Basset, M., Hawash, H., & Ali, A. (2022). Explainability of artificial intelligence methods, applications and challenges: A comprehensive survey. *Information Sciences, 615*, 238-292.

Dokumacı, M. (2024). Legal frameworks for AI regulations. *Human Computer Interaction, 8*(1), 133.

Doshi-Velez, F., & Kim, B. (2017). *Towards a rigorous science of interpretable machine learning*. arXiv preprint arXiv:1702.08608.

Ebers, M., & Grützmacher, P. (2019). The Liability of AI and the EU Approach: A First Impression. *European Journal of Risk Regulation, 10*(2), 241-255.

Efe, A. (2024). Evolution of Management Information Systems by Super Artificial Intelligence Revolutions. *Uluslararası Yönetim Bilişim Sistemleri ve Bilgisayar Bilimleri Dergisi, 8*(2), 127–142.

Eitel-Porter, R. (2021). Beyond the promise: implementing ethical AI. *AI and Ethics, 1*(1), 73-80.

Ennab, M., & Mcheick, H. (2024). Enhancing interpretability and accuracy of AI models in healthcare: a comprehensive review on challenges and future directions. *Frontiers in Robotics and AI, 11*, 1444763.

Eubanks, V. (2018). *Automating inequality: How high-tech tools profile, police, and punish the poor*. St. Martin's Press.

European Commission. (2019). *Ethics Guidelines for Trustworthy AI*. High-Level Expert Group on Artificial Intelligence. Publications Office of the European Union.

European Union. (2024). Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2011, (EU) No 167/2013, (EU) 2017/745 and (EU) 2017/746 and Directives 2002/58/EC, (EU) 2018/1972 and (EU) 2020/1828. *Official Journal of the European Union, L 2024/1689*.

Few, S. (2013). *Information Dashboard Design: Displaying Data for At-a-Glance Monitoring*. Analytics Press.

Floridi, L. (2019). *The Logic of Information: A Defence of Semantic Realism*. Oxford University Press.

Floridi, L., & Cowls, J. (2019). A unified framework of five principles for AI in society. *Harvard Data Science Review, 1*(1).

Floridi, L., Cowls, J., Beltrametti, M., Chatila, R., Chazerand, P., Dignum, V., Luetge, C., Pagallo, U., Schafer, B., & Vayena, E. (2018). AI4People—Ethical guidelines for a trustworthy AI. *Minds and Machines, 28*(4), 689–707.

Galaz, V., Centeno, M. A., Callahan, P. W., Causevic, A., Patterson, T., Brass, I., Fuhrmann, B., & Levy, K. (2021). Artificial intelligence, systemic risks, and sustainability. *Technology in Society, 67*, 101741.

Gomez, C., Cho, S. M., Ke, S., Huang, C. M., & Unberath, M. (2025). Human-AI collaboration is not very collaborative yet: a taxonomy of interaction patterns in AI-assisted decision making from a systematic review. *Frontiers in Computer Science, 6*, 1521066.

Guidotti, R., Monreale, A., Giannotti, F., Pedreschi, D., Ruggieri, S., & Turini, F. (2019). Factual and counterfactual explanations for black box decision making. *IEEE Intelligent Systems, 34*(6), 14-23.

Gunning, D. (2017, May). Explainable artificial intelligence (xai). In *Defense Advanced Research Projects Agency (DARPA)* (Vol. 36, No. 2, pp. 3–13).

Gunning, D., Stefik, M., Choi, J., Haitt, T., & Lieberson, C. (2019). XAI—Explainable Artificial Intelligence. *Science Robotics, 4*(37), eaay7120.

Hassija, V., Chamola, V., Mahapatra, A., Singal, A., Goel, D., Huang, K., Scardapane, S., Spinelli, I., Mahmud, M., & Hussain, A. (2023). Interpreting Black-Box Models: A Review on Explainable Artificial Intelligence. *Cognitive Computation, 16*, 45-74.

Imai, K., & Jiang, Z. (2023). Principal fairness for human and algorithmic decision-making. *Statistical Science, 38*(2), 317-328.

Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. *Nature Machine Intelligence, 1*(9), 389–399.

Königs, P. (2022). Artificial intelligence and responsibility gaps: What is the problem?. *Ethics and Information Technology, 24*(3), 36.

Kroll, J. A., Huey, J., Barocas, S., Feeley, E. W., Goel, A., & Nissenbaum, H. (2017). Accountable algorithms. *University of Pennsylvania Law Review, 165*, 633.

Kuznietsov, A., Gyevnar, B., Wang, C., Peters, S., & Albrecht, S. (2024). Explainable AI for Safe and Trustworthy Autonomous Driving: A Systematic Review. *IEEE Transactions on Intelligent Transportation Systems, 25*, 19342-19364. https://doi.org/10.1109/TITS.2024.3474469

Lalor, J. P., Abbasi, A., Oketch, K., Yang, Y., & Forsgren, N. (2024). Should fairness be a metric or a model? A model-based framework for assessing bias in machine learning pipelines. *ACM Transactions on Information Systems, 42*(4), 1-41.

Lee, M. H., & Tok, M. Z. Y. (2025, June). Towards Uncertainty Aware Task Delegation and Human-AI Collaborative Decision-Making. In *Proceedings of the 2025 ACM Conference on Fairness, Accountability, and Transparency* (pp. 2274-2289).

Li, X. H., Cao, C. C., Shi, Y., Bai, W., Gao, H., Qiu, L., Liu, Y., Zhang, W., Chen, M., & Chen, L. (2020). A survey of data-driven and knowledge-aware explainable AI. *IEEE Transactions on Knowledge and Data Engineering, 34*(1), 29-49.

Lipton, Z. C. (2018). The mythos of model interpretability: In machine learning, the concept of interpretability is both important and slippery. *Queue, 16*(3), 31-57.

Lührmann, A., Marquardt, K. L., & Mechkova, V. (2020). Constraining governments: New indices of vertical, horizontal, and diagonal accountability. *American Political Science Review, 114*(3), 811-820.

Lundberg, S. M., & Lee, S. I. (2017). A Unified Approach to Interpreting Model Predictions. *Advances in Neural Information Processing Systems, 30*, 4765–4774.

Luo, Y., Liu, T., Pang, P. C. I., McKay, D., Chen, Z., Buchanan, G., & Chang, S. (2025). Enhanced Bloom's Educational Taxonomy for Fostering Information Literacy in the Era of Large Language Models. *arXiv preprint arXiv:2503.19434*.

Marda, V. (2018). The spectacle of human oversight. *Science, Technology, & Human Values, 43*(2), 263–285.

Mehrabi, N., Morstatter, F., Saxena, N., Lerman, K., & Galstyan, A. (2021). A Survey on Bias and Fairness in Machine Learning. *ACM Computing Surveys, 54*(3), 1–35.

Miguel, B. S., Naseer, A., & Inakoshi, H. (2021, January). Putting accountability of AI systems into practice. In *Proceedings of the Twenty-Ninth International Conference on International Joint Conferences on Artificial Intelligence* (pp. 5276-5278).

Miller, T. (2016). *What is an Explanation? An Account of How and When We Explain*. Routledge.

Miller, T. (2019). Explanation in artificial intelligence: Insights from the social sciences. *Artificial Intelligence, 267*, 1–38.

Minh, D., Wang, H. X., Li, Y. F., & Nguyen, T. N. (2022). Explainable artificial intelligence: a comprehensive review. *Artificial Intelligence Review, 55*(5), 3503-3568.

Mishra, S., & Tripathi, A. R. (2021). AI business model: an integrative business approach. *Journal of Innovation and Entrepreneurship, 10*(1), 18.

Mitchell, M., Wu, S., Tenenbaum, J. B., Stoyanovich, J., & Doshi-Velez, F. (2019). Model Cards for Model Reporting. In *Proceedings of the Conference on Fairness, Accountability, and Transparency (FAT '19)* (pp. 220–229). ACM.

Mittelstadt, B. (2019a). Principles alone cannot guarantee ethical AI. *Nature Machine Intelligence, 1*(11), 501–507.

Mittelstadt, B. (2019b). Principles for governing AI: Ethical considerations for a future of artificial intelligence. *Journal of Ethics and Information Technology, 21*(3), 1–19.

Mittelstadt, B., Allo, P., Taddeo, M., Wachter, S., & Floridi, L. (2016). The ethics of algorithms: Mapping the debate. *Big Data & Society, 6*(2), 2053951719887994.

Microsoft. (2022). *Responsible AI Standard*.

Mulgan, R. (2000). 'Accountability': an ever-expanding concept?. *Public Administration, 78*(3), 555-573.

Nakamoto, S. (2008). *Bitcoin: A Peer-to-Peer Electronic Cash System*.

National AI Initiative Office. (2023). *Blueprint for an AI Bill of Rights*. The White House.

Nauta, M., Trienes, J., Pathak, S., Nguyen, E., Peters, M., Schmitt, Y., Schlötterer, J., Keulen, M., & Seifert, C. (2022). From Anecdotal Evidence to Quantitative Evaluation Methods: A Systematic Review on Evaluating Explainable AI. *ACM Computing Surveys, 55*, 1-42.

O'Neil, C. (2016). *Weapons of math destruction: How big data increases inequality and threatens democracy*. Crown.

OECD. (2019). *Recommendation of the Council on Artificial Intelligence*.

Osasona, F., Amoo, O. O., Atadoga, A., Abrahams, T. O., Farayola, O. A., & Ayinla, B. S. (2024). Reviewing the ethical implications of AI in decision making processes. *International Journal of Management & Entrepreneurship Research, 6*(2), 322-335.

Pagano, T. P., Loureiro, R. B., Lisboa, F. V., Peixoto, R. M., Guimarães, G. A., Cruz, G. O., ... & Nascimento, E. G. (2023). Bias and unfairness in machine learning models: a systematic review on datasets, tools, fairness metrics, and identification and mitigation methods. *Big Data and Cognitive Computing, 7*(1), 15.

Parasuraman, R., Sheridan, T. B., & Wickens, C. D. (2000). A Model for Types and Levels of Human Interaction with Automation. *IEEE Transactions on Systems, Man, and Cybernetics—Part A: Systems and Humans, 30*(3), 286–297.

Pedreschi, D., Ruggieri, S., & Turini, F. (2019). Interpretable machine learning models in big data analytics. In *Handbook of Big Data Analytics* (pp. 515-538). Springer.

Power, D. J. (2017). *Decision Support Systems: Concepts and Resources for Managers*. Business Expert Press.

Raja, A. K., & Zhou, J. (2023). AI accountability: Approaches, affecting factors, and challenges. *Computer, 56*(4), 61-70.

Raji, I. D., Smart, A., White, R. N., Mitchell, M., Gebru, T., Hutchinson, B., Barnes, P., & Corley, J. (2020, January). Closing the AI accountability gap: Defining an end-to-end framework for internal algorithmic auditing. In *Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency* (pp. 33-44).

Ribeiro, M. T., Singh, S., & Guestrin, C. (2016). "Why Should I Trust You?": Explaining the Predictions of Any Classifier. In *Proceedings of the 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (pp. 1135–1144). ACM.

Rodríguez, N., Ser, J., Coeckelbergh, M., De Prado, M., Herrera-Viedma, E., & Herrera, F. (2023). Connecting the Dots in Trustworthy Artificial Intelligence: From AI Principles, Ethics, and Key Requirements to Responsible AI Systems and Regulation. *Information Fusion, 99*, 101896.

Rudin, C., Chen, C., Chen, Z., Huang, H., Semenova, L., & Zhong, C. (2022). Interpretable machine learning: Fundamental principles and 10 grand challenges. *Statistic Surveys, 16*, 1-85.

Russell, S. J., & Norvig, P. (2021). *Artificial Intelligence: A Modern Approach* (4th ed.). Pearson.

Saltelli, A., Bammer, G., Bruno, I., Charters, E., Di Fiore, F., Didier, E., Nelson, J., Niamh, M., Sluijs, J. P. van der, & Stelling, G. (2020). Five ways to ensure that models serve society: A manifesto. *Nature, 582*(7813), 482–484.

Sambasivan, N., Kapania, S., Highfill, H., Akrong, D., Habibi, M., & Lee, B. (2021). "Everyone wants to do the model work, not the data work": Data Cascades in High-Stakes AI. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (pp. 1–15). ACM.

Schoeffer, J., De-Arteaga, M., & Kuehl, N. (2024, May). Explanations, fairness, and appropriate reliance in human-AI decision-making. In *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems* (pp. 1-18).

Sculley, D., Holt, G., Golovin, D., Davydov, E., Phillips, T., Ebner, A., ... & Young, V. (2015). Hidden Technical Debt in Machine Learning Systems. In *Advances in Neural Information Processing Systems 28*.

Sheikh, K. A. H. (2024). *The Potential for AI to Augment or Replace Human Intelligence*. Springer Nature.

Shneiderman, B. (2020). *Human-Centered AI*. Oxford University Press.

Slimi, Z., & Carballido, B. V. (2023). Navigating the Ethical Challenges of Artificial Intelligence in Higher Education: An Analysis of Seven Global AI Ethics Policies. *TEM Journal, 12*(2).

Stettinger, G., Weissensteiner, P., & Khastgir, S. (2024). Trustworthiness assurance assessment for high-risk AI-based systems. *IEEE Access, 12*, 22718-22745.

Sullivan, Y., & Wamba, S. F. (2024). Artificial intelligence and adaptive response to market changes: A strategy to enhance firm performance and innovation. *Journal of Business Research, 174*, 114500.

Thalpage, N. (2023). Unlocking the black box: Explainable artificial intelligence (XAI) for trust and transparency in ai systems. *Journal of Digital Art Humanities, 4*(1), 31-36.

Tóth, Z., Caruana, R., Gruber, T., & Loebbecke, C. (2022). The dawn of the AI robots: Towards a new framework of AI robot accountability. *Journal of Business Ethics, 178*(4), 895-916.

Tufte, E. R. (2001). *The Visual Display of Quantitative Information*. Graphics Press.

UNESCO. (2021). *Recommendation on the Ethics of Artificial Intelligence*. United Nations Educational, Scientific and Cultural Organization.

United Nations. (2020). *Roadmap for Digital Cooperation: Report of the Secretary-General*.

Vilone, G., & Longo, L. (2021). Notions of explainability and evaluation approaches for explainable artificial intelligence. *Information Fusion, 76*, 89-106.

Von Eschenbach, W. J. (2021). Transparency and the black box problem: Why we do not trust AI. *Philosophy & Technology, 34*(4), 1607-1622.

Wachter, S., Mittelstadt, B., & Floridi, L. (2017). Why a Right to Explanation of Automated Decision-Making Does Not Exist in the General Data Protection Regulation. *International Data Privacy Law, 7*(2), 76–99.

Wang, J., Huo, Y., Mahe, J., Ge, Z., Liu, Z., Wang, W., & Zhang, L. (2024). Developing an ethical regulatory framework for artificial intelligence: integrating systematic review, thematic analysis, and multidisciplinary theories. *IEEE Access*.

Wang, T., Li, J., & Zhou, B. (2019). A graph-based fraud detection system for financial networks. In *2019 IEEE International Conference on Data Mining (ICDM)* (pp. 598-607). IEEE.

Wang, X., & Wu, Y. C. (2024). Balancing innovation and regulation in the age of generative artificial intelligence. *Journal of Information Policy, 14*, 385-416.

Weisswange, T. H., Javed, H., Dietrich, M., Jung, M. F., & Jamali, N. (2024). Social Mediation through Robots—A Scoping Review on Improving Group Interactions through Directed Robot Action using an Extended Group Process Model. *arXiv preprint arXiv:2409.06557*.

World Economic Forum. (2021). *The Global AI Agenda*.

Wulff, K., & Finnestrand, H. (2024). Creating meaningful work in the age of AI: explainable AI, explainability, and why it matters to organizational designers. *AI & SOCIETY, 39*(4), 1843-1856.

Zaidan, E., & Ibrahim, I. A. (2024). AI governance in a complex and rapidly changing regulatory landscape: A global perspective. *Humanities and Social Sciences Communications, 11*(1).

Zan, L. (1994). Toward a history of accounting histories: perspectives from the Italian tradition. *European Accounting Review, 3*(2), 255-310.

Zhang, Y., Xie, H., Cai, W., & Li, Y. (2020). Towards Data Traceability in Federated Learning based on Blockchain. *Future Generation Computer Systems, 113*, 274–287.

Chapter 4

Sustainability in Foreign Language Learning in Turkey Approaches, Challenges and Perspectives for a Future-Oriented Language Education

Yaşar Ali SARKİLER[1]

Abstract

The paper investigates the sustainability notion in foreign language education in Turkey and how its use has become more prominent in light of the environmental, social, and economic crises simultaneously being faced across the planet. The study discusses ways that the various dimensions of sustainability (ecological, economic, and social) might be included in the language teaching process, while also critically examining the generative possibilities derived from digital technologies such as Open Educational Resources (OER), e-portfolios, and artificial intelligence tools specifically related to learning in sustainable ways. The study argues that learner-centered and autonomy supporting approaches to teach will be necessary to fulfil sustainable education objectives of lifelong language learning, but also improve student motivation. The paper identifies the challenges in the Turkish education context that prevent progressive teaching such as inflexible, test-based curricula, and a lack of professional teacher education or teacher training, while also identifying challenges in relation to a lack of administrative support and social inequity as well as the digital divide. The paper also creates a provocation for future thinking perspectives, specifically in teacher education related to sustainability, professional learning in relation to the school context, local partnerships, and policy strategies that acknowledge curriculum flexibility or inclusivity; and a more grounded digital infrastructure. Finally, the paper highlights the importance of active student involvement and social responsibility as a dimension of foreign language learning and sustainable education. The holistic notion of sustainable education presented in the paper creates a path and a vision for developing resilient rational, equitable, and effective foreign language education systems and institutions in Turkey which will recognize a global commitment to educational sustainability and innovation.

Keywords: Digital Tools, Foreign Language Education, Sustainability, Teacher Training, Turkey

[1] Res. Assist., Anadolu University/ Faculty of Education/ Department of Foreign Language, Eskişehir/Türkiye, yasaralisarkiler@anadolu.edu.tr, ORCID: 0009-0002-3028-0368

Introduction

Sustainability has long been recognized as an important concept, but it has become even more urgent globally in recent years, largely due to disasters such as wildfires, the COVID-19 pandemic, earthquakes, and wars. In an environment that increasingly sees drought affecting the entire globe and with scientists issuing continuous warnings, the current emphasis on sustainability and the derivation from it, specifically regarding how one question from an AI intent like GPT might take tons of water to answer (Ardalı, 2023; George vd., 2023), is even more important.

As indicated by the Oxford English Dictionary (OED), the concept of sustainability is taken up in terms of three different aspects:

(a) the quality of an argument or opinion being sound, accurate, or defensible;
(b) the ability to be maintained at a specified rate or level; and
(c) In terms of Environmental Sustainability, the extent to which a process or activity can be continued without leading to the long-term depletion of natural resources (2025).

With these definitions in mind, the conscious use of natural resources, and the transition from non-renewable to renewable resources, is, therefore, a critical issue both locally and globally. Given this, sustainability should be understood as a comprehensive issue that includes not just environmental aspects, but also social and economic aspects, and the implication of this is that it requires an increased level of awareness-raising across all aspect of actions.

The concept of sustainability in foreign language education has been on the radar since the 2010s, and it is still very much in focus today (Molina, 2022). Sustainability in the context of language teaching entails the ability to harness educational capital across a long period of time for learning processes or to keep teaching materials unquestioned from a pedagogical viewpoint, or to support teacher's continuing professional development, or to increase the lifelong learning skills in learners.

In a Turkish perspective, sustainability in foreign language teaching is still a relevant and important, but under-researched topic, both for the development of educational policy and the improvement of practices. The purpose of this study is to examine sustainability in foreign language education, evaluate the present situation, and reinforce future recommendations. The following sections will discuss, the theoretical foundations of sustainability, explore its dimensions in education and language teaching, and deliberate on the current situation and recommendations specific to the Turkish context.

1. Theoretical Framework and Conceptual Definitions

At its essence, sustainability is an approach to meeting the needs of the present generation, while enabling future generations to meet their own needs. Sustainability

involves the understood balanced management of environmental, economic, and social elements. From the educational lens, sustainability goes beyond the sustainable management of natural resources. It also encompasses equitable, accessible, and long-lasting learning opportunities (Abo-Khalil, 2024). Therefore, sustainable learning intends to cultivate individuals' competencies to update, reshape, and reuse their knowledge and skills successfully in several contexts, while transitioning into newer conditions (Ben-Eliyahu, 2021). A sustainable education system can be characterized by the inclusion of atypical teaching techniques and approaches, lifelong learning skills and the commissioning of contributions to responsibility at the local and global levels. The specific case of foreign language education sustainability is relevant to learners' durability of language competences, continuing learning processes, and reinforcing intercultural awareness.

The United Nations (UN) sustainable development goals (SDGs), through the Education for Sustainable Development (ESD) approach, seek to foster individuals who are sensitive to global challenges, responsible, and engaged. ESD fosters awareness of the linkages between environmental, social, and economic issues, and encourages sustainable, environmentally friendly behaviors. ESD strengthens public participation and engages multiple stakeholders in accomplishing the sustainable development goals. ESD addresses a variety of local and global issues solely through an interdisciplinary and intercultural view, and this process advances the comprehensive formulation of solutions. It promotes responsible consumption, climate action, and sustainable economic development at both the individual and institutional level. It helps to foster responsible environmental advocacy and civic engagement, particularly among young people. It promotes the design of creative solutions in transportation or energy or agricultural fields, for example. It nurtures moral and ethical consciousness related to biodiversity and environmental protection to inform important decision-making (UNESCO, 2025).

Foreign language education is one piece of that mission as access to knowledge associated with other cultures, skills in intercultural communication, and empathic skills are developed mainly through language. In reporting ESD practices, foreign language learning in the ESD context aims to provide more than just English or another linguistic skill; it seeks to promote the concept of universal values such as the environment, equality, justice, and peace as well. Within this regard, language learning provides the ability to develop global citizenship awareness, to recognize differing perspectives, and to actively engage in the development of sustainable solutions. At this point, addressing sustainability issues in course materials and supporting them with intercultural projects provides a practical way to build ESD into foreign language teacher education (Cardiff et al, 2024).

Schools and educators today are trying to maximize not only the knowledge that they impart, but more importantly, the skills needed for 21st Century success! The set of competencies including critical thinking, problem solving, creativity, communication, collaboration, digital literacy, and cultural awareness is particularly apparent in as well, (Əliyev, 2024). The competencies regarding sustainable language learning are directly connected to the aforementioned competencies, where critical thinking is utilized when learners read and analyze various types of texts in the target language, digital literacy is reinforced when learners use an online tool or language platform or practice, and steeping into collaboration skills when learners do project-based learning, or complete an intercultural student exchange. Basically, sustainable language learning reflects an approach that emphasizes social responsibility over individualistic achievement. Using 21st century skills in a curriculum model, meaning that language learning is important now and will be important in the future.

In Turkey, foreign language education is implemented through several levels, from primary to higher education. As a consequence of international education opportunities, the Ministry of National Education has undergone several curriculum changes to develop foreign language teaching based on the standards established by the Common European Framework of Reference for Languages (CEFR) (MEB, 2018a; MEB, 2018b). However, based on the curricula provided by MEB in 2018 that were developed or renewed, the term "sustainability" is not situated within the English curriculum, whereas the German curriculum is associated with "nachhaltig," which was only mentioned once. The absence of a critical concept in the curricula, which is substantive to the ESD 2030 agenda, is worth noting. Furthermore, a search in Scopus based on the keyword “sustainability in foreign language teaching” with Turkey being selected as a country offered a total of ten results. Two based on Turkish, one based on German, and the remaining seven located in the context of English language education, suggests a growing body of research related to sustainability in linguistics (English) but relatively few studies regarding sustainability related to the teaching of German, making it a significant gap. In addition, it was reported that the updated curricula for 2024 consisted of a skills-oriented approach, the English course was not identified, whereas the existing practices in the foreign language courses remained (Güven Çoban, 2024).

Research indicates that although updated curricula were developed, students do not achieve sufficient communicative skills in the target language upon graduation (Palabıyık & Oral, 2022). Some of these obstacles, include limited teaching hours, overcrowding in the classroom, traditional instruction, lack of materials, and opportunities for in-class practices (Boğaziçi University & Istanbul Provincial Directorate of National Education, 2024). At the higher education level, at the very

least, the foreign language teacher education programs are developed to include the language skills and pedagogical competencies. Recently, there have been more cases of integrating digital technology into language education practices, project-based learning, and intercultural interaction. However, an overall systematic incorporation of a sustainability perspective into language teacher education programs is not readily identifiable in the recent curricula in Turkey. Developing and expanding the sustainability principle as embedded in Turkey's language education system could potentially be an advance to support Turkey's competitiveness on both national and global scales.

2. Current Approaches to Promoting Sustainability in Foreign Language Teaching

As mentioned above, sustainability extends beyond environmentalism and necessitates encompassing a holistic approach to ecological, economic, and social dimensions (Pawłowski, 2008; UNESCO, 2020:8).

Figure 1. What needs to be done (UNESCO, 2020:8)

Referring to three dimensions - ecological, economic, and social - offers boundless opportunities in language education with regard to both content and pedagogy. The ecological dimension facilitates the incorporation of texts, projects and learning materials that support students' environmental awareness. For example, authentic texts on the environment, discussion activities on environmental topics, and project-based learning tasks can foster students' language skills while promoting environmental awareness.

The economic dimension facilitates efficient use of resources as well as the inclusion of cost-effective models of learning. Open educational resources (OER)

makes using digital learning platforms in language education and reducing the financial cost of learning possible, thereby facilitating reach across an expansive range of learners. The social dimension of sustainability, however, towards equity, inclusiveness, and intercultural understanding. Language education enables students from disparate socio-economic and cultural contexts to exist in the same learning classroom and develop a shared understanding and empathy. In this light, a language classroom can become a micro-society whose purpose is aligned with Sustainable Development Goals.

Digital technologies represent potential accelerants of language sustainability learning processes (Tang, 2024). Open educational resources (OER), e-portfolios, and artificial intelligence-based systems (AI-based systems) represent a number of pedagogical and sustainability benefits. OER helps learners and teachers with low-cost or free educational materials, therefore, contributing to economic sustainability and providing equitable opportunities. E-portfolios allow students to document their learning process over time and allow a focus on their own progress which allows the accumulation of learning instead of a set time for learning.

AI-based systems allow learners to develop personalized learning experiences through generated content and activities based on where the learners are at (Başaran, 2025). For example, exercises generate at a learners' language level or systems that provide automated feedback about language learning challenges support learners' autonomy. The use of digital pedagogies, in particular, reduces the consumption of physical resources thereby supporting ecological sustainability when possible. It is important the correct and ethical use of these systems in educational spaces remains focused on the social aspect of sustainability.

It is important to always consider the environmental implications of any digital pedagogy. This also applies to AI-based systems. Data centers that house multi-layered AI models require a lot of energy and water for cooling processes, and sometimes this puts pressure on local communities and ecosystems. So, while AI-based systems exhibit innovative and sustainable possibilities for language pedagogies, those systems need to incorporate strategies to mitigate their environmental impact.

Sustainable language education is possible when learners are positioned to actively participate and direct their own learning, and they are given a pathway regarding how to develop lifelong learning skills. Learner-centered teaching can provide the flexibility for curriculum design to address specific and individual learner needs. Although flexible through learner-centered pedagogy, this way of teaching learners' individual interests, goals, and learning styles will increase their motivation and help them see learning as more meaningful.

Autonomy-supportive strategies encourage students to specify their own learning goals, to choose their learning materials, and reflect on their learning and development than what the teacher specifies. Autonomy-supportive strategies help the learner not only develop their language skills but also be competent in self-management, critical thinking, and problem-solving. Possible pathways that support autonomy-supportive strategies are project-based learning, the flipped classroom, and self-directed learning through self-assessment practices.

To conclude; learning all three aspects of sustainability of ecology, economy, and society in your language education combined with digital tools and learner-centered, autonomy-supportive ways of learning will provide a holistic way of sustainable language learning. This we hope will provide targeted people with sustainable, long-lasting learning that contributes to positive social change at a societal level.

3. Challenges and Limitations in the Turkish Educational Context

Like in many other countries, language teaching policies based in Turkey are largely curriculum-oriented and exam-oriented, and there are significant implications for the priorities determined by the instructional process (Balbay & Doğan, 2021). In curriculum-oriented with exam-oriented policies, a standardized course content is included in a framework with pre-determined learning outcomes, and learning achievements are primarily aligned with the performance determined by centralized examinations. Although this kind of framework can ensure some level of consistency in teaching, it can also hinder students' abilities to develop the twenty first century skills necessary to sustain language learning over their lifespan. More specifically, focusing solely on achieving success in exams limits students' development of core competences like communicative competence, intercultural awareness, and autonomous learning in the form of "sustainable" foreign language learning. In addition, the structure of exam-oriented systems makes it less feasible for teachers to develop their lessons through project-based, creative, and learner-centered activities because of time limitations.

Sustainable language education will largely depend on the pedagogical expertise and familiarity with contemporary teaching cultures of teachers. That said, similar to many other countries, the pre-service and in-service teacher education programs in Turkey, have not devoted enough attention to sustainability-oriented language teaching. For example, with little professional development opportunities along with insufficient opportunities to receive professional development related to digital pedagogies, learners' autonomy perspectives, project-based learning perspectives, and intercultural communication, have constrained teachers' abilities to put these types of innovative practices into action. Furthermore, heavy workloads and time constraints hinder teachers from engaging in regular professional development,

which can ultimately weaken pedagogical diversity and the long-term potential of sustainable language learning in the teaching and learning process.

The sustainability of language education depends on the provision of sufficient physical, digital, and human resources; in many educational organizations, however, foreign language courses are not prioritized in terms of funding and infrastructure. Consequently, access to instructional resources, digital resources, and extracurricular learning opportunities are limited. Furthermore, projects and innovative practices are implemented on a short-term and project-based basis without being adopted as structures that allow for institutional continuity. For example, the digital learning platform that was available in a school for the duration of a project may not be obtained in subsequent years due to lack of budget or technical support, undermining students' ability to build long-term habits of learning; without institutional support over time, sustainability principles are at risk of remaining purely theoretical.

Sustainable success when it comes to language learning is directly linked to the learners' levels of motivation and active involvement in the learning process (Muñoz et al., 2024). However, socioeconomic differences create significant inequalities in access to educational resources, and students who live in rural communities, or who come from lower socio-economic backgrounds have less access to both digital learning tools and opportunities to practice the foreign language. This situation perpetuates the technological access gap known as the "digital divide" and exacerbates disparities in student achievement. Further, continuous exam pressure and a competitive environment reduce learners' intrinsic motivation, causing them to view language learning as only having an academic function. Regarding sustainable language education, addressing inequities, and sustaining motivation over time should not only be seen as a pedagogical challenge but as a social duty.

Curriculum-centric policies, lack of teacher development opportunities, lack of institutional support, and social inequality that influences student motivation, are the main barriers to achieving sustainable foreign language education. To meet these challenges it is not only necessary to reform educational policy but also the socio-technical infrastructures of society to align with the principles of sustainability. Above all, providing opportunities to support teachers' professional development, integrating 21st-century skills into the teaching of languages, providing long-term planning for institutional resources, and closing the digital divide should be seen as the critical building blocks for sustainable language learning.

4. Perspectives for Future-Oriented Language Education in Turkey

Future-oriented language teaching involves a holistic approach that embraces the development of individual students as well as social outcomes as a function of

practicing the intentions of sustainability. The challenges currently faced in language education in Turkey can be successfully managed and improved upon by effectively applying innovative teacher education models, school-based professional learning processes, policy change, and active student engagement.

Of paramount importance when striving for improvement in the quality of language education, is the ongoing professional learning and development of teachers. Teacher education focused on the principles of sustainability promotes the improvement of pedagogical capabilities, by supporting contemporary pedagogical processes and the use of technological resources in language education. The aim of these teacher education models is to further improve knowledge transmission, and develop learner-centred approaches that promote critical thinking skills and autonomy. Regular and accessible in-service training must be prioritized to allow for opportunities for teachers to up-skill their digital competencies, engage with environmental and social sustainability content topics, and develop knowledge about curricular content. Furthermore, encouraging collaborative environments allows teachers to learn from other teachers in professional communities and share and promote innovative practices.

It is critical that schools provide a sustainable ecosystem for language learning to occur. School-based professional learning activities provide an effective way for teachers to improve their practice in professional learning communities and provide targeted solutions to improve their practice for place-based needs. Part of this collaboration includes partnerships with the immediate community to link the language education ecosystem with the community. Developing partnerships with municipalities, NGOs, and cultural organizations builds the connectedness between language learning and real life, promoting local social responsibility and cultural responsibility as an agent of social change. Community partnerships enhance and expand the education ecosystem and provide opportunities for supplementary motivation for students and teachers.

Wide-ranging policy reform must also be a part of enacting sustainable language education. Language education policies must be flexible, responsive to learners, and curricula must be structured around communication and lifelong learning, rather than preparing for an exam. Curricula need to provide time for intercultural communication, critical awareness of language as problematic, and digital literacy pedagogies. Given the rapid pace of digital development, policy reform and structures must advocate for digital literacy pedagogies and digital tools for effective education. Schools typically have antiquated forms of digital infrastructure, and this needs to be addressed immediately and strategically, with the emphasis on economically disadvantaged regions.

Active student engagement in the language-learning process is a foundational outcome of sustainable teaching. Learner-centred approaches are important as they consider individual learners and their interests and needs will enhance motivation. Also, the learning of a language needs to be embraced with a commitment to social responsibility; the ability to make sense of cultural diversity, issues of human rights, and the educational outcomes related to the sustainable development goals (SDGs) are important aspects of the sustainability process. Project-based learning, community service learning, and global collaboration and exchanges are practices that will not only contribute to language competencies but will also provide for alternatives of social segregation with social responsibility that promotes diversity and leadership skills.

In conclusion, future-focused language education is an opportunity for Turkey to influence systems of learning through a holistic perspective that values sustainability with pre-service teacher education, school and community partnerships, policy reform and student engagement. All of these perspectives contribute to ensuring dignity and meaning-making through the experience of learning a language within communities, and also for society.

5. Conclusion

This study has resulted in a comprehensive examination of foreign language education in Turkey in relation to sustainability; the primary result delimited a number of substantial impediments including system inertia associated with curriculum, examination orientated educational delivery, limitations of teacher education, insufficient institutional supports, and socio-economic disparities. At the same time, it is reasonable to suggest that digitalization and innovative pedagogical practice of a high standard can play a significant role in contributing to sustainable language education.

For practitioners, the implications include an ongoing professional development agenda for teachers with regard to sustainability, the need for collaborative practices at the school level, and ways to support and sustain local practices. To researchers, there will be opportunities for fuller research in terms of the sociocultural dimensions of language education; how digitalization might contribute to this, and ways of understanding models of teacher education. To policymakers, there is a requirement for re-examining their education policy so as to introduce sustainable, flexible, and inclusive changes, to improve digital capabilities, and equitable access to education.

There will follow a number of research questions for future research. They will include questions such as: to what extent are sustainable language teaching models effective in different educational settings; what are the pedagogical considerations for when using various digital tools in language learning; what realistic interventions

can be conceived that can help overcome social inequities that will diminish language learning; how can we reimagine engaging with the enormous upheaval in teachers' professional development processes which are effective and can include a sustainability agenda; what are the best practices to support students' independent capacities for learning, which will also be part of an ongoing research agenda.

In conclusion, sustainable foreign language education cannot be studied in isolation, it requires a multi-dimensional, cross-disciplinary approach and it will unfold as a relationship shared by teachers, researchers and policymakers. Given that this will be a fluid and ongoing process, contextualized strategies driven from Turkey can contribute to sustainable language learning experiences maximizing the socially responsive potential of language learning.

REFERENCES

Abo-Khalil, A. (2024). Integrating sustainability into higher education: Challenges and opportunities for universities worldwide. *Heliyon, 10.* https://doi.org/10.1016/j.heliyon.2024.e29946

Balbay, S., & Doğan, C. (2021). English language teaching and language teacher education in Turkey: An evolutionary overview. *International Journal of Progressive Education.* https://doi.org/10.29329/IJPE.2021.375.23

Boğaziçi Üniversitesi, İstanbul İl MEM, & Yabancı Diller Eğitimi Bölümü. (2024, January 17). *Bugünden yarına: Türkiye'de İngilizce öğretimi çalıştayı* [Çalıştay]. Boğaziçi Üniversitesi. https://istanbul.meb.gov.tr/dergi/Bugunden_Yarin_Turkiyede_Ingilizce_Ogretimi_Calistayi/files/basic-html/page28.html

Başaran, B. (2025). Language learning at the crossroads of AI, pedagogy, and professional practice. In S. Demir Başaran (Ed.), Theoretical and applied approaches in educational sciences (pp. 1-23). Duvar Yayınları.

Cardiff, P., Polczynska, M., & Brown, T. (2024). Higher education curriculum design for sustainable development: Towards a transformative approach. *International Journal of Sustainability in Higher Education.* https://doi.org/10.1108/ijshe-06-2023-0255

Güven Çoban, M. (2024). Türkiye'de zorunlu eğitimde yabancı dil öğretimi. https://doi.org/10.71174/pn063

Molina, P. (2022). Bibliographical review on sustainable literacy in language learning and teaching. *Language Learning in Higher Education, 12*(2), 513–524. https://doi.org/10.1515/cercles-2022-2059

Ministry of National Education (MEB). (2018a). *Secondary education German curriculum (Preparatory, grades 9, 10, 11, and 12).* https://mufredat.meb.gov.tr/ProgramDetay.aspx?PID=333

Ministry of National Education (MEB). (2018b). *Secondary education English curriculum (Preparatory, grades 9, 10, 11, and 12).* https://mufredat.meb.gov.tr/Dosyalar/201812411191321-%C4%B0NG%C4%B0L%C4%B0ZCE%20%C3%96%C4%9ERET%C4%B0M%20PROGRAMI%20Klas%C3%B6r%C3%BC.pdf

Ondokuz Mayıs Üniversitesi. (2023, August 15). Prof. Dr. Ardalı: Yapay zekaya sorulan her soru temiz suyu tüketiyor. https://www.omu.edu.tr/tr/icerik/haber/prof-dr-ardali-yapay-zekaya-sorulan-her-soru-temiz-suyu-tuketiyor

Oxford University Press. (2025). Sustainability. In *Oxford English Dictionary.* Retrieved July 1, 2025, from https://www.oed.com/dictionary/sustainability_n?tab=meaning_and_use#19473065

Palabıyık, T., & Oral, B. (2022). Yabancı dil öğretiminde öğretmenlerin karşılaştığı sorunlar üzerine yapılan araştırmaların incelenmesi. *USBAD Uluslararası Sosyal Bilimler Akademi Dergisi, 4*(9), 638–654.

Pawłowski, A. (2008). How many dimensions does sustainable development have. *Sustainable Development, 16,* 81–90. https://doi.org/10.1002/SD.339

Shaji George, A., Hovan George, A. S., & Gabrio Martin, A. S. (2023). The environmental impact of AI: A case study of water consumption by Chat GPT. *Partners Universal International Innovation Journal, 1*(2), 97–104. https://doi.org/10.5281/zenodo.7855594

Tang, F. (2024). Understanding the role of digital immersive technology in educating the students of English language: Does it promote critical thinking and self-directed learning for achieving sustainability in education with the help of teamwork? *BMC Psychology, 12.* https://doi.org/10.1186/s40359-024-01636-6

UNESCO. (2020). *Education for sustainable development: A road map.* https://doi.org/10.54675/YFRE1448

UNESCO. (2025). *Sites as partners for education for sustainable development: An implementation guide* (ISBN 978-92-3-100746-0). https://doi.org/10.54675/SAVQ1325

Əliyev, R. (2024). 21st century skills in education: Our yesterday, today. *Scientific Works,* 91(3), 31–36. https://doi.org/10.69682/azrt.2024.91(3).31-36

Muñoz, M., Gálvez, J., & Buyse, K. (2024). Language learning among higher education students: An analysis on motivation. *Research in Education and Learning Innovation Archives.* https://doi.org/10.7203/realia.32.27546

Chapter 5

From Pen to Poisoned Ink: The History, Dynamics, and Cultural Significance of Literary Feuds Among Novelists

Ahmet Yusuf AKYÜZ[1]

Introduction

The world of literature is not immune to personal rivalries, ideological clashes, and public disputes. While literary feuds may seem trivial compared to political or military conflicts, they often reflect deeper tensions within cultural and intellectual spheres. Novelists, in particular, engage in feuds that range from private disdain to public denunciations, sometimes through essays, reviews, or even fictional portrayals of their rivals. As Gore Vidal once remarked, "Whenever a friend succeeds, a little something in me dies" (n.d.).[2] This sentiment captures the competitive undercurrent of literary circles, where success can breed resentment as easily as admiration.

This essay investigates the phenomenon of literary feuds by asking several interrelated questions: What constitutes a literary feud, and what conditions drive authors into such conflicts? How have feuds functioned across different historical contexts, and what rhetorical forms do they typically assume? What ethical considerations and professional responsibilities arise within the literary field when rivalries escalate into public antagonism? How have digital platforms in the twenty-first century fundamentally reconfigured the dynamics of such disputes? And, more broadly, what do literary feuds reveal about the structures, values, and transformations of the literary field across eras? To address these questions, the essay combines a historical survey with close analyses of selected case studies, while also offering a theoretical reframing grounded in scholarship on literary rivalries, cultural production, and the sociology of literature.

Literary feuds are episodes in which writers publicly attack, satirize, or otherwise set themselves against other writers; they are a surprisingly durable feature of literary culture. They range from quiet slights embedded in prefaces,

[1] Dr., Atatürk University, Faculty of Letters, ORCID: https://orcid.org/0000-0001-8258-4748
ahmetmhdyusuf@hotmail.com
[2] You can find it in Oxford References, Gore Vidal's quotes, number 2 at https://www.oxfordreference.com/display/10.1093/acref/9780191826719.001.0001/q-oro-ed4-00011172?utm_source=chatgpt.com

essays, reports, newspaper stories, and reviews to explosive confrontations and coordinated press smear campaigns. Arthur (2002) argues that while popular attention often treats feuds as personality drama—a rigorously historicized reading shows that they are also windows onto the economics, institutions, and discourses that shape literary production—authors compete for readership, critical esteem, and symbolic capital; they defend aesthetic lineages; and they police moral or ideological boundaries. Heddendorf (2014) contends that literary feuds are not a contemporary phenomenon. During the early modern era, disputes were frequently conducted via pamphlets and sarcastic poetry; writers of the eighteenth and nineteenth centuries employed reviews, periodical essays, and theatrical satires to criticise adversaries. The Victorian press witnessed notable conflicts, such as the Thackeray–Yates incident and various other journalistic disputes, which intertwined personal attacks with discussions on taste and moral obligation. The twentieth century witnessed an intensification in the visibility of literary feuds, a phenomenon driven by three principal factors: the high-stakes aesthetic schisms of modernism, which pitted realism against experimentalism; the expansion of mass media and literary journalism, which provided amplified platforms for polemic; and the commercial pressures of the publishing industry, which frequently transformed private rivalries into public spectacles. As Bradford (2014) observes, beneath this varied surface, surveys of these antagonisms reveal recurrent structural themes—such as accusations of plagiarism, stylistic disparagement, and ideological condemnation—that provide a consistent framework for understanding these conflicts.

Some feuds sharpen aesthetic positions, forcing authors and critics to articulate principles more clearly. Historical polemics, for instance, modernist manifestos and anti-modernist critiques, clarified stakes in formal debates, and the resulting discourse sometimes catalyzed new genres or rhetorical experiments. Surveying literary rivalries, Bradford (2014) and others suggest that antagonisms can have creative side effects by intensifying critical attention on particular works or techniques. Literary feuds have long functioned as both reputational and commercial catalysts, with publicized disputes often increasing visibility and driving market interest. The logic of scandal means that controversy can generate sales and cultural attention even as it damages personal or professional reputations. In the contemporary media environment, feuds amplified through social media and news coverage can propel novels onto bestseller lists or renew interest in film and television adaptations. J. K. Rowling's controversies, for example, have stimulated widespread public commentary that reverberates across fan communities and the branding of associated commercial properties (Davies, 2025; Sass, 2020). Yet feuds also carry risks, as they can harden cultural boundaries and reinforce exclusionary dynamics. Wheatley (2013) argues that literary conflicts, when entangled with

institutional forms of gatekeeping such as prize committees, tenure reviews, and publishing networks, may consolidate cliques while marginalizing dissenting voices. Moreover, the theatricalization of disagreement—particularly in media-driven environments—can reduce complex debates to ad hominem performances, discouraging sustained critical dialogue. Thus, while feuds can catalyze publicity and profit, they also risk distorting literary culture by privileging spectacle over substance.

The rhetoric of literary feuds tends to cluster around three recurring genres of attack: parody, indictment, and moral passion. Satirical parody, often deployed through fictionalized characters or caricatured scenes, enables authors to ridicule rivals with the advantage of indirectness, though such portrayals can persist in literary memory as enduring slurs (Bradford, 2014). An exemplary instance of this type is Henry Fielding's novel *Shamela* (1741). Fielding composed this novel as an immediate reaction to Richardson's immensely popular novel *Pamela* (1740). In this novel, Fielding employs ridicule, irony, and satire as literary devices to critique the acclaim *Pamela* received from contemporary readers. More formal critical indictments emerge in the form of reviews, essays, and manifestos that ostensibly rely on reasoned argument to delegitimate a rival's aesthetic or ethical stance; yet even these ostensibly literary critiques frequently blur into personal calumny (Heddendorf, 2014). The third sort, feuds can assume a moral register when authors frame their conflicts as public testimony, appealing to civic authority and collective judgment. Such strategies are especially pronounced in politically charged controversies, where petitions, boycotts, or calls to rescind honors transform literary quarrels into matters of public ethics, as seen in debates surrounding *The Satanic Verses* and its legacies (Satanic Verses Controversy, 2025; Sass, 2020). Together, these rhetorical repertoires underscore how literary feuds are not merely private quarrels but staged interventions in cultural discourse, oscillating between satire, critique, and moral urgency.

In the twenty-first century, digital platforms have fundamentally reconfigured the dynamics of literary feuding by altering its tempo, scale, and modes of participation. The acceleration of communication through tweets and posts compresses time, forcing instant responses that often escalate minor slights into sustained controversies. Social media has also democratized feuds by allowing fans, critics, and even relatively marginal authors to intervene, producing polyphonic debates that extend beyond elite literary circles—a development that resonates with Bakhtin's theorization of dialogism as an ever-expanding chain of voices. At the same time, the platform economies of contemporary media incentivize outrage, as algorithms reward high-engagement content, meaning that polemics and performative quarrels can be monetized through clicks, subscriptions, and adaptations (Bradford, 2014). The digital archive ensures that once-ephemeral disputes now endure as searchable traces, creating long-term

reputational consequences for authors and shaping institutional responses well after the immediate controversy has subsided. In this way, the digital age has transformed literary feuds into highly visible cultural events, simultaneously amplifying their reach and entrenching their legacies.

The heightened visibility of literary feuds inevitably raises pressing ethical questions for the institutions that govern the literary field. Publishers, prize juries, and universities are increasingly compelled to respond when interpersonal antagonisms intersect with allegations of misconduct, exclusion, or hate speech. Such situations demand a principled balance between safeguarding freedom of expression and protecting individuals and communities from harm, as well as a careful distinction between legitimate intellectual disagreement and targeted harassment. Wheatley (2013) emphasizes that unchecked feuds can harden boundaries and foster exclusionary practices, while Bourdieu (1993) highlights the need for transparent adjudicative mechanisms within the field of cultural production to prevent institutional decisions from being swayed by volatile public pressures or the capricious dynamics of online outrage. At the same time, both scholars defend the value of critical dispute as central to the vitality of intellectual life, suggesting that the challenge is not to eliminate conflict but to cultivate structures that ensure it remains generative rather than destructive.

Theoretical Framework: Bourdieu, Foucault, Bakhtin, and Bloom

To move beyond anecdote, we need conceptual tools. Four theorists illuminate different dimensions of feuds: Pierre Bourdieu, Michel Foucault, Mikhail Bakhtin, and Harold Bloom. Within the competitive landscape of the literary world, Bourdieu's sociological framework of the field of cultural production (1993) provides a critical lens for understanding authorial conflicts. Bourdieu conceptualizes this field as a structured space of struggle wherein authors, gatekeepers, and institutions compete for dominance. At the heart of these struggles is the accumulation of symbolic capital (prestige, recognition, and awards), which, although independent, holds a fraught potential for conversion into economic capital (sales, contracts). Consequently, literary feuds emerge not as mere personal animosities but as calculated strategic practices. A polemical attack functions to deplete a rival's symbolic capital or to reassert the legitimacy of one's own aesthetic position, while a public quarrel can be a calculated risk to garner attention and thus accrue symbolic advantage. Ultimately, applying Bourdieu's theory reveals that these feuds are fundamental to the very construction of literary value, demonstrating that it is not inherent but is perpetually contested and defined relationally through such struggles for position within the field.

While Bourdieu situates feuds within broader struggles for symbolic capital, Foucault turns our attention to the discursive mechanisms through which these

struggles are played out, particularly the author function as a site of authority and contestation. Michel Foucault's essay "What is an Author" (1979) reframes the author not as an originating genius but as an author function that regulates how texts circulate within a discursive economy, a perspective that illuminates the dynamics of literary feuds. Rivalries among authors often unfold less as textual disagreements than as contests over authority, where the legitimacy of interpretation and reception depends on mobilizing the author function itself. Public disputes—whether conducted in reviews, interviews, letters, books, or through social media—frequently turn on the persona, biography, or perceived character of the author, rather than the literary qualities of the text. In this sense, when writers disparage one another in printed forms, televised spats, off-the-record comments, or online provocations, they are not merely exchanging insults but reconfiguring the conditions under which texts are read, cited, and valued. Foucault's (1979) caution against conflating author and text underscores the paradox of these conflicts: while theory insists on the separation of the two, the cultural economy of feuds thrives precisely on their entanglement, dramatizing the extent to which literary authority is negotiated as much through public performance as through critical discourse.

If Foucault highlights how authorial identity is mobilized in feuds, Bakhtin complements this perspective by emphasizing how the texts themselves participate in dialogic relations, turning literary conflict into a heightened form of intertextual exchange. Mikhail Bakhtin's concept of dialogism provides a productive lens for interpreting literary feuds, reframing them as intensified moments within the inherently dialogic nature of authorship. For Bakhtin, every text is shaped by and responds to prior utterances, situating literature in a polyphonic network of voices that continually intersect, oppose, and reconfigure one another (Arán, 2014). Within this framework, a feud is not a disruption of literary culture but an amplification of its dialogic foundations, where polemic, parody, and satire operate as strategies that force intertextuality into overt visibility. According to Bakhtin (1981), when novelists publicly attack, mock, or reframe the works of rivals, they enact a heightened form of the dialogic process, making explicit the relational quality of authorship that is otherwise implicit in all acts of writing. In this sense, feuds contribute to the vitality of the literary ecosystem, dramatizing the interplay of voices and underscoring the impossibility of a monologic text.

Whereas Bakhtin frames feuds as dialogic interplay that enriches the literary ecosystem, Harold Bloom recasts such relations in more agonistic terms, suggesting that authorship itself is haunted by an Oedipal struggle against the authority of precursors. Bloom's theory of the anxiety of influence provides a compelling framework for understanding the antagonistic dynamics of literary feuds, particularly the tendency of younger or emerging novelists to challenge

established figures in order to assert creative independence. Bloom (1973) argues that writers experience an Oedipal struggle with their precursors, resisting influence through strategies of revision, misprision, or outright rejection. Within this paradigm, public attacks, scathing reviews, or polemical satire can be read not merely as personal animosities but as manifestations of a deeper psychopoetic struggle, in which authors negotiate their literary identities against the looming presence of predecessors. Feuds thus function as both personal and aesthetic acts of differentiation: by repudiating a rival's authority, writers simultaneously perform an act of self-definition, situating their own voice within the literary tradition while attempting to escape the suffocating shadow of influence. This Bloomian perspective highlights how feuds, far from being mere spectacles of vanity, can be symptomatic of the structural pressures inherent in literary production and reception.

Taken together, these four theoretical perspectives reveal that literary feuds are far more than colorful episodes of personal rivalry; they constitute a complex cultural practice that operates simultaneously across multiple dimensions. From Bourdieu, we see how such disputes are inseparable from the structural logics of the literary field, functioning as strategic maneuvers in the accumulation and defense of symbolic capital. From Foucault, we recognize that these contests are never merely about texts but also about the very conditions of authorship, as writers mobilize and contest the author function in order to shape the authority through which texts are received. From Bakhtin, we understand feuds as a heightened mode of dialogism, where polemics and parody bring to the surface the relational quality of all writing, dramatizing the polyphony inherent in literary culture. And from Bloom, we grasp the psychopoetic dimension of such rivalries, where the drama of influence and resistance plays itself out in public gestures of antagonism and differentiation. When read together, these frameworks suggest that feuds should not be dismissed as peripheral dramas but recognized as constitutive of literary culture itself: they are at once struggles over prestige, performances of authorial identity, dramatizations of intertextuality, and enactments of generational succession. In other words, feuds are not external to literature but integral to its production, circulation, and reception, shaping both the value of texts and the identities of those who produce them. By situating feuds at the intersection of sociological, discursive, dialogic, and psychopoetic dynamics, we gain a richer understanding of how literature is made, contested, and remembered.

Historical and Contemporary Case Studies of Literary Feuds Among Novelists

Samuel Richardson vs. Henry Fielding: The Conflict Between Two Novels and Novelists

The rivalry between Samuel Richardson and Henry Fielding stands as one of the earliest and most emblematic instances of novelistic antagonism in English literary history, crystallized in the polemical relationship between *Pamela* (1740) and *Shamela* (1741). Richardson's *Pamela* was groundbreaking in its epistolary form and moral didacticism, promoting the triumph of chastity and virtue through the heroine's resistance to her master's sexual advances. Yet its enormous popularity also provoked skepticism about its moral earnestness and artistic method. Fielding, perceiving *Pamela* as sentimental, contrived, and even hypocritical, composed *Shamela* as a direct parody, exposing what he viewed as the self-interest and manipulation hidden beneath Pamela's supposed virtue. The parody not only ridiculed Richardson's narrative strategies and moral posturing but also inaugurated a broader debate about authenticity, social mobility, and the purpose of fiction in an emerging novelistic marketplace. However, Bradford (2014) believes that Fielding's motive was not material but rather more fundamental and had hidden agendas as explained below:

> Some have argued that Fielding wrote Shamela as an attempt to cash in on Richardson's profits but this is very questionable as a motive ... I contend that something more elemental than financial gain prompted Fielding ... Fielding's [Shamela is an] unapologetic announcement of his intention to parody, indeed ridicule, Richardson's enterprise. Yet beneath the ribald tone lurks a mature agenda. (p. 107)

As critics have noted, the *Pamela–Shamela* exchange exemplifies how rivalry in the eighteenth-century novel was not mere personal animosity but a formative contest over the genre's ethical function and representational possibilities (Tarrant, 2019; Bradford, 2014). By situating virtue against satire, Richardson and Fielding established a dialectic that would shape the trajectory of the English novel for decades.

Charles Dickens vs. William Makepeace Thackeray: The Collapse of a Friendship

The rivalry between Charles Dickens and William Makepeace Thackeray has long been a subject of scholarly fascination, representing a clash between two of the Victorian period's most celebrated novelists. Both men rose to prominence in the 1830s and 1840s, contributing prolifically to serialized fiction and cultivating large reading publics. Dickens, with his extraordinary popularity following *The Pickwick Papers* (1836–37), quickly became a literary celebrity whose pathos, sentiment, and reformist zeal appealed to broad audiences. Thackeray, in contrast, achieved recognition somewhat later with *Vanity Fair* (1847–48), a novel whose biting irony and satirical critique of social pretension marked him as a

counterpoint to Dickens's emotional and moral earnestness. Bradford (2014) asserts that though the two authors admired each other's talent, their relationship was tinged with competitive tension, exacerbated by their simultaneous serialization of major works in the 1850s (*Bleak House* and *The Newcomes*), and by a cultural climate in which periodicals, reviewers, and readers often staged them as rivals in style and status.

The personal dimension of the rivalry emerged most dramatically in 1858 during Dickens's public marital scandal, when Thackeray was rumored to have repeated gossip about Dickens's relationship with the actress Ellen Ternan (Temple, 2018). Dickens, deeply wounded by the circulation of these rumors, distanced himself from Thackeray, leading to a period of estrangement that only ended shortly before Thackeray's death in 1863. Scholars such as Heddendorf and Tarrant argue that the Dickens–Thackeray conflict illustrates not only personal sensitivities but also the structural pressures of the Victorian literary publishing industry, in which authors competed for serial audiences, publishing contracts, and critical reputation. Their rivalry reflects a broader dialectic within nineteenth-century fiction between the sentimental and the satirical, the popular and the ironic, and demonstrates how literary feuds, however personal in form, are deeply embedded in the professional and cultural economies of authorship.

Virginia Woolf vs. D. H. Lawrence: Aesthetic and Ethical Divergence

Woolf and Lawrence, contemporaries in early twentieth-century Britain, clashed less in a single publicized incident than in a constellation of divergent aesthetic and moral positions. Woolf, aligned with Bloomsbury's inward psychological realism and modernist experimentation, and Lawrence, associated with a more embodied, vitalist vision of human relations and the body, frequently found themselves at odds in critical commentary and implied critique. As Feyel (2015) notes, Woolf's emphasis on the life of the mind was frequently opposed to Lawrence's commitment to the visceral and instinctual dimensions of human experience. Similarly, Miracky (2002) observes that this divergence exemplifies feuds that arise from incompatible literary philosophies rather than episodic personal attacks: the debate concerns what literature should attend to (inner consciousness vs. embodied drives) and what claims it may make about modern life.

The antagonism between these two novelists, though less overtly personal than some literary feuds, exemplifies the profound aesthetic and ethical divergences that characterized early twentieth-century modernism. Woolf, committed to psychological realism and the exploration of consciousness through impressionistic narrative techniques, regarded the novel as a medium for capturing the intricacies of subjectivity and the fleeting rhythms of modern life. Lawrence, by contrast, privileged the primacy of instinct, sensuality, and the embodied self, envisioning fiction as a vehicle for dramatizing the elemental

forces of human desire and social vitality. These conflicting aesthetic orientations often translated into mutual criticism: Woolf dismissed Lawrence's writing as crude and overwrought, while Lawrence perceived Woolf's formal experimentation as excessively cerebral and detached from lived passion (Bradford, 2014; Goldman, 1993). Their rivalry thus extended beyond individual taste into a debate over what the modern novel should represent: interiority and cultural refinement, or bodily vitality and primal truth. Ethical considerations further intensified this divergence. Woolf's feminist sensibility, evident in works like *A Room of One's Own* (1929), framed the literary vocation as one bound to social critique and the dismantling of patriarchal hierarchies. Lawrence, however, often articulated essentialist views of gender and sexuality that struck Woolf and her Bloomsbury circle as retrogressive and even threatening. As critics like Ellis (2008) and Worthen (2005) have observed, this clash was not merely aesthetic but ideological, representing two competing visions of modernist ethics: one grounded in intellectual emancipation and gender equality, the other in a vitalist philosophy that valorized instinct and sexual power. The Woolf–Lawrence antagonism is therefore emblematic of how literary rivalries can crystallize broader cultural tensions, turning questions of form and style into sites of ethical struggle that shaped the trajectory of modernist fiction.

In retrospect, the Woolf–Lawrence feud may be read less as a petty antagonism and more as an emblem of the pluralism that defined literary modernism. Woolf's cerebral, experimental, and feminist sensibilities and Lawrence's visceral, vitalist, and erotic commitments represented poles of a dialectic that shaped the possibilities of the novel in the twentieth century. The fact that their rivalry remains a subject of sustained scholarly attention underscores its significance not merely as a quarrel but as a dialogue—albeit a hostile one—that sharpened the aesthetic self-consciousness of an entire generation of writers.

Ernest Hemingway vs. William Faulkner: Clashing Literary Philosophies

The literary rivalry between Ernest Hemingway and William Faulkner represents one of the most illuminating clashes of aesthetic philosophy in twentieth-century American letters. While both writers were central figures in the modernist movement, their approaches to narrative form, language, and the representation of human experience diverged so radically that their professional interactions frequently descended into pointed critique. Richard Bradford (2014) situates the Hemingway–Faulkner dispute as a paradigmatic example of how stylistic differences could harden into personal antagonism, producing one of the most widely publicized debates about prose style in the twentieth century.

At the core of the rivalry was a question of style and its relation to truth. Hemingway, with his celebrated Iceberg Theory,[3] insisted that a writer should say less and imply more. His sentences, stripped of ornament, created a prose of maximum compression, leaving the unspoken to resonate beneath the textual surface. In stark contrast, Faulkner embraced the complexity of consciousness and the convolutions of time, producing sentences that stretched across pages and wove together multiple temporalities. Joseph Blotner's biography of Faulkner highlights how the novelist conceived of language as a medium expansive enough to capture what he once described as "the human heart in conflict with itself" (2005, p. 376), a scope that minimalism, in his view, could not adequately encompass.

The tension between the two erupted into open rivalry in the late 1940s. In a lecture delivered at the University of Mississippi in 1947, Faulkner ranked contemporary American writers according to artistic ambition and accomplishment. He placed Thomas Wolfe at the top, himself slightly below, and Hemingway at the very bottom, with the cutting remark that Hemingway "has never been known to use a word that might send the reader to the dictionary" (n.d).[4] James Mellow, in his biography *Hemingway: A Life Without Consequences* (1992), recounts this moment as the definitive spark that transformed simmering aesthetic difference into open hostility. For Faulkner, Hemingway's economy of expression appeared not as discipline but as limitation: a refusal to risk depth, complexity, or difficulty. Hemingway, never one to let criticism go unanswered, responded in kind. In a private letter from the same year, he replied: "Poor Faulkner. Does he really think big emotions come from big words?" (Temple, 2012, number 14).[5] A sardonic jab that implied Faulkner's loquacity was the inverse of artistry. Jay Parini, in his monumental *One Matchless Time: A Life of William Faulkner*, reproduces Hemingway's retort and observes that it reveals as much about Hemingway's pride in his stylistic economy as it does about his disdain for what he perceived as Faulkner's overwriting. To Hemingway, Faulkner's labyrinthine sentences were less the mark of genius than a failure of control; to Faulkner, Hemingway's restraint was not a virtue but a timidity.

---

[3] Ernest Hemingway's iceberg theory, or theory of omission, is a minimalist writing technique that emphasizes surface description while leaving deeper meanings unstated, allowing them to emerge implicitly.

[4] The quote is available in Oxford References, quote number 10 at the URL: https://www.oxfordreference.com/display/10.1093/acref/9780191843730.001.0001/q-oro-ed5-00004295?d=%2F10.1093%2Facref%2F9780191843730.001.0001%2Fq-oro-ed5-00004295&p=emailAEAhIa3sz9FC2 ; find it also in Quote Investigator, question number 2, at https://quoteinvestigator.com/2016/01/26/dictionary/

[5] You can find it in Flavorwire, comment number 14, at the following URL: https://www.flavorwire.com/188138/the-30-harshest-author-on-author-insults-in-history ; available also in Quote Investigator, at https://quoteinvestigator.com/2016/01/26/dictionary/

Beyond personal insults, this exchange crystallized two divergent philosophies of fiction. Hemingway believed that literary truth emerged from precision, from the discipline of cutting away until only the essential remained. His stories of war, hunting, and love depend on understatement to carry emotional weight, creating resonance precisely by withholding. Faulkner, by contrast, pursued abundance and complexity, believing that the modern novel had to stretch the resources of language to capture the fractured temporality and psychological turbulence of modern existence. Judith Sensibar (2009) suggests that Faulkner's immersion in the polyphony of voices, especially women's voices in the South, shaped his sprawling aesthetic and gave his writing an expansiveness that clashed with Hemingway's stark masculinity and compression. The rivalry also illuminates how literary feuds are as much about cultural capital as about artistic vision. Hemingway's stripped-down prose appealed to mass readerships and became readily adaptable to journalism and popular magazines, cementing his image as the rugged, masculine writer who embodied American stoicism. Faulkner, though recognized with the Nobel Prize in 1949, struggled for much of his career to secure commercial readership and financial stability; his complex novels were often considered too demanding for the broader public. Bradford (2014) underscores that these asymmetries of reception sharpened the antagonism: Faulkner dismissed Hemingway's accessibility as pandering, while Hemingway mocked Faulkner's difficulty as self-indulgence. The feud thus reflects Pierre Bourdieu's insight that literary disputes often mask deeper struggles over symbolic and economic capital, with style serving as a proxy for status.

Despite their mutual hostility, the Hemingway–Faulkner antagonism has had lasting scholarly significance. It helped crystallize two recognizable trajectories in American modernism: the minimalist, accessible, and internationally mobile style of Hemingway, and the maximalist, experimental, regionally rooted style of Faulkner. Later critics and creative writers would position themselves, explicitly or implicitly, in relation to this opposition. Minimalist authors such as Raymond Carver and Amy Hempel drew inspiration from Hemingway's compression, while postmodern writers such as Cormac McCarthy and Toni Morrison extended Faulkner's dense syntax and multi-perspectival narration. In this way, what began as personal animosity evolved into a symbolic debate that continues to shape discussions of literary style.

Conclusively, the Hemingway–Faulkner rivalry demonstrates how feuds contribute to literary history not merely as gossip but as moments that sharpen critical categories. By openly attacking each other's methods, both writers forced contemporaries and successors to articulate what they valued in fiction: clarity versus depth, discipline versus daring, silence versus excess. As Bradford (2014) argues, the value of such rivalries lies in their ability to turn questions of taste

into public debates that shape the contours of the canon. The Hemingway–Faulkner feud, therefore, stands as a case study in how personal antagonism can enlighten aesthetic principles, leaving a legacy that extends far beyond the individuals involved.

Gabriel García Márquez vs. Mario Vargas Llosa: Dialogic Violence of Rival Aesthetics

The rupture between Mario Vargas Llosa and Gabriel García Márquez is one of the most infamous literary feuds of the Latin American Boom,[6] a period during the 1960s and 1970s when novelists from the region gained international prominence. Initially close friends and mutual admirers, the two writers collaborated on panels, exchanged ideas, and appeared to embody the spirit of solidarity among Latin American intellectuals. Vargas Llosa praised *One Hundred Years of Solitude* as a revolutionary novel, while García Márquez acknowledged Vargas Llosa's *Conversation in the Cathedral* as a landmark in political fiction. Yet their relationship disintegrated dramatically in 1976 when Vargas Llosa punched García Márquez outside a cinema in Mexico City, leaving him with a black eye—an incident that quickly acquired legendary status. As Gerald Martin (2010) notes that the physical altercation became the symbolic break in the unity of the Boom. Though neither writer publicly explained the reasons, scholars often situate the conflict at the intersection of political disagreements, personal tensions, and divergent literary trajectories.

While the notorious punch has overshadowed their earlier camaraderie, the deeper rivalry between Vargas Llosa and García Márquez reflected competing visions of literature's role in society. García Márquez remained committed to leftist politics and a form of magical realism that fused myth, history, and political allegory into a literary vision of Latin America. Vargas Llosa, in contrast, gradually shifted toward liberal democratic ideals and a more realist, rationalist style. Jean Franco (1999) observes that this divergence mirrored broader debates among Latin American intellectuals about whether literature should function primarily as political commitment or aesthetic innovation. Their falling out, therefore, was not merely a personal quarrel but a fracture emblematic of the fragmentation of the Boom itself. The Vargas Llosa–García Márquez rivalry continues to resonate in discussions of Latin American literature, standing as a reminder of how personal conflicts often intertwine with ideological and aesthetic disputes in shaping literary history.

[6] The Latin American Boom was a mid-20th-century literary movement, spanning the 1960s and 1970s, in which novelists such as Gabriel García Márquez, Mario Vargas Llosa, Julio Cortázar, and Carlos Fuentes gained international prominence. Characterized by narrative experimentation, political engagement, and the global popularization of magical realism, the Boom redefined Latin American literature as both aesthetically innovative and central to world literary culture.

Mark Twain vs. Bret Harte: Collaboration Turned Antagonism

The relationship between Mark Twain and Bret Harte began as one of mutual admiration and mentorship, rooted in their shared participation in the literary scene of the American West during the 1860s. Twain credited Harte with cultivating his emerging voice, famously noting in a letter that Harte had "trimmed and trained and schooled" him, refining his early roughness into prose that commanded respect (as cited in Literary feud, n.d).[7] Yet this collegial bond disintegrated amid a failed collaboration: the play *Ah Sin* (1876–77), which both men worked on but found unsatisfactory. Scharnhorst recounts that tensions heightened when Twain, frustrated with Harte's revisions, wrote to the American novelist and literary critic William Dean Howells, saying, "Harte is a liar, a thief, a swindler, a snob, a sponge, a coward… brim full of treachery" (Scharnhorst, 1993, p. 29). This public eruption marked a turning point in their relationship, transforming a friendship into a lasting feud suffused with personal resentment.

Beyond the dramatic outburst, the Twain–Harte rivalry reflected deeper divergences in their artistic literary trek and social contexts. Harte flourished briefly as the iconic voice of California local color, captured in sketches like *The Luck of Roaring Camp;* however, his later years were marred by financial instability and relocation to Europe. Meanwhile, Twain's star ascended as he developed a nationally resonant satire rooted in realism and humor. According to Scharnhorst (1993), the rivalry culminated in Twain's efforts to block Harte's diplomatic appointment, framing him as morally unreliable. Arthur (2002) notes that upon discovering Harte's impending diplomatic mission to China, Twain corresponded with William Howells, who was connected to Rutherford B. Hayes, the 19th president of the United States, through his wife's family. Twain implored Howells to notify the president that Harte would bring disgrace to the nation if sent abroad, asserting, "Wherever he goes his wake is tumultuous with swindled grocers & with defrauded innocents" (p.15). Twain's continued disparagement—even years after Harte's death—underscored how literary feuds often intertwine personal grievances with larger debates about literary authority, genre evolution, and cultural recognition.

J. K. Rowling vs. Critics in the Social-Media Era: A New Tempo of Feuding

The feud surrounding J. K. Rowling demonstrates how literary antagonisms have been transformed in the contemporary age of social media, where disputes are not confined to the aesthetic or even personal domain but spill over into urgent sociopolitical debates. Rowling's controversial public remarks on transgender identities, most notably her 2020 tweet, "If sex isn't real, there's no same-sex attraction. If sex isn't real, the lived reality of women globally is erased"

[7] Check the subheading "Mark Twain and Bret Harte", at https://en.wikipedia.org/wiki/Literary_feud

(Rowling, 2020),[8] provoked immediate and widespread condemnation from fellow writers. Prominent figures such as Stephen King and Margaret Atwood expressed disapproval, while Gillian Flynn directly countered Rowling's stance by asserting her solidarity with the transgender community and rejecting "harmful rhetoric" (Flynn, 2020).[9] Unlike feuds of the past, which unfolded through letters, reviews, or slow-moving literary gossip, Rowling's conflict was instantly amplified, framed not as a disagreement over literary technique or genre but as a cultural battle with ethical stakes.

This transformation illustrates a profound shift in the nature of literary feuds in the twenty-first century. As scholars of digital culture, such as Helen Lewis (2020), have noted, Rowling's disputes exemplify how social media accelerates and globalizes antagonism, turning once-private debates into spectacles of collective engagement. Where nineteenth-century feuds between novelists like Twain and Harte circulated within limited literary publics, Rowling's controversies are mediated by platforms with millions of followers, where responses generate hashtags, protests, and even calls for boycotts of her work and its adaptations. The Rowling episode underscores how, in the contemporary period, the author's public persona and political statements can eclipse the literary text, reshaping not only critical reception but also the economic and cultural capital of a global literary brand. This convergence of authorship, celebrity, and activism signals that feuds in the digital era are no longer confined to questions of style or influence, but have become part of the contested terrain of cultural politics.

Conclusion

Feuds among writers and novelists are both symptoms and engines: symptoms of contested value regimes, and engines that sometimes generate stylistic invention, market energy, or institutional reform. The historical persistence of feuding suggests that antagonism is built into the social life of literature, but the form it takes changes with media ecologies and institutional structures. In the nineteenth century, feuds circulated through journals and salons; in the twentieth century, they migrated to radio, television, and glossy profiles; in the twenty-first century, social media and streaming platforms magnify both stakes and audiences. Theoretical frameworks drawn from Bourdieu, Foucault, Bakhtin, and Bloom reveal feuds as structural struggles over capital, discursive authorial function, dialogic intertextuality, and anxiety of influence. Everything considered, these approaches allow us to read feuds not as scandalous detours

[8] It can be located on X, formerly known as Twitter, at the specified URL: https://x.com/jk_rowling/status/1269389298664701952 ; you can find it also in The New York Times at https://www.nytimes.com/2020/06/07/arts/Jk-Rowling-controversy.html ; and in The Guardian at https://www.theguardian.com/film/2020/jun/08/daniel-radcliffe-jk-rowling-transgender-tweets

[9] you can access Gillian Flynn's account by entering the following URL: https://twitter.com/TheGillianFlynn

from literary value but as productive sites for studying how literature is made, contested, and remembered.

While literary feuds can be petty and damaging, they also generate critical discourse, redefine literary movements, and sometimes push authors to refine their craft. Whether driven by ego, ideology, or market competition, these conflicts remain an integral part of literary history. Future research could explore how feuds influence readership and publishing trends, as well as the psychological toll on writers engaged in prolonged disputes. The investigation into literary feuds, as framed by this essay, concludes that they are an ineradicable feature of the literary ecosystem, acting as both a mirror and an engine of its transformations. We have seen that the conditions for feud—a mix of structural pressure and agent provocateurs—persist across history, even as the rhetorical forms mutate to fit new mediums. The central ethical dilemmas of public conflict, professional jealousy, and artistic integrity are thrown into sharp relief in the digital age, where a feud can be ignited in minutes and its consequences can be both global and permanent. Therefore, understanding the anatomy of these disputes is no longer a niche academic pursuit but a crucial form of literacy for anyone navigating the contemporary literary world. As the boundaries between the private author and the public brand continue to dissolve, the questions raised here become ever more urgent: How will the literary community develop new norms and ethics to manage these inevitable conflicts? And what forms will feuds take next, as the digital landscape continues to evolve? The literary feud, it seems, is a story with no final chapter.

References

Arán, P. O. (2014). The Question of the Author in Bakhtin. *Bakhtiniana: Revista de Estudos Do Discurso*, 9(Special), 5–27.

Arthur, A. (2002). *Literary Feuds: A Century of Celebrated Quarrels--From Mark Twain to Tom Wolfe.* Macmillan.

Bakhtin, M. (1981). *The Dialogic Imagination: Four Essays.* University of Texas Press.

Bloom, H. (1973). *The Anxiety of Influence: A Theory of Poetry.* Oxford University Press.

Blotner, J. (2005). *Faulkner: A biography*. University Press of Mississippi Jackson.

Bourdieu, P. (1993). *The Field of Cultural Production: Essays on Art and Literature* (R. Johnson, Ed.). Columbia University Press.

Bradford, R. (2014). *Literary Rivals: Feuds and Antagonisms in the World of Books.* The Robson Press.

Davies, C. (2025, April 18). J. K. Rowling's journey from Harry Potter creator to gender-critical campaigner. *The Guardian.* https://www.theguardian.com/books/2025/apr/18/jk-rowling-harry-potter-gender-critical-campaigner

Ellis, D. (2008). *Love and sex in D. H. Lawrence*. Harvester Press.

Faulkner, W. (n.d.). Oxford Reference. Retrieved August 26, 2025, from https://www.oxfordreference.com/display/10.1093/acref/9780191843730.001.0001/q-oro-ed5-00004295?d=%2F10.1093%2Facref%2F9780191843730.001.0001%2Fq-oro-ed5-00004295&p=emailAEAhIa3sz9FC2

Feyel, J. (2015). Self and Suffering: Virginia Woolf, D.H. Lawrence and the War. *Études Lawrenciennes*, 46. https://doi.org/10.4000/lawrence.234

Fielding, H. (1999). *Joseph Andrews and Shamela*. Penguin Classics. (Original work published 1841)

Flynn, G. [@TheGillianFlynn]. (2020, June 10). I stand with the trans community and reject Rowling's harmful rhetoric [Tweet]. *Twitter.*

Foucault, M. (1979). What is an Author? *Screen,* 20(1), Spring 1979, 13–34. https://doi.org/10.1093/screen/20.1.13

Franco, J. (1999). *Critical Passions: Selected Essays*. Duke University Press.

Goldman, J. (1993). *The Cambridge Introduction to Virginia Woolf*. Cambridge University Press.

Gore Vidal. (n.d.). Oxford Reference. Retrieved August 25, 2025, from https://www.oxfordreference.com/display/10.1093/acref/9780191826719.001.0001/q-oro-ed4-00011172?utm_source=chatgpt.com

Heddendorf, D. (2014). The Literary Feud. *The Sewanee Review*, 122(3), 473–478. http://www.jstor.org/stable/43662883

Lewis, H. (2020, July 6). How J. K. Rowling Became Voldemort: The backlash against the Harry Potter creator is a growing pain of her fandom. The Atlantic. https://www.theatlantic.com/international/archive/2020/07/why-millennial-harry-potter-fans-reject-jk-rowling/613870/

Literary feud. (2025). In *Wikipedia*. https://en.wikipedia.org/wiki/Literary_feud

Martin, G. (2010). *Gabriel García Márquez: A life*. Vintage.

Mellow, J. R. (1992). *Hemingway: A life without consequences*. Houghton Mifflin.

Miracky, J. J. (2002). Regen(d)erating the Modernist Novel: Literary Realism vs. the Language of the Body in D.H. Lawrence and Virginia Woolf. *The D.H. Lawrence Review*, *31*(1), 29–50. http://www.jstor.org/stable/44235682

Parini, J. (2004). *One Matchless Time: A Life of William Faulkner*. Harper Collins.

Richardson, S. (2001). *Pamela.* Oxford University Press. (Original work published 1840)

Rowling, J. K. [@jk_rowling]. (2020, June 6). If sex isn't real, there's no same-sex attraction. If sex isn't real, the lived reality of women globally is erased [Tweet]. *Twitter.*

Sass, A. J. (2020, June 19). I'm a Nonbinary Writer of Youth Literature. J.K. Rowling's Comments on Gender Identity Reinforced My Commitment to Better Representation. *Time*. https://time.com/5855633/jk-rowling-gender-identity/

Satanic Verses Controversy. (2025). In *Wikipedia.* https://en.wikipedia.org/w/index.php?title=Satanic_Verses_controversy&oldid=1307709078

Scharnhorst, G. (1993). The Bret Harte-Mark Twain Feud: An Inside Narrative. *Mark Twain Journal*, 31(1), 29–32. http://www.jstor.org/stable/41641376

Sensibar, J. (2009). *Faulkner and Love: The women who shaped his art*. Yale University Press.

Tarrant, G. (2019). *For the love of books: Stories of literary lives, banned books, author feuds, extraordinary characters, and more*. Skyhorse Publishing.

Temple, E. (2018, February 16). 25 Legendary Literary Feuds, Ranked. *Literary Hub*. https://lithub.com/25-legendary-literary-feuds-ranked/

Temple, E. (2012, January 1). The 30 Harshest Author-on-Author Insults In History. *Flavorwire.* https://www.flavorwire.com/188138/the-30-harshest-author-on-author-insults-in-history

Wheatley, P. K. (2013). *Romantic Feuds: Transcending the "Age of Personality".* Ashgate Publishing, Ltd.

Woolf, V. (1935). *A Room of One's Own*. Hogarth Press.

Worthen, J. (2005). *D. H. Lawrence: The life of an outsider*. Allen Lane.

Chapter 6

The Role of ISM and ISPS Codes on Crew Safety and Wellbeing: A Qualitative Research

Ramazan Özkan YILDIZ [1], Elif KOÇ[2]

Abstract

This book chapter explores the vital function of the International Safety Management (ISM) and International Ship and Port Facility Security (ISPS) Codes in protecting the safety and wellbeing of crew members in the maritime industry. The chapter employs a qualitative research methodology, conducting interviews with ship commanders and HR executives to gain insight into their viewpoints regarding the efficacy and influence of these standards on the safety and welfare of the crew. Ship officers often prioritise practical elements such as safety equipment and emergency response procedures. On the other hand, HR executives take a more complete approach by incorporating safety measures into a larger safety culture, which includes training programmes and a strong organisational commitment to safety. Although both groups have different focuses, they both highlight the significance of ISM and ISPS standards in improving the safety and welfare of crew members. They emphasise the crucial role of training programmes, the availability of safety equipment, and a strong safety culture inside organisations. The chapter ends with suggestions for proactive safety measures, stringent security requirements, and nurturing organisational cultures to guarantee the safety and welfare of the workforce. It emphasises the importance of giving priority to training and education programmes, promoting a culture that prioritises safety, and guaranteeing the continuous application of ISM and ISPS standards. Furthermore, the chapter emphasises the need for additional study to investigate the long-lasting effectiveness of safety management techniques and the influence of technology on safety and welfare in the maritime sector. The results of this study make a

[1] Dr., Bandırma Onyedi Eylul University
Maritime Faculty, Department of Maritime Transportation and Management Engineering
ramazanyildiz@bandirma.edu.tr
[2] Dr., Bandırma Onyedi Eylul University
Omer Seyfettin Faculy of Applied Sciences, Department of International Trade and Logistics
elifkoc@bandirma.edu.tr

substantial contribution to our knowledge of safety management strategies and have practical implications for improving the wellbeing of crew members in the maritime industry.

Key words: *Crew Wellbeing, Maritime Safety, International Safety Management (ISM) Code, International Ship and Port Facility Security (ISPS) Code, Maritime Industry, Qualitative Research*

Introduction

The shipping industry is an intricate and ever-changing setting that necessitates rigorous safety and security protocols to safeguard ships, cargo, and crew. The International Safety Management (ISM) Code and the International Ship and Port Facility Security (ISPS) Code are crucial in guaranteeing the safety and security of ships and port facilities. These codes provide detailed rules and criteria for this purpose. These codes are essential for safeguarding crew members, who have a critical function in ensuring the secure and effective functioning of vessels.

The ISM Code, established by the International Maritime Organisation (IMO) in 1993, is a comprehensive set of principles designed to ensure the secure administration and functioning of ships, as well as the prevention of pollution. Ship owners and operators are obligated to establish and execute a Safety Management System (SMS) that encompasses all elements of ship operations, such as crew training, maintenance, and emergency readiness (Moore and Roberts, 1995). The ISPS Code, implemented in 2002 as a result of the 9/11 terrorist attacks, aims to improve the security measures of ships and port facilities. Ships and port facilities must deploy security measures to identify, discourage, and address security concerns (Ricardianto et al., 2021).

Both codes prioritise the safety and wellbeing of crew members as a crucial area of concern. Ship crew personnel face a range of hazards and difficulties throughout their employment, such as accidents, injuries, and health problems (Papageorgiou et al., 2023). The ISM and ISPS codes seek to mitigate these hazards by establishing precise criteria for crew education, safety apparatus, and emergency protocols. As an illustration, the ISM Code mandates that ship owners must furnish crew members with suitable safety instruction and gear, such as life jackets and fire extinguishers, in order to guarantee their safety while on board (Abdulla, 2021). The ISPS Code mandates that both ships and port facilities must enforce security measures to safeguard crew members from security risks, including terrorism and piracy (Akyurek and Bolat, 2021). These measures may encompass access control measures, surveillance systems, and security patrols. Ship owners and operators can improve the safety and security of their crew

members and decrease the likelihood of security incidents by employing these steps (Cetin and Koseoglu, 2020).

These codes are instrumental in promoting safety within the shipping industry by mandating systematic management approaches for safe ship operations. The ISM Code, a mandatory requirement under the Safety of Life at Sea Convention, aims to ensure the safe operation of ships and pollution prevention (Karahalios and Yang, 2014). Its implementation has been found to significantly impact crew-related dimensions, leading to increased safety and efficiency in safety management systems. The ISM Code has been effective in reducing the number of incidents, injuries, and fatalities during vessel operations, aligning with its objective of enhancing maritime safety (Georgoulis and Nikitakos, 2019). By requiring companies to document management procedures to eliminate unsafe crewing and ship operations, the ISM Code shifts the focus towards regulating human actions for accident prevention (Talley, 1999).

Furthermore, the ISM Code's fulfilment involves various elements such as safety and environmental protection policies, emergency preparedness, and certification, all aimed at ensuring comprehensive safety measures on ships (Loh and Thai, 2015). Studies have shown that crew attitudes, safety management practices, and operational performance are influenced by the application of the ISM Code, highlighting its significance in shaping crew behaviour and safety practices (Karakasnaki et al., 2018).

The primary aim of this research is to explore and understand the perceptions of ship officers and HR executives of ship-owning companies regarding the effectiveness and impact of ISM and ISPS codes on crew safety and wellbeing. The research aimed to find answers for following research questions:

- *How do ship officers perceive the effectiveness of ISM and ISPS codes in ensuring crew safety and wellbeing?*
- *How do HR executives perceive the effectiveness of ISM and ISPS codes in ensuring crew safety and wellbeing?*
- *How do ISM and ISPS codes contribute to the overall wellbeing of crew members?*

To explore the impact of ISM and ISPS codes on crew safety and wellbeing, this chapter proposes a qualitative research approach using the interview method and content analysis. The research will focus on gathering insights from ship officers, who are responsible for implementing and adhering to these codes in their daily operations, and HR executives of ship-owning companies, who are responsible for the general design and control of these operations. By understanding the perspectives of both ship officers and HR executives, this

research aims to provide valuable insights into the effectiveness of ISM and ISPS codes in ensuring the safety and wellbeing of crew members. The research will involve conducting semi-structured interviews with ship officers and HR (human resources) executives to gather their views and experiences regarding the ISM and ISPS codes. The interviews will be designed to elicit detailed and nuanced responses from participants, allowing for a thorough analysis of the data. The gathered data will be analysed using content analysis, which involves identifying key themes and patterns in the data related to crew safety and wellbeing.

The findings of this research are expected to provide valuable insights into the impact of ISM and ISPS codes on crew safety and wellbeing. This research will contribute to a better understanding of the practical implications of these codes on maritime operations. Additionally, the findings will inform policy and decision-making in the maritime industry, helping to improve safety measures and enhance the wellbeing of crew members.

In conclusion, the ISM and ISPS codes play a crucial role in ensuring the safety and wellbeing of crew members in the maritime industry. Through their requirements and guidelines, these codes help to mitigate risks and protect crew members from harm. By exploring the impact of these codes on crew safety and wellbeing, this research aims to contribute to a safer and more secure maritime environment for all.

Conceptual Background

International Safety Management (ISM) Code

The International Safety Management (ISM) Code is a vital global rule implemented by the International Maritime Organisation (IMO) to bolster safety and reduce the likelihood of accidents in the maritime industry. This code requires the adoption of safety management systems (SMS) aboard ships in order to protect seafarers and prevent accidents (Pike et al., 2021). In 1998, the maritime industry underwent a notable transition towards a management strategy based on systems with the mandate of the International Safety Management (ISM) Code. Shipping businesses must implement safety management systems to ensure the safety of seafarers (Chen et al., 2016).

Furthermore, the ISM Code mandates reporting, investigation, and analysis of dangerous circumstances in order to prevent them from happening again. The ISM Code strives to enhance safety procedures and avoid future accidents by mandating the reporting of near misses and occurrences (Georgoulis & Nikitakos, 2019). Although the ISM Code is crucial, there have been difficulties in effectively implementing it, with discrepancies observed in the comprehension of its application between managers and seafarers (Kimera & Nangolo, 2019).

The ISM Code has played a crucial role in promoting a methodical approach to managing occupational health and safety (OHS) at sea (Devereux et al., 2020). Nevertheless, there have been objections regarding the bureaucratic culture that the ISM Code may have fostered in the maritime industry. However, the ISM Code continues to be a fundamental regulation for safety management systems on ships and is crucial in safeguarding the welfare of seafarers and preventing maritime accidents (Størkersen et al., 2016).

International Ship and Port Facility Security (ISPS) Code

The International Ship and Port Facility Security (ISPS) Code is a crucial international law implemented by the International Maritime Organisation (IMO) to bolster security measures for ships and port facilities worldwide (Loh & Thai, 2015). This code was created in response to perceived risks that arose after the September 11, 2001, attacks on the United States. The primary objective of the ISPS Code is to enhance security by establishing criteria and structures for assessing risks and implementing suitable security measures (Eski, 2017). The ISPS Code mandates the adoption of security measures for ships and port infrastructure to reduce security risks and improve safety (Loh & Thai, 2015). The introduction of this measure in 2004 aimed to tackle worldwide piracy and terrorism risks, requiring complete adherence from participating nations. The code implements proactive efforts to enhance security levels within the maritime transport sector and comprises a wide array of procedures to protect ships and port facilities (Eski, 2017).

Moreover, the introduction of the ISPS Code has led to an increase in administrative tasks and a slowdown in port operations. Although there are difficulties in achieving the best possible execution, such as problems with operator and regulator preparedness, the ISPS Code continues to be essential for guaranteeing the safety of ships and port infrastructure. Ultimately, the ISPS Code is crucial in bolstering security protocols for ships and port facilities on a worldwide scale, with the goal of mitigating security risks and guaranteeing the safety of shipping activities (Koliousis et al., 2020).

Maritime Safety

Maritime safety encompasses the measures and efforts undertaken to ensure the protection of human life, property, and the environment in the maritime industry (Praetorius and Lützhöft, 2011). The concept encompasses various components, such as measures to prevent accidents, strategies to mitigate risks, and adherence to global regulations and benchmarks. Maritime safety is of utmost importance in the realm of global commerce and trade due to various compelling

factors. The shipping industry plays a crucial role in global commerce and trade by facilitating the majority of international trade through maritime transit (Formela et al., 2019).

Ensuring maritime safety is essential for supporting the continuous transportation of goods and commodities globally, since any disruption or accident in the maritime sector can have significant economic consequences (Jiang et al., 2020). Maritime accidents can cause interruptions to the transfer of goods, damage to cargo, and financial losses for businesses involved in international trade. By prioritising maritime safety, the industry can minimise the probability of hazards and disruptions, therefore facilitating seamless and reliable global trade (Gurning and Cahoon, 2011).

Additionally, it is of utmost importance to prioritise maritime safety in order to protect human lives and prevent accidents at sea (Dominguez-Péry et al., 2021). The shipping industry encompasses several activities such as shipping, fishing, offshore operations, and cruise tourism. These activities provide potential risks and hazards to individuals (Kim et al., 2022). In order to decrease the occurrence of accidents and protect the lives of crew members, passengers, and individuals involved in maritime activities, it is necessary for the industry to implement efficient safety measures. These measures should include thorough training, routine equipment maintenance, and strict compliance with safety protocols. Considering the potential consequences of maritime accidents, including loss of life, injuries, and environmental pollution, it is imperative to give priority to this issue (Fenstad et al., 2016).

Furthermore, the conservation of the marine ecosystem is closely linked to the upholding of maritime security. The maritime industry exerts a significant impact on the marine environment, and the implementation of safety measures can successfully minimise or decrease environmental pollution and damage. Key components of maritime safety that promote environmental sustainability encompass the effective handling and transportation of hazardous materials, the prevention of oil spills, and the reduction of ship emissions. By prioritising maritime safety, the industry can minimise its environmental footprint and contribute to the preservation of marine ecosystems (Dupont et al., 2020).

In order to maintain the reputation and trustworthiness of the maritime industry, it is essential to give utmost importance to maritime safety. The sector operates within a global framework, and incidents of accidents or safety violations can have significant consequences on its reputation and public perception (Praetorius and Lützhöft, 2011). By prioritising safety and adhering to international norms and standards, the sector can demonstrate its commitment to responsible and sustainable operations. By enhancing its reputation, the

organisation may establish confidence among stakeholders, including customers, investors, and regulatory authorities (Fenstad et al., 2016).

Crew Wellbeing

Crew wellbeing refers to the whole physical, mental, and emotional health and satisfaction of individuals working in a specific industry or profession, such as the maritime industry (Sackey et al., 2022). The concept encompasses various aspects, such as physical health, mental well-being, balance between work and personal life, satisfaction with one's job, and social support (Attwood et al., 2018). The crew's wellbeing is of utmost importance since it directly influences their performance, productivity, and safety, as well as the overall profitability and sustainability of the industry or organisation they work for (Pike et al., 2021; Şenbursa, 2024).

The importance of crew wellbeing lies in its impact on the performance and efficiency of the crew members. Maximising the physical and mental well-being of crew members improves their capacity to fulfil their duties with effectiveness and efficiency, leading to improved operational outcomes (Sackey et al., 2022). In the shipping industry, crew personnel who are adequately rested, in optimal physical shape, and mentally alert are better equipped to handle the demands and challenges of their profession, including long working hours, physically demanding tasks, and emergency situations (Pike et al., 2021). On the other hand, crew members who are fatigued, anxious, or experiencing mental health issues are more prone to committing errors, experiencing accidents, and having reduced productivity (Sackey et al., 2022).

Furthermore, ensuring the crew's well-being is crucial for safeguarding the safety and security of both the crew members themselves and the individuals, cargo, and environment they are responsible for. Having good physical and mental health is crucial for crew members in the maritime industry. It enables them to efficiently handle emergency situations, follow safety protocols, and make wise decisions to prevent accidents and minimise risks (Sackey et al., 2022; Sackey et al., 2021). On the other hand, crew members who are experiencing physical or mental health issues are more susceptible to accidents, injuries, or making bad decisions. This can have serious consequences for both the crew, the vessel, and the marine ecology (Sackey et al., 2021).

Moreover, the welfare of the crew is paramount when contemplating ethical and social obligations. Employers have a duty to ensure the wellbeing of their workers and should prioritise their well-being to create fair and humane working conditions (Progoulaki and Theotokas, 2016). This encompasses the promotion of healthcare accessibility, the promotion of a balanced relationship between

work and personal life, addressing issues of harassment and discrimination, and fostering a work environment that is supportive and inclusive (Pike et al., 2021; Progoulaki and Theotokas, 2016). Organisations can demonstrate their commitment to employee well-being and cultivate a positive and long-lasting work environment by prioritising crew wellbeing (Pike et al., 2021).

The crew's wellbeing encompasses the holistic state of their physical, mental, and emotional health and satisfaction as individuals employed in a specific area or profession. The importance of crew management stems from its direct impact on the performance, efficiency, safety, and job satisfaction of crew members, as well as the overall prosperity and longevity of the industry or organisation they work for. Highlighting the significance of crew welfare is crucial for attaining optimal performance, upholding safety, and improving job satisfaction. Additionally, it plays a crucial role in the recruitment and retention of highly skilled crew members. Employers are morally and socially obligated to establish a work environment that is helpful, inclusive, and promotes the well-being of their employees.

Materials and Method

Research Approach

The research process adhered to the phenomenological research design. The phenomenological technique seeks to reveal the unique subjective viewpoints of knowledgeable individuals regarding their experiences, observed events, and observations throughout their professional lives, as seen from the researcher's perspective (Bloor and Wood, 2006: 128). The interviews were performed using the phenomenological research approach to analyse and explain the phenomena that were happening and developing around the individual being interviewed and their surroundings (Sığrı, 2018: 186).

Researchers can analyse individuals' thoughts, emotions, perceptions, and reality pertaining to a given topic by conducting interviews to gather oral information. The primary objective of the interview approach is to get data of exceptional quality regarding the research subject (Sığrı, 2018: 237). Semi-structured interviews are highly advantageous in maritime research because of their adaptability and versatility. These interviews facilitate the development of a framework that is in line with the objectives of the study and the researcher's perspective, permitting a thorough investigation of the subject matter. Semi-structured interviews have played a crucial role in maritime research by obtaining intricate information that may be overlooked by alternative approaches like surveys. This is especially true when investigating experiences and attitudes (Lin et al., 2021).

The interview method's validity is guaranteed by conducting pilot interviews with subject matter experts. It is important to follow a sequential process when conducting research, which includes procedures such as establishing the study framework, designing the data collection tool, preparing the interview guide, and asking participants relevant questions. Once the interviews have been performed and transcribed, the material is subjected to qualitative content analysis.

Data Collection and Sampling

The data was collected via online, structured interviews. The data collection instrument consisted of questions based on the existing literature on crew welfare and safety concepts. In order to mitigate concerns regarding reliability, the interview form underwent a thorough analysis by five academics from different institutions, including a professor and an associate professor from Dokuz Eylul University, an assistant professor from Bursa Technical University, an assistant professor from Bandırma Onyedi Eylul University, and finally an assistant professor from Mersin University. This cohort of scholars investigated the extent to which the inquiries were sufficiently broad to gather pertinent and focused data. In order to assess the accuracy of the data collection instrument, the interview form was given to two authorised individuals employed in the human resources departments of ship-owner firms. We conducted the interviews again a week later to check for consistent results. The uniformity of the responses demonstrated the essential reliability of the data collection form.

The purposeful (purposive) sampling method is frequently employed in qualitative research to locate and choose samples that possess extensive knowledge about the relevant phenomenon in order to effectively utilise limited resources. Criteria such as experience, competence, knowledge, willingness, and eligibility for participation are essential in intentional sampling (Palinkas et al., 2015: 534). The research sample for our study consisted of 15 HR executives and 30 ship officers from 15 different ship-owning companies. These individuals were picked via purposive sampling, taking into account their active involvement, competence, and dominance in the sector. Therefore, the ultimate sample consists of 45 professionals from 15 distinct organisations in the Turkish shipping industry. The chosen organisations possess highly developed human resources (HR) departments and assert that they actively execute crew wellbeing initiatives.

We gathered data from January to March 2024. We primarily conducted the research via remote internet means. The duration of the interviews averaged 55 minutes. The participants' privacy concerns prevented the tape recording of the interviews. Hence, the interviewers transcribed the participants' responses word for word.

Analysis Process

We have employed an inductive paradigm for the comprehensive analysis procedure and coding. This methodology enables the conversion of participants' individual opinions and inclinations into outcomes, regardless of the researcher's perspective. The coding method followed Corbin and Strauss's (1990) coding paradigm. Adhering to this framework, the procedure commences with initial coding prior to consolidating axial codes. Next, we create categories through selective coding. We generated the initial codes during the coding procedure by reading the texts iteratively. The codes, derived from the utilisation of interview questions as overarching categories, were further organised into categories according to their interrelationships. In the following phase, we further interpreted the resulting categories using accessible language.

An analysis has been conducted on the role of ISM and ISPS codes in the safety and well-being of crew members. This analysis has considered two separate viewpoints and drawn conclusions and generalisations based on the commonalities observed between these perspectives. Initially, we collected the viewpoints from 30 ship officers who represented the crew. We then gathered opinions from 15 human resources executives of ship-owning firms. We undertook content analysis on the collected data, identifying codes within fundamental categories. The meanings conveyed by these codes were analysed according to the frequencies at which they appeared. The researchers identified the codes that appeared most frequently and analysed the significance that the participants gave to these elements.

Findings

Ship Officers' Perspective

Six fundamental themes have emerged from the perspectives of ship officers: safety measures, security measures, crew wellbeing, compliance and enforcement, organizational culture, and overall impact.

Safety Measures

The safety measures category assesses the efficiency and execution of safety policies and practices aboard ships. The requirements encompass training programmes that evaluate the calibre and applicability of safety training given to crew members, guaranteeing their readiness for unforeseen circumstances. The assessment also takes into account the accessibility and sufficiency of safety equipment on board, as it is essential for ensuring the safety of the crew during emergency situations. In addition, the efficacy of emergency response protocols and procedures is assessed to ascertain the crew's level of preparedness for addressing different emergencies. These criteria highlight the significance of taking proactive

safety measures and being prepared to ensure the safety of the crew during shipping operations.

Security Measures

The security measures category evaluates the efficacy of security protocols and practices implemented on ships to guarantee the well-being of crew members. One of the factors considered is access control, which assesses the adoption of measures to limit access to the ship only to authorised personnel. Surveillance systems are also evaluated to determine the efficacy of technology such as closed-circuit television (CCTV) cameras in surveillance and the identification of security risks. In addition, an assessment is conducted on the role and efficacy of security personnel in upholding security measures on board, encompassing their training and readiness to address security risks. These criteria highlight the significance of implementing strong security measures to safeguard crew members from security threats, such as terrorism and piracy.

Crew Wellbeing

The crew wellbeing category examines the influence of ISM and ISPS codes on the physical, mental, and emotional health of crew members through the perspectives of ship officers. The criteria encompass factors such as workload and tiredness, which evaluate the influence of workload and working hours on crew exhaustion. The category also takes into account mental health support, assessing the accessibility of services for conditions such as stress and anxiety. In addition, the category evaluates work-life balance by examining whether the codes encourage actions that foster a harmonious equilibrium between work and personal life. These criteria emphasise the significance of addressing elements that can influence the wellbeing of crew members, thereby fostering a healthier and more supportive atmosphere for them.

Compliance and Enforcement

The compliance and enforcement category assesses the conformity and implementation of ISM and ISPS codes. One of the criteria considered is regulatory compliance, which evaluates the degree to which ships and port infrastructure adhere to the requirements outlined in the regulations. The category also takes into account audits and inspections, assessing the frequency and efficacy of these procedures in guaranteeing compliance. In addition, the category evaluates the enforcement actions carried out against entities that do not comply, such as imposing fines or penalties. In summary, these criteria emphasise the significance of encouraging adherence to ISM and ISPS rules in order to enhance the safety and security of shipping operations.

Organisational Culture

The category of organisational culture investigates the impact of ISM and ISPS codes on the culture of shipping businesses and port facilities from the viewpoint of ship officers. One of the criteria considered is safety culture, which evaluates how the

codes contribute to the development of a proactive commitment to safety. The category also assesses security culture, examining the influence of the codes on increasing awareness of security concerns. In addition, the category evaluates the communication and reporting systems regarding safety and security, taking into account whether the codes provide effective and transparent communication channels. These criteria emphasise the significance of fostering a culture that prioritises safety and security within organisations in order to enhance safety and security outcomes.

Overall Impact

The overall impact category analyses the wider ramifications of ISM and ISPS codes on the safety, security, and wellbeing of the crew. This category evaluates the efficacy of the codes in enhancing safety, security, and well-being results for crew members, as well as the perceived influence of the codes on stakeholders. In addition, the category evaluates the difficulties and constraints related to the implementation of the regulations, including barriers to adherence and possible limitations of the codes themselves. In general, this category offers a thorough assessment of the consequences of ISM and ISPS codes, with the goal of evaluating their total influence on the safety, security, and welfare of the crew.

Ship officers believe that the ISM and ISPS regulations are crucial to improving the safety and wellbeing of the crew. The codes imposed for safety measures guarantee that crew members undergo sufficient training and have the proper safety equipment, hence improving their readiness for emergencies. Security procedures, such as access control and surveillance systems, safeguard crew members from security risks like terrorism and piracy. In addition, the guidelines prioritise crew wellbeing by taking into account factors such as workload, mental health support, and work-life balance, therefore promoting a healthy work environment. Compliance and enforcement procedures guarantee that ships and port facilities strictly follow safety and security standards, hence improving overall safety and security outcomes. The norms additionally impact the organisational culture by fostering a sense of safety and security consciousness, enhancing communication, and strengthening reporting systems. The ISM and ISPS codes play a crucial role in improving crew safety, security, and welfare. They achieve this by implementing thorough safety and security processes, fostering a safety and security-oriented mind-set, and enforcing adherence to rules.

Ultimately, the ISM and ISPS codes exert a significant influence on the safety and welfare of crew members within the shipping industry. By implementing safety and security procedures, these codes improve the crew's readiness for crises and safeguard them from security risks. In addition, the regulations prioritise crew wellbeing by fostering a healthier work atmosphere and guaranteeing the availability

of mental health assistance. Compliance and enforcement techniques bolster safety and security outcomes by guaranteeing conformity to regulations. The ISM and ISPS rules are essential for promoting a culture of safety and security in organisations, which ultimately enhances the overall safety, security, and wellbeing of crew members in the maritime industry.

HR Executives' Perspective

According to the information gathered from interviews with ship officers and HR executives, it seems that there is agreement on the basic aspects of the function of ISM and ISPS codes in ensuring the safety and wellbeing of the crew. Both groups recognised common underlying themes, including safety measures, security measures, crew wellbeing, compliance and enforcement, organisational culture, and overall impact. The alignment indicates a consensus between ship officers and HR executives regarding the fundamental elements of ISM and ISPS standards with respect to the safety and wellbeing of the crew.

Safety Measures

HR executives of ship-owning firms assert that safety measures encompass numerous criteria aimed at safeguarding the physical and mental health of crew members. Training programmes are crucial, with an emphasis on assessing the efficacy and sufficiency of safety training given to crew members. This involves evaluating the applicability of the training to real-world situations and ensuring that crew members are sufficiently equipped to handle emergencies. Furthermore, the presence and ease of access to safety equipment on the ship are crucial elements that directly influence the crew's capacity to promptly and efficiently handle emergency situations. The evaluation of emergency response protocols and procedures also assesses their performance, emphasising the significance of proactive measures in safeguarding the wellbeing of crew members during shipping operations. The criteria demonstrate the HR executives' focus on the significance of thorough safety procedures in safeguarding crew members and reducing hazards in the maritime setting.

Security Measures

HR executives consider security measures to be crucial in safeguarding crew members and vessels, demonstrating the company's dedication to preserving its assets and staff. Access control is an essential factor that emphasises the execution and enforcement of policies that limit entry to the ship only to authorised individuals. This involves assessing the efficacy of access control measures and ensuring that personnel adhere to these regulations. Surveillance systems are assessed to verify their effectiveness in monitoring and identifying security threats. Furthermore, the analysis takes into account the responsibilities and level of readiness of security staff

in executing security protocols and addressing security breaches. This includes evaluating their training and ability to successfully manage security risks. The company's commitment to developing strong security measures to protect assets and staff is emphasised by these criteria, showing the importance of security in their operations.

Crew Wellbeing

Shipping-owning firms prioritise the wellbeing of their crew members, as confirmed by HR executives. To achieve this, they have adopted a range of activities and policies to provide support. In order to effectively handle the amount of work and prevent exhaustion, they have implemented scheduling strategies that give importance to allowing enough time for rest between shifts, restricting the number of overtime hours, and ensuring regular breaks are taken during working hours. In addition, they provide training sessions on time management and stress reduction techniques to assist their staff in managing challenging workloads and achieving a harmonious work-life equilibrium. In terms of mental health support, they arrange workshops and seminars focused on increasing awareness of mental health, managing stress, and developing resilience. In addition, they offer access to confidential counselling services and employee assistance programmes (EAPs) to assist their crew members in resolving any mental health concerns they may encounter. In addition, they foster work-life equilibrium by providing adaptable work arrangements, such as telecommuting and flexible scheduling, and coordinating leisure events and wellness programmes to facilitate employee relaxation and rejuvenation outside of working hours. These initiatives demonstrate their dedication to safeguarding the physical, mental, and emotional welfare of their staff, and they consistently endeavour to enhance and broaden their assistance programmes to cater to their requirements.

Compliance and Enforcement

From the perspective of HR executives of ship-owning companies, the compliance and enforcement category focuses on ensuring strict adherence to the International Safety Management (ISM) and International Ship and Port Facility Security (ISPS) codes, as well as other pertinent regulations. This entails overseeing the execution of safety and security protocols, conducting routine audits and inspections, and swiftly rectifying any detected shortcomings. Shipping companies have the responsibility of providing their staff with the required training and assistance to adhere to the rules and regulations. Additionally, they may create and enforce policies and procedures to support their compliance efforts. In addition, companies are responsible for supervising the reporting and documentation obligations pertaining to safety and security. They guarantee the proper maintenance and presentation of all essential documents in compliance with the applicable

regulations. Activities specific to shipping firms may involve organising internal training sessions on regulatory compliance, collaborating with external auditors and regulatory authorities, and communicating with legal advisors regarding compliance issues. Shipping companies are essential in maintaining adherence to the ISM and ISPS rules, which in turn contribute to creating a safe and secure working environment for all crew members.

Organisational Culture

From the ship-owning companies' perspective, the organisational culture category is used to assess how the ISM and ISPS codes influence the overall culture and values of the enterprise. This involves evaluating the extent to which the codes affect the organisation's safety and security culture, as well as their influence on communication and reporting procedures. An essential factor is the incorporation of safety and security concepts into the company's purpose and vision statements, showcasing a strong dedication to these values at the highest echelons. Another factor to consider is the cultivation of a reporting culture that fosters employees' willingness to disclose safety and security concerns without any apprehension of retaliation. In addition, the category examines the impact of leadership on fostering a culture of safety and security, ensuring that top-level executives actively engage in safety and security activities. The organisational culture category evaluates the impact of the ISM and ISPS codes on the values, beliefs, and behaviours of the organisation. This creates a culture that places importance on safety, security, and adherence to regulatory standards.

Overall Impact

HR executives at ship-owning companies view the overall impact category as an evaluation of the wider consequences of the ISM and ISPS codes on the company's operations and performance. This involves assessing the efficacy of the codes in improving the company's safety and security protocols, as well as their influence on the wellbeing of the crew and the overall operational efficiency of the organisation. One factor to consider is the evaluation of the impact of the codes on the company's reputation and interactions with stakeholders, including clients, regulators, and the general public. Another issue to consider is the assessment of the codes' impact on operational efficiency and cost-effectiveness, taking into account variables such as decreased accidents, greater compliance, and optimised resource allocation. In addition, the category takes into account the company's ability to continue its operations over the long term, particularly its capacity to adjust to evolving regulatory requirements and industry trends. The overall impact category evaluates the extent to which the ISM and ISPS codes contribute to the company's strategic objectives and overall success, emphasising their influence on the company's reputation, performance, and sustainability.

HR executives in ship-owning companies consider the ISM and ISPS rules to be critical for ensuring crew safety and improving their general welfare. These codes guarantee the enforcement of stringent safety measures, which encompass thorough safety instruction, the provision of essential safety gear, and the construction of strong emergency response protocols. In addition, the guidelines enhance security measures by implementing strict access controls and surveillance systems in order to minimise security risks and safeguard crew members against potential dangers like terrorism and piracy. Ship-owning firms establish a work environment that places a high value on safety and security. This environment not only guarantees the physical protection of the crew but also cultivates a feeling of security and peace of mind among them.

Furthermore, the ISM and ISPS regulations have a crucial role in enhancing crew wellbeing by addressing multiple aspects that can influence their health and morale. Companies adhere to these guidelines by implementing strategies to successfully manage workload and exhaustion. They provide mental health assistance through counselling services and workshops, and they promote work-life balance through flexible work arrangements and leisure activities. These programmes demonstrate a dedication to promoting the overall well-being of crew members, acknowledging that a healthy and satisfied workforce is crucial for sustaining high levels of performance, engagement, and retention. From the viewpoint of HR executives, the ISM and ISPS standards serve as both regulatory mandates and drivers for establishing a work environment that is safe, secure, and supportive, with a primary focus on the well-being of crew members.

Discussion

The viewpoints of ship officers and HR executives offer a detailed comprehension of the influence of ISM and ISPS standards on crew safety and wellbeing, uncovering both commonalities and differences. Although both groups prioritise safety measures, such as training and equipment, their emphasis and interpretation vary. Ship officers frequently emphasise the pragmatic elements, such as the accessibility and efficacy of safety equipment and the efficiency of emergency response processes. On the other hand, HR executives typically have a more expansive perspective, seeing safety measures as a component of a full safety culture that encompasses training programmes, safety rules, and the organisation's dedication to safety. The divergence in emphasis is likely attributable to the distinct roles and duties of the two factions, with ship commanders primarily prioritising operational facets and HR executives concentrating on the broader safety strategy and culture.

Security measures also evoke different perspectives. Ship officers often prioritise physical security measures, such as access control and surveillance systems, based on their first-hand knowledge of ship security. On the other hand, HR executives may

adopt a more strategic perspective, incorporating security measures within a comprehensive risk management strategy that addresses both physical and cyber hazards. The discrepancy in viewpoint might be ascribed to the distinct priorities and competence of the two factions, with ship officers concentrating on immediate security issues and HR executives contemplating the wider organisational ramifications of security measures.

Ship officers and HR executives have different understandings of crew wellbeing. Ship officers often prioritise immediate factors such as workload and exhaustion, which are influenced by their day-to-day experiences on-board. On the other hand, HR executives take into account a broader array of elements, such as mental health assistance, maintaining a healthy work-life balance, and the overall effect of corporate policies on the well-being of employees. The disparity in viewpoint is likely a result of the distinct tasks and obligations of the two factions, with ship officers prioritising operational matters while HR executives concentrate on more extensive organisational matters.

Although ship officers and HR executives may have differing perspectives, they also have similar opinions regarding the importance of ISM and ISPS standards in enhancing crew safety and wellbeing. Both groups stress the significance of training programmes and safety equipment in guaranteeing crew safety, acknowledging the crucial role these aspects have in preparing crew members for emergency scenarios. Furthermore, both ship officers and HR executives see the significance of a robust safety culture inside the organisation, emphasising the necessity of well-defined safety policies, efficient communication channels, and a proactive approach to safety management. The similarities indicate a mutual comprehension of the fundamental principles that support efficient safety and well-being measures in the maritime sector. This forms a strong basis for cooperation between ship officers and HR executives in fostering a secure and supportive work environment for crew members.

Conclusion

The study examined the non-ignorable importance of ISM and ISPS rules in protecting the safety and wellbeing of crew members in the maritime industry. It provided significant perspectives from both ship officers and HR executives. Distinct viewpoints on safety management and organisational culture were revealed through a qualitative investigation. This study is significant because it thoroughly investigates how safety measures, security regulations, and organisational practices affect the well-being of crew members. Industry stakeholders may find its practical insights useful.

The study's key findings emphasised the importance of taking proactive safety measures, implementing strong security regulations, and fostering supportive

organisational cultures to ensure the safety and wellbeing of the crew. Ship officers and HR executives both stressed the significance of thorough training programmes, the availability of safety equipment, and efficient emergency response protocols. It is also determined that a robust safety culture and well-defined communication routes are crucial elements for fostering a secure and encouraging work environment. These findings enhance the current body of knowledge by presenting concrete proof of the real-life effects of ISM and ISPS rules on the safety and wellbeing of crew members. This study deepens the comprehension of safety management methods in the maritime industry.

The study recommends prioritising training and education programmes to further improve the preparedness of crew members in emergency scenarios. Furthermore, it is crucial to prioritise the promotion of a culture that emphasises safety and wellbeing inside organisations. This can be achieved by implementing explicit policies and establishing effective communication channels to support these endeavours. In addition, it is important for regulatory organisations and industry groups to work together in order to guarantee the uniform implementation of ISM and ISPS norms throughout the maritime industry. This will help promote a culture of adherence to regulations and responsibility.

To further investigate, it is advisable to examine the enduring efficacy of safety management techniques and organisational actions in enhancing crew safety and wellbeing. Furthermore, conducting comparison analyses across various maritime industries and geographic areas could yield significant knowledge regarding the cultural and contextual elements that impact safety management protocols. Furthermore, conducting an analysis of the influence of developing technology and digital solutions on safety and wellbeing in the maritime industry could present novel methods for improving crew welfare in the future. In summary, further investigation in this field is crucial for enhancing safety management protocols and fostering the wellbeing of crew members in the shipping industry.

References

Abdulla, A. (2021). Lag state jurisdiction of the Maldives: Protection and preservation of the marine environment from vessel source pollution. International Journal of Social Research and Innovation, 5(1), 67–118. https://doi.org/10.55712/ijsri.v5i1.30

Akyurek, E., & Bolat, P. (2021). Ranking port state control detention remarks: Professional judgement and spatial overview. European Transport Research Review, 13(1). https://doi.org/10.1186/s12544-021-00480-8

Bloor, M., & Wood, F. (2006). Keywords in Qualitative Methods: A vocabulary of research concepts. Sage. https://doi.org/10.4135/9781849209403

Chen, X., Tang, L., & Walters, D. (2016). Who is dominant? Occupational health and safety management in Chinese shipping. Journal of Industrial Relations, 59(1), 65–84. https://doi.org/10.1177/0022185616676231

Çetin, O., & Köseoğlu, M. (2020). A study on the classification of maritime security threat topics. International Journal of Environment and Geoinformatics, 7(3), 365–371. https://doi.org/10.30897/ijegeo.742336

Corbin, J., & Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. Qualitative Sociology, 13(1), 3–21.

Devereux, H., Wadsworth, E. J. K., & Bhattacharya, S. (2020). Workplace fiddles in the shipping industry. Employee Relations: The International Journal, 42(4), 933–948. https://doi.org/10.1108/ER-07-2019-0294

Dominguez-Péry, C., Vuddaraju, L., Corbett-Etchevers, I., & Tassabehji, R. (2021). Reducing maritime accidents in ships by tackling human error: A bibliometric review and research agenda. Journal of Shipping and Trade, 6(1). https://doi.org/10.1186/s41072-021-00098-y

Eski, Y. (2017). A fear of coercion and accountability? Security officers and the non-use of force. Policing and Society, 28(8), 985–998. https://doi.org/10.1080/10439463.2017.1340292

Fenstad, J., Dahl, Ø., & Kongsvik, T. (2016). Shipboard safety: Exploring organizational and regulatory factors. Maritime Policy & Management. https://doi.org/10.1080/03088839.2016.1154997

Formela, K., Neumann, T., & Weintrit, A. (2019). Overview of definitions of maritime safety, safety at sea, navigational safety, and safety in general. TransNav: The International Journal on Marine Navigation and Safety of Sea Transportation. https://doi.org/10.12716/1001.13.02.03

Georgoulis, G., & Nikitakos, N. (2019). The importance of reporting all the occurred near misses on board: The seafarers' perception. TransNav: The International Journal on Marine Navigation and Safety of Sea Transportation, 13(3), 657–662. https://doi.org/10.12716/1001.13.03.24 (Listed twice; deduped)

Gurning, S., & Cahoon, S. (2011). Analysis of multi-mitigation scenarios on maritime disruptions. Maritime Policy & Management, 38(3), 251–268. https://doi.org/10.1080/03088839.2011.572701

Jiang, M., Lu, J., Qu, Z., & Yang, Z. (2021). Safety evaluation of the ports along the maritime silk road. Maritime Policy & Management, 49(6), 797–819. https://doi.org/10.1080/03088839.2021.1903598

Karakalios, H., & Yang, Z. (2014). A risk appraisal system regarding the implementation of maritime regulations by a ship operator. Maritime Policy & Management, 42(4), 389–413. https://doi.org/10.1080/03088839.2013.873548

Karakasnaki, M., Vlachopoulos, P., Pantouvakis, A., & Bouranta, N. (2018). ISM Code implementation: An investigation of safety issues in the shipping industry. WMU Journal of Maritime Affairs, 17(3), 461–474. https://doi.org/10.1007/s13437-018-0153-4

Kim, D., Shen, L., Lee, J., Poh, B., Benson, S., & Cho, N. (2022). An empirical formula to assess ultimate strength of initially deflected plate: Part 1 – proposed general shape and application to longitudinal compression. Ocean Engineering, 252, 111151. https://doi.org/10.1016/j.oceaneng.2022.111151

Kimera, D., & Nangolo, F. (2019). Maintenance practices and parameters for marine mechanical systems: A review. Journal of Quality in Maintenance Engineering, 26(3), 459–488. https://doi.org/10.1108/JQME-03-2019-0026

Koliousis, I., He, Q., Wu, Q., & Sarpong, D. (2020). Using an integrated humanitarian supply chain ERP system to improve refugee flow management: A conceptual framework and validation. Production Planning & Control, 33(6–7), 676–691. https://doi.org/10.1080/09537287.2020.1834134

Loh, H. S., & Thai, V. V. (2015). Management of disruptions by seaports: Preliminary findings. Asia Pacific Journal of Marketing and Logistics, 27(1), 146–162. https://doi.org/10.1108/APJML-04-2014-0053

Lin, M. S., Potter, A. T., & Pettit, S. J. (2021). Relationship heterogeneity in Taiwanese maritime logistics service supply chains. Supply Chain Management: An International Journal, 26(3), 385–401. https://doi.org/10.1108/SCM-03-2019-0116

Moore, W., & Roberts, K. H. (1995). Safety management for the maritime industry: The international safety management code. International Oil Spill Conference Proceedings, (1), 305–310. https://doi.org/10.7901/2169-3358-1995-1-305

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. Administration and Policy in Mental

Health and Mental Health Services Research, 42(5), 533–544. https://doi.org/10.1007/s10488-013-0528-y

Papageorgiou, P., Dermatis, Z., Anastasiou, A., Liargovas, P., & Papadimitriou, S. (2023). Using a proposed risk computation procedure and bow-tie diagram as a method for maritime security assessment. Transportation Research Record, 2678(2), 318–339. https://doi.org/10.1177/03611981231173641

Pike, K., Wadsworth, E. J. K., Honebon, S., Broadhurst, E., Zhao, M., & Zhang, P. (2021). Gender in the maritime space: How can the experiences of women seafarers working in the UK shipping industry be improved? Journal of Navigation, 74(6), 1238–1251. https://doi.org/10.1017/S0373463321000473

Praetorius, G., & Lützhöft, M. (2011). "Safety is everywhere" – The constituents of maritime safety. Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 55(1), 1798–1802. https://doi.org/10.1177/1071181311551373

Progoulaki, M., & Theotokas, I. (2016). Managing culturally diverse maritime human resources as a shipping company's core competency. Maritime Policy & Management, 43(7), 860–873. https://doi.org/10.1080/03088839.2016.1173734

Ricardianto, P., Prastiama, R., Thamrin, M., Agusinta, L., Abdurachman, E., & Perwitasari, E. P. (2021). The ship's crew performance of Indonesian national shipping companies. International Journal of Research in Commerce and Management Studies, 3(3), 52–66. https://doi.org/10.38193/ijrcms.2021.3304

Sığrı, Ü. (2018). Nitel Araştırma Yöntemleri. Beta.

Şenbursa, N. (2024). Seafarers' wellbeing on board: Scoping review. Transactions on Maritime Science, 13(1). https://doi.org/10.7225/toms.v13.n01.w04

Størkersen, K. V., Antonsen, S., & Kongsvik, T. (2016). One size fits all? Safety management regulation of ship accidents and personal injuries. Journal of Risk Research, 20(9), 1154–1172. https://doi.org/10.1080/13669877.2016.1147487

Talley, W. (1999). Determinants of ship accident seaworthiness. International Journal of Maritime Economics, 1(2), 1–14. https://doi.org/10.1057/ijme.1999.9