13th World Conference on Design and Arts

On Art, Politics, and Life

WCDA-2025 organized by
the Cyprus Educational Sciences Association,
in collaboration with the Association of Art Educators
and hosted by Cappadocia University.

PROCEEDINGS BOOK

Cappadocia University, Nevşehir, Türkiye
September 25- 27, 2025, www.artsedu.org

Editors: Prof. Dr. Ayşe Çakır İlhan, Assoc. Prof. Dr. Ödül Işıtman

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13th World Conference on Design and Arts

On Art, Politics, and Life
PROCEEDINGS BOOK

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CAPPADOCIA UNIVERSITY
2025

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in partnership with the Art Educators Association (SEDER, Türkiye)
and hosted by Cappadocia University (Ürgüp /Nevşehir, Türkiye)
under the theme "ART, POLITICS, AND LIFE."

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EXHIBITION

The International juried exhibition with the theme "ABOUT LIFE..." was held by the Art Educators Association (SEDER) in Nevşehir, Cappadocia on 25- 26-27 September 2025, within the scope of the 13th World Conference of Art and Design (WCDA-2025).

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OPENING SPEECH

Prof. Dr. İlhan Öztürk
Cappadocia University,
Vice Rector
(September 25, 2025, at 09:30, Hall: J4)

Esteemed Presidents, Dear Academicians, Artists, Students, and Participants,

I respectfully greet you all on behalf of Cappadocia University and on my own behalf.

We are deeply honored to host the 13th World Congress of Art and Design. Today, distinguished scientists, artists, and designers from diverse cultures and disciplines have gathered here. This gathering is a platform for dialogue established through the universal language of art and design.

As we open the World Congress of Art and Design, I would like to commemorate our Founder, Alev Alatlı, with gratitude and respect. Alatlı was a contemporary thinker and also deeply interested in literature, music, and painting. In many of her writings, she emphasized the importance of originality in painting, the artist's ability to produce independently of market pressures, and the need for greater critical engagement. Art's commitment to social responsibility formed the cornerstones of her perspective. Art and design are among the most powerful forms of expression, reflecting not only aesthetic concerns but also the identity, cultural heritage, values, and future vision of societies. Global challenges we face today, such as the climate crisis, technological transformation, migration movements, and cultural diversity, transform art and design into not only creative but also responsible areas of action.

I believe that the papers to be discussed at this congress will strengthen interdisciplinary collaborations, offer new perspectives to researchers, and enrich intercultural interaction.

On behalf of our university, I would like to thank Prof. Dr. Hüseyin Uzunboylu, President of the World Educational Research Association/(TRNC), the Faculty of Architecture, Design, and Fine Arts, the congress chairs Prof. Dr. Müge Artar and Prof. Dr. Ayşe Çakır İlhan, the Art Educators Association, the scientific committee, the organizing committee, and all the stakeholders who contributed to the organization of this congress. Dear participants, as like Cappadocia University, we have made it our mission to carry our deep-rooted heritage into the future and to bring together the contemporary dimensions of art and design with the values of this land. The Fabrika campus you are on today, converted from our University's Tekel Factory, is a fine example of both preserving industrial heritage and revitalizing cultural heritage through education.

I hope this congress, set amidst Cappadocia's unique landscapes, will bring you new inspiration, new collaborations, and lasting friendships. I wish you all a productive and successful meeting.

It is our honor to have You here...

OPENING SPEECH

Prof. Dr. Ayşe Çakır İlhan
Cappadocia University,
Dean of the Faculty of
Architecture, Design and Fine Arts
(September 25, 2025, at 09:40, Hall: J4)

Distinguished participants, esteemed colleagues, dear students, and art lovers,

On behalf of the Cappadocia University Faculty of Architecture, Design and Fine Arts and the Art Educators Association, I greet you all with my warmest feelings. Welcome to the 13th World Art and Design Congress. Since 2012, as the Art Educators Association, except for the pandemic period, we have organized Art and Design Congresses every year in a different country and university in cooperation with the TRNC World Education Research Association.

Today, art and design education plays an important role in acquiring aesthetic and technical skills, as well as in fostering cultural sustainability, critical thinking, and creative problem-solving skills. UNESCO reports also show that art education strengthens individuals' democratic participation, cultural awareness, and social solidarity. We have therefore chosen the theme of the 13th World Art and Design Congress (WCDA-2025) as "Art, Politics and Life". By exploring the effects and role of art on social, political, and individual life, we wanted to share different perspectives and investigate the following topics:

Environmental Problems and Sustainability,
Natives and Migrants of the Digital Age,
City, Settlement, Housing, and Life,

Architecture, Environment, and Art Culture,

The Art Market, Economy, and its Place in the Global Market,
Art, Psychology, and Mental Health,
Art and Migration,
Political, Social, and Economic Links Between Art and Society, etc.

We also organized the juried "International SEDER 2025" exhibition with the theme "ABOUT LIFE…". You can see the exhibition in the J3 exhibition hall.

Today, this hall is filled with academics, artists, designers, and students from different cities around the world and in Turkey. Although we all have different thoughts, traditions, and cultural backgrounds, our common ground is our belief in art. Our vision is to constantly remind everyone of the fact that art is a universal force that transforms people and society. Because we know that art builds bridges, transcends boundaries, and produces hope and peace.

I would like to express my heartfelt gratitude to our university administration, which gave us this opportunity to prepare this congress, to the entire organizing team, to the supporting institutions, and to you academics who contributed with your presentations.

Vince Briffa, from the University of Malta,
Uğurcan Akyüz, from Mersin Toros University,
Deniz Sözen, from Birmingham University, London,
Hafize Keser, from Ankara University,

Bager Akbay, from Istanbul. I would like to thank our invited speakers who honored us with their participation in our congress. I would like to thank our Honorary President Hüseyin UZUNBOYLU, our former Dean of the Faculty of Humanities, Müge ARTAR, with whom I co-chaired the congress, the members of the congress organizing committee Ayşe OKVURAN, Candan TERWIEL, Ödül IŞITMAN, Ceren GÜNERÖZ, Ayşem YANAR and Şükran ÜNSER, and our research assistant Hacer Özyanıkoğlu (for her help in many tasks, from website design to poster design).

I would also like to thank the members of the International SEDER 2025 EXHIBITION ORGANIZING COMMITTEE, themed "ABOUT LIFE…": Candan TERWIEL, Ödül IŞITMAN, Özlem ALP, Nursel BAYKASOĞLU, Nurtaç ÇAKIR, Seda ÖZCAN ÖZDEN and Çağhan AĞCA. A special thank you also to our international selection committee of 11 members. I would also like to thank Büşra COŞGUN, who is in charge of the Congress secretariat. My thanks also go to Rabia Akçer, the faculty secretary. I extend my sincere thanks to the technical, administrative, and support staff who meticulously fulfilled all our requests. In closing, I wish us all an unforgettable congress filled with fruitful discussions, new knowledge, and friendships.

Sincerely…

OPENING SPEECH

Prof.Dr Müge Artar
Cappadocia University,
Dean of the Faculty of
Humanities and Social Sciences
(September 25, 2025, at 09:50, Hall: J4)

Distinguished guests, dear colleagues, artists, and students,

It is a great honor to welcome you to Cappadocia University for the 13th World Conference on Design and Arts.

This year's theme, "On Art, Politics, and Life," reminds us that art is inseparable from society.

This year is also very special for us: Cappadocia University is celebrating its 20th anniversary. With programs ranging from health sciences to social sciences, from arts and design to aviation, our university has grown into a dynamic and multifaceted institution. Our Psychology and Child Development departments, as well as research and practice centers such as the Healthy Living Center, the Psychology Laboratory, and the Arts and Design Center, demonstrate our commitment to innovation and interdisciplinary learning.

Situated in a region shaped by thousands of years of civilizations, Cappadocia University embraces this cultural heritage. We integrate the spirit of Cappadocia into our research, our teaching, and our vision of connecting tradition with innovation.

I warmly thank the organizing committee, our keynote speakers, and all participants joining us from across the world. Your presence enriches this gathering and makes it truly inspiring.

I wish you all a fruitful, creative, and inspiring conference.

Thank you.

13th WCDA THEME

Assoc. Prof. Dr.Ödül Işıtman
The Board Member of
Art Educators Association

Art, Politics and Life

The 13th World Conference on Design and Art (WCDA-2025), with the theme 'Art, Politics and Life', aims to question the power of the relationship between art, politics and life in today's world, where the motto of the post-World War-I era is 'Re-Life!

The congress will focus on the modernist understanding that glorifies the new and the postmodernist understanding that ends grand narratives; Lev Kreft's nation-building, autonomy and avant-garde models of the art-politics regime; modernism and modern aestheticism, which 20th-century avant-gardists criticized as disconnected from life; the art-political dilemma into which modernism fell; the avant-gardists' ideals of making a revolution; the Frankfurt School's blurring of the boundaries between art and politics; postmodernism's "anything goes" discourse; and much more. There are globalization and its consequences since the 1990s, cultural imperialism, the dethronement of the human being, the loss of truth, the digital world that is changing lives and fields of discussion. There are the values, interaction and communication networks of a society alienated by artificial intelligence, block chain, augmented reality, virtual reality, the Internet of Things, big data and much more.

Arthur Danto, who shook the boundaries between art and life, signaled a new beginning when he said that the 1960s were the end of art. In the 1990s, Gilles Deleuze responded to this view with the discourse that art is not creating or communicating, but resisting, and Francis Fukuyama with the thesis of the end of history; ten years later, Donald Kuspit expressed the claim that art was intertwined with politics and lost in life, and therefore the art of the end of art was contemporary art. In the same period, Ranciere furthered the debate by stating that art and politics are not two fixed and separate realities to be asked whether they are related to each other; art and politics are a way of sharing the sensible and depend on a certain regime of definition. Today, debates on whether art and politics are forces that push, pull, destroy, transform, or change each other continue in every field. However, many issues of digital culture that are changing society, such as the detachment from reality and the dominance of artificial intelligence, have been added to the debate.

The World Conference on Design and Art is an international event organized to bring together artists, thinkers, academics, or those who want to discuss the impact of art on social, political, and individual life and explore its role.

KEYNOTE

How does painting mean? Practice and meaning in painting: Insights from a personal perspective

Vince BRIFFA
Digital Arts, Faculty of Media & Knowledge Sciences,
University of Malta

Vince Briffa is a painter, multimedia artist, curator, and researcher. His cross-disciplinary and trans-mediatic work consists of painting, gallery and site-specific artwork, sculptural objects, video, and installations. He was awarded the prize 'Omaggio all'Arte ed all'Innovazione a Venezia 2019' at the 2019 Venice Art Biennale. In addition has been exhibited in numerous prestigious venues including the Malta Pavilion, Venice Art Biennale, 1999 and 2019; Pierides Museum, Cyprus; Palais des Nations, Switzerland; Museum of Modern Art, Liechtenstein; Casoria Museum, Naples; Villa Manin Contemporary Art, Italy; MAC, Argentina; Palais Liechtenstein, Austria; Museum of Fine Arts, Romania, Museum of Modern Art, Israel, and Malta International Contemporary Art Space MICAS. Briffa has curated exhibitions internationally including the NRW-Forum, Düsseldorf; the Münchner Künstlerhaus, Munich; Les Rencontres Arles; De Harmonie, Leeuwarden; and the Museum of Fine Arts, Valletta amongst many others.

Abstract

The paper examines the complex relationship between meaning-making, truth, and autonomy as process and product in Vince Briffa's painting practice. Drawing on phenomenological and hermeneutic approaches, it unpacks the notion that painting operates via a distinct dual ontology existing as both a material artefact and a channel for meaning that transcends its physical properties. It discusses how meaning is created from the dialogical encounter of artist, medium, viewer, and cultural context, and not only through established semiotic codes. The paper further challenges reductive notions that conflate a painting's meaning with either artistic intention or social construction, instead proposing that meaning emerges through embodied cognition in which physical engagement with painting material generates knowledge and significance that cannot be obtained through other means. This approach enables us to rethink creative autonomy not in isolation from social dynamics, but as a separate form of truth-making that acts via material resistance and transformation.

Good morning fellow colleagues, artists, designers, academics, and friends.

Thank you, Professor Ilhan, Professor Artar and the University of Cappadocia for inviting me to speak today. It is a great honour and privilege for me to be here.

In this address, I will attempt to tackle a much-debated issue that is central to our work as visual art practitioners and which has significant implications for today's artistic production: the question of meaning, specifically in relation to painting.

SLIDE 2. I have chosen to focus my talk on painting after coming full circle in my 45 years of practice, where I began as a figurative painter in my late teens and early 20s, gradually shifting to abstraction and pure abstract painting in my early thirties, then on to video and installation between my mid-thirties and mid-fifties, and finally returning to painting as my main output in the last ten years. Even though I was quite active as a video and installation artist, I always found time to return to painting, and in truth, I always consider myself a painter first, viewing videoart and installation through a painter's lens.

SLIDE 3 Another, more pressing reason why I would also like to focus on the practice of painting is that today, returning to my original vocation of painting, I am constrained to operate in a totally different world of production and dissemination than when I started in the late 70s; where the 'speed of the image' has become painting's central force (Virilio, 1977); where the online image of a painting is dominant and even further separated from its real-life viewing experience, and where a painting's (and by extension) an artist's success rests primarily on the image's persona and validation on social media. Today, we operate in an age defined by the instant transmission of digital content, where the image no longer waits to be encountered as it arrives unbidden, insistent and continuous, and where technological speed has reshaped the conditions under which painting exists as both a material practice and cultural object.

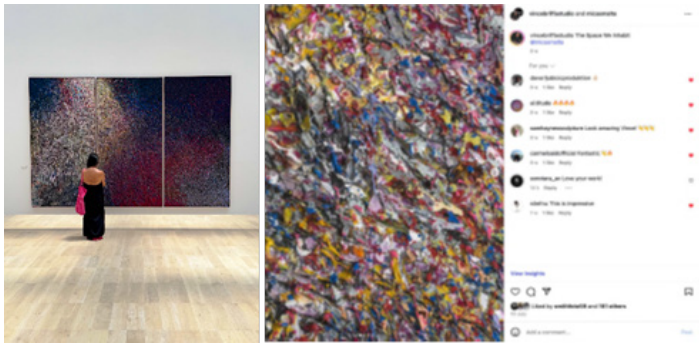


SLIDE 4 So I would like to pitch to you this question: what does paint mean? Not as an illustration of a concept, not as a decoration of an object, but as a dynamic entity that generates knowledge through its very materiality and the encounters it provokes. This question has driven my practice and research for decades. Today, I invite you to explore with me how painting operates as a distinct form of truth—one that resists easy translation into language but demands we take its material and philosophical dimensions seriously.

To frame this, I will briefly draw on phenomenological and hermeneutic approaches, as well as my own studio experience to argue that painting's meaning emerges from a dialogical encounter between the artist, the medium, the viewer, and culture. Painting's rich meaning does not emerge from a simple passive transmission between artist and canvas and transferred from canvas to viewer, but through an active, embodied process, as I will hope to explain.

At the outset, I would like to take a step back to highlight the values that we're missing through the way we primarily consume paintings in these times of image overload, as well as present you with some perhaps hidden insights into my practice in order to highlight the truths that I seek and the meaning that my painting conveys. But before I move further, I do have a confession to make. I need to come clean about the title of this keynote.

SLIDE 5 "How does painting mean?" isn't actually my creation, though I wish I could take credit for it. I borrowed it from the late artist, poet, and critic Jesse Murry, who expressed this idea beautifully in his posthumous book "Painting is a Supreme Fiction," published in 2021. Therefore, I kindly ask you to consider my function as a respectful academic "borrowing" – like how musicians' sample great tracks or chefs adapt classic recipes. The question "How does painting mean?" sets the tone for my talk and also lays the philosophical foundation for my own work. After all, sometimes the perfect words already exist, and recognizing that is half the battle. My intention today is not to try to give any definite answers to this complex question, but rather to attempt to unpack it by sharing some personal reflections on my own painting process and its meaning.



How does painting mean?

Jesse Murry with John Constable's paint brushes, Somerset, England, 1991. Photo by Richard Constable.

SLIDE 6 In the December 2021 issue of Bomb magazine, Sheryl Oppenheim writes about this rather elegantly presented, poetic question by Jesse Murry and observes that, "How does painting mean?", moves away from the more conventional what (does painting mean)? and instead, looks at the more compelling question of how (does painting mean)? Therefore, it does not ask whether painting has meaning or what painting means, but poses a more significant and important question: how does painting create meaning? This question challenges us to consider painting not merely as a process that leads to a form of image, but as a form of meaning-making that operates through its own distinct logic—a rationality that cannot be reduced to language, yet somehow communicates with profound eloquence.

1.The abstract and the real – space and place

SLIDE 7 In the same book, Jesse Murry (p. 143) makes an intriguing comment about his relationship to the abstract and how he derives or extracts a more concrete meaning. He writes:

> The abstract does not exist, but it is certainly as immanent: that is to say, the fictive abstract is as immanent in the mind of the poet, as the idea of God is immanent in the mind of the theologian. The poem is a struggle with the inaccessibility of the abstract. First, I make the effort; then I turn to the weather because that is not inaccessible and is not abstract. The weather as described is the weather that was about me when I wrote this. There is a constant reference from the abstract to the real, to and fro.

More than looking at the paradoxical relationship between the abstract and the tangible as two separate realities, this passage tries to chart a nebulous, however necessary continuity between the two extremes. Murry does this through a process of shifting to and fro between the opposing and often incongruous states of consciousness of the abstract and the real. Throughout this process, the deliberate transitioning opens a floodgate that emanates from and feeds back into Murry's sensibility, enabling the different states to coexist in a productive way and increasing the potential for a more nuanced meaning- making.

SLIDE 8 Through a critical integration of contemporary psychoanalytic and philosophical thinking, social scientist Jussi Saarinen further claims that this activity envelopes the painter in a unique affective situation where, through the process of painting, an experiential space is created wherein highly valued feelings are interactively enabled and supported, activating a unique and special sense of feeling, and enabling the transformation of the painter's whole sense of being (Saarinen, 2020).

SLIDE 9 Paul Crowther (2017) further suggests that painting is an embodied material practice – a deeply symbolic act that engages with human cognition, embodiment, and the spatial world. Painting, therefore, becomes an autographic practice that embodies gesture and materiality, where the work created transforms how we perceive space and time, and where particularly abstract painting engages with "transperceptual space," revealing aspects of the world that are not immediately visible but are fundamental to perception.

SLIDE 10 There is a similar process to what Murry and Saarinen describe and that supports Crowther's notion happening within my own practice (and possibly in that of most of the abstract artists), that is the transference of an abstract sensibility through

the pigments and tools of painting by my 'knowing' body. This process occurs in an objective, surrounding reality that wraps the work's journey, allowing it to be placed within awkward, but personally reassuring hybrid reality of the enveloping place which is the studio. When this mental and physical struggle gets too much for me, I must turn to the more immediate, tangible sensation of the studio environment and its many distractions as a haven and a more secure anchor to regulate the pace of the process, also acting as a different headspace to observe the progress of the work. (I will further elaborate my process towards the end of this talk).

2.Internal, external, and transmitted rhythms

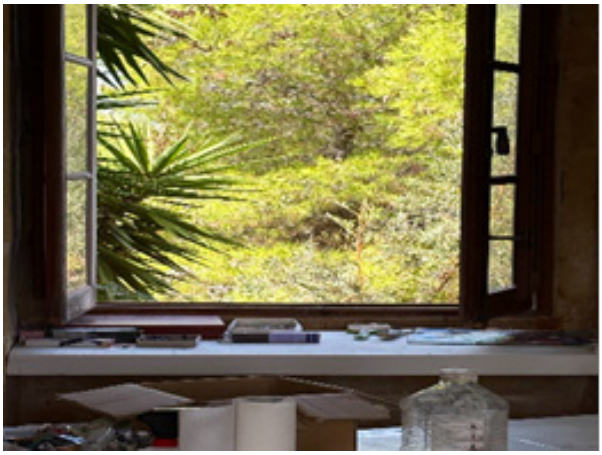
A further consideration in the complex process of abstract painting is the presence of involuntary yet structured internal rhythms in the artist's brain and body mediated by the handling of materials which, in many cases, are also felt by the viewer. Gregory Minissale (2021) contends that this rhythmic entanglement of brain, body and world resists centuries of philosophical and aesthetic order that has elevated the substance of mind over the substance of matter, and therefore, through contact with matter, the process of abstract painting in fact eliminates this 'substance dualism'.

SLIDE 11 One of the clearest testimonies to this is how Catalan artist Antoni Tàpies describes his painting, his process and its connections: organic elements, forms that suggest natural rhythms and the spontaneous movement of matter; a sense of landscape, the suggestion of the primordial unity of all things; generalized matter; affirmation of and esteem for the things of the earth meditation on a cosmic theme, reflections for contemplation of the earth, of the magma, of lava, of ash[In] Buddhist meditation, they also seek the support of certain kasinas that sometimes consist of earth placed in a frame, in a hole in a wall, in charred matter (Tàpies in Ishaghpour 2006, 117).

3.The romantic notion of the solitary artist in the studio

SLIDE 12 This may sound like quite a traditional, perhaps even a romantic notion of the practice of painting and indeed, since the early 1960s, the isolated practice of an artist working in the studio has been fiercely contested, with Italian curator and critic Germano Celant describing the opposing reactionary work to this philosophy of painting particularly by artists like Giulio Paolini as the "rejection of metaphysical incrustations […] an attempt to outlaw values (human, subhuman, and superhuman) which are external to art, in order to give due emphasis to elementary structures" (Celant, 1972, p. 5 – Giulio Paolini).

Painting has undergone a very tumultous history particularly in the recent past, to the extent of being declared dead several times due to the advances of photographic technology, the changes of conceptual and philosophical ideologies as well as the shifts in institutional critique. However, it has not only survived but thrived in the 21st century by reinventing itself conceptually while offering something digital media cannot, that is the irreplaceable physical presence and emotional immediacy of materials and the artist's hand. Rather than being displaced by new technologies, painting has absorbed their influences while maintaining its unique capacity for contemplation and direct material expression, making it more precious as a counterpoint to our increasingly digitalized ways of experiencing the world.


Tàpies in Ishaghpour, (2006, 117)


Germano Celant


Guilio Paolini

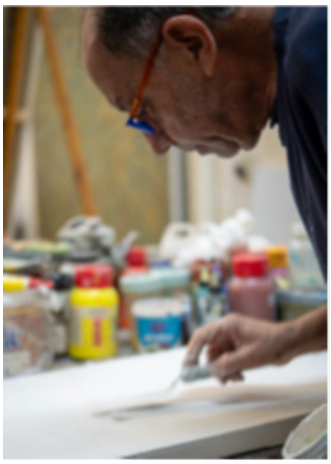
4.Painting as embodied practice

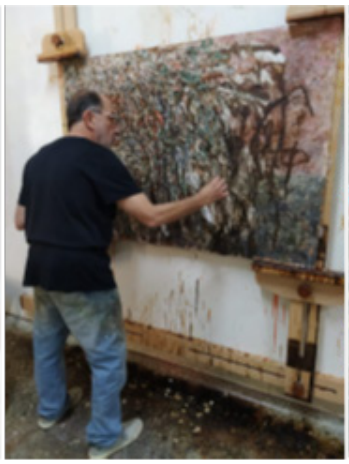
Therefore, the way we painters move in color, work through touch, and think in rhythm through the medium we use merits further investigation. As already mentioned, for too long, Western art and philosophy have clung to a Cartesian dualism: mind on one side, body, and matter on the other.

We inherited a legacy that treats thought as clean, abstract, and rational, but however disembodied. But painting is a stubborn activity, as it fuses both our body in its totality and materiality to drive the process of painting, with rhythm – both in us and beyond us – forming the bridge between us and the work.

SLIDE 13 In recent years, the cognitive sciences have joined artists in challenging this split. The theory of embodied cognition suggests that thinking is not confined to the brain. Rather, it arises through our bodies moving in the world (Varela, Thompson, & Rosch, 1991). Perception is action.

Cognition, in this view, is not just computational; it is gestural, situated, and material. Once more, I would like to refer to Gregory Minissale (2021) who builds on this idea, drawing attention to how rhythm connects perception, motor systems, and the plasticity of the mind. He shows that rhythm in art activates temporalities in the body—micro-rhythms of muscle anticipation, breath, and heartbeat amongst other motor and sensory functions. The painter does not just "see" rhythm; they entrain to it. They move with it.





5.Rhythm

SLIDE 14 What then is rhythm? Rhythm is not just pattern. It is the negotiation of difference across time. It lives in the interplay of repetition and interruption, pulse, and counter-pulse. In painting, rhythm can be found in brushstrokes, color transitions, spacing, and surface tension amongst other attributes.

In neuroscience, rhythmic stimuli engage sensorimotor systems, entrain neural oscillations, and modulate attention (Thaut, 2013). But rhythm also exceeds us. Minissale (2021) writes of rhythm as a "trans-subjective" phenomenon. It is not reducible to personal expression; it arises between body, environment, and material. From this perspective, rhythm becomes a form of intelligence. Not just human, but more- than-human. The canvas thinks back. The paint resists, drips, and stutters. We do not impose form upon matter – we negotiate with it.

6.Materiality

SLIDE 15 This brings us to materiality. As abstract painters, we do not work to represent "objects", that is any entity that exists, whether physical, fictional, abstract, or otherwise. We collaborate with them. Pigment, oil, linen, wood, graphite, solvents – all have their say. They are not inert carriers of expression, but active collaborators. New materialist thinkers such as Jane Bennett (2010) speak of "vibrant matter" – a world alive with tendencies and forces. In her book "Vibrant Matter: A Political Ecology of Things," Jane Bennett challenges the traditional subject/object divide by proposing that matter itself possesses a form of agency – what she calls "thing-power" – that actively participates in assemblages rather than passively awaiting human manipulation.

Bennett suggests that objects actively participate in events and can influence outcomes. For her, a plastic bottle or electrical grid does not just sit passively but actively shapes political and social realities through its material properties and effects. Applied to painting, this perspective reveals the canvas and paint as vibrant co-conspirators in the creative process: the canvas's weave and tension guide the brush's movement, while paint's viscosity, drying time, and chemical interactions with other pigments assert their own material demands and possibilities.

Rather than being mere tools subordinated to human artistic intention, these materials exhibit what Bennett might recognize as a distributed intelligence—the paint "knows" how to flow and blend, the canvas "responds" to pressure and moisture, creating unpredictable effects that no artist can fully control. This material agency transforms the act of painting into what Bennett would call an "assemblage" where human creativity and material vitality collaborate, suggesting that artistic meaning emerges not just from human consciousness but from the dynamic interplay between thinking bodies and thinking matter.

Minissale (2021) aligns with this view, suggesting that materials are not passive supports but "actants" in the event of art. The painting is not just a medium; it is a site of agency. His concept of materials as "actants" directly extends Bennett's theory of vibrant matter into the specific domain of artistic practice. By adopting Bruno Latour's term "actant" – which denotes any entity that acts or causes action within a network – Minissale reinforces Bennett's central argument that agency is distributed beyond human subjects to include non-human entities. This alignment is particularly powerful in the

art context because it reframes the traditional hierarchy where materials serve human creative vision; instead, Minissale positions materials as co-agents that actively shape the "event of art." This resonates with Bennett's critique of the nature/culture divide, where she argues that political and creative processes emerge from hybrid assemblages of human and non-human forces. Where Minissale builds on Bennett is in emphasizing the temporal dimension – art as "event" – which captures how material agency unfolds processual rather than as fixed properties.

Both theorists suggest that acknowledging material agencies is not merely philosophical but has practical implications: for Minissale, it transforms how we understand artistic collaboration, while for Bennett, it opens new possibilities for ecological politics by recognizing the participatory power of the material world. As painters, we often experience this firsthand. A brushstroke does not obey entirely. Viscosity, gravity, grain – all contribute to the quality of the mark. Embodied cognition helps us understand this: our hands adjust before we are conscious of doing so. There is feedback in the very act. The painting emerges not from intent alone, but from a rhythm of responsiveness.

7.The viewer's body

SLIDE 16 So one might ask "how does a work, which is the result of such a complex engagement of the artist's body with materials and their agency, resonate with a viewer's perception, and indeed her body?" In abstract painting, there is no image to "recognize." The viewer's body becomes the primary site of resonance.

SLIDE 17 When we stand before work, the painting does not offer a narrative. It offers kinesthetic invitation: a movement across surface, a rhythm of weight and lightness, an echo of physicality. (insert image of Stars triptych with Jade's comment) In a recent story on Instagram which I posted, a follower replied with a message which tried to sum up these sensations, when she wished that the work, being of large dimensions and therefore standing over and overpowering her, would swallow her in whole.

The viewer's comment echoed Edmund Burke's concept of the sublime, which is an overwhelming aesthetic encounter that temporarily dissolves the boundaries of self, while also suggesting that she was experiencing the painting not just visually but synaesthetically, almost physically.

The work's scale and color created an enveloping space she wanted to inhabit rather than simply view. Minissale (2021) refers to sensations such as Jade's to my work, discussing how abstract art exploits the gaps between perception and cognition, creating genuine

somatic experiences through visual stimuli. He further adds that the body responds to abstract art through several neurological and perceptual mechanisms, mentioning how viewers of abstract art often report feeling bodily responses—muscle tension, breath shifts, affective charges. This is not metaphor.

The nervous system participates in art. Abstract painting, far from being "pure" or "detached," is one of the most direct ways of engaging embodied cognition. The nervous system does not just observe or respond - it actively orchestrates the complex integration of motor control, spatial processing, creative ideation, and executive function that enables abstract painting to emerge as a physical and conceptual reality.

This somatic dimension of aesthetic response finds robust theoretical grounding in Phenomenology and Affect theory. Maurice Merleau-Ponty's (1945) embodied phenomenology suggests that our bodily experiences and capacities shape our perception and understanding of the world and that perception is a physical phenomenon, not a mental event. For Merleau-Ponty, the body is not merely a vessel for consciousness but the primary site through which we encounter and make sense of artworks, as we respond to visual stimuli through muscular tensions and postural adjustments before cognitive interpretation occurs.

Brian Massumi (2002) argues that "the strength or duration of an image's effect is not logically connected to the content in any straightforward way," suggesting that abstract art's power lies precisely in its capacity to trigger pre-cognitive bodily intensities that bypass narrative meaning. Critiquing static cultural theories, he emphasizes effect as a pre- conscious intensity-shaping experience, where autonomous reactions may manifest in the body in diverse ways, namely as changes in heartrate or breathing, and in muscle contractions. Massumi would identify this as the body's immediate registration of visual forces before they are organized into conscious emotions or interpretations. Affect therefore exists as pre-conscious bodily intensities—autonomous physiological responses that occur prior to emotion or cognitive interpretation.

8.Affect and the painter's body

SLIDE 18 In the context of painting, affect may trigger reactions in the viewer similar to Jade's physical experiencing of the work, but, to return back to the artist, this suggests that the artist's body also becomes an active site of affective encounter, where movement, sensation, and perception coalesce before conceptualization or narrative emerges.

The act of painting, then, is not merely a technical or cognitive process but a corporeal event shaped by rhythms, gestures, and intensities that precede and exceed conscious control. In this light, the painter's body is not just a tool guided by intention, but an affectively charged medium which in collusion with the "thing-power" of the materials become an active membrane that allows forces—such as line, color, texture and so on—to be translated into form.

For example, the artist's contraction of muscles, fluctuations in breathing, spasm of gesture or shifts in posture are not simply physiological phenomena but are affective responses to the unfolding visual field on the canvas through continuous negotiation with materiality. These responses are immediate registrations of visual and kinetic

forces, aligning with Massumi's assertion that it affects bypasses logical connection to content and instead resonates as intensity.

This aligns with a Deleuzian perspective where the body is understood as a site of becoming, constantly affected and affecting through sensation (Deleuze & Guattari, 1987). The painter, in the moment of creation, is immersed in this affective flux—not fully in control yet fully involved. The painter's consciousness is therefore not a detached observer, but an immanent participant in the affective field, experiencing moments of pre-reflective awareness—a zone where sensation is felt before it is known.

The act of painting is therefore a profoundly affective process emerging not only from thought, but from the visceral, embodied intensities that guide and shape the painter's engagement with and in reaction to the actively collaborating materials, registering and responding to the unfolding artwork in ways that elude representation or verbalization.

9.Back to the work

SLIDE 19 At this point, I would like to filter these varying, dense observations and thoughts back to my own work, through concentrating on a small selection of work starting with the triptych entitled "Stars have their moment, and then they die" (2025). Once again, I would like to do this by returning to Jesse Murry's writing, (p.21) in which I find great affinity particularly to the mutual transfiguration of light and paint in this work. During a difficult phase in his personal life, he re-engages with landscape painting in a new manner, describing the transformation from light to material as follows:

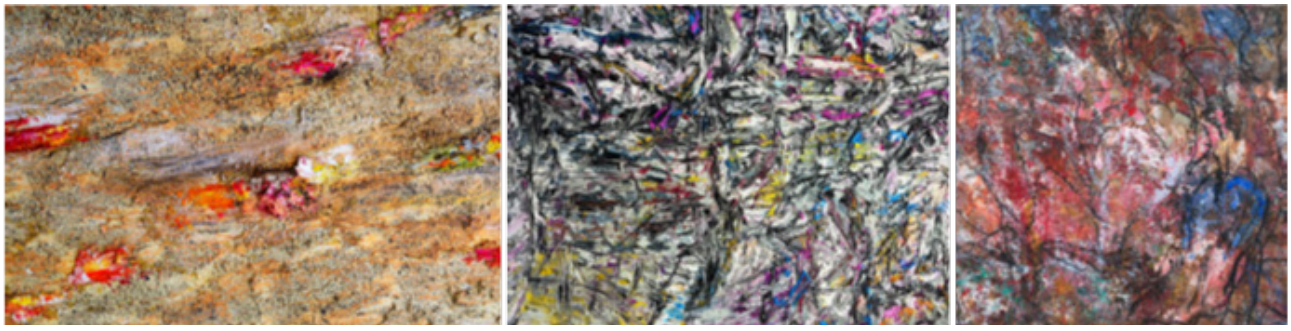
The light I came to love in Italy returned in memory as a need to think beyond color toward light as the true emanation of the Spirit. It would mean giving an essence to a material body like an alchemist, I would have to convert light into a material substance. I discover wax as a medium. I return to the methods of Old Masters; I work on linen with lead prepared grounds. I return to the love of place as the habitat of the Spirit and no longer locate myself within the limited context of modernism. I now embrace the entire Romantic landscape tradition from Giorgione to Rothko.

STARS HAVE THEIR MOMENT,
THEN THEY DIE, 2025,
synthetic polymer, polymer
and charcoal on wood panels,
3 panels of 245 x 120 cm each10.
The space I inhabit.

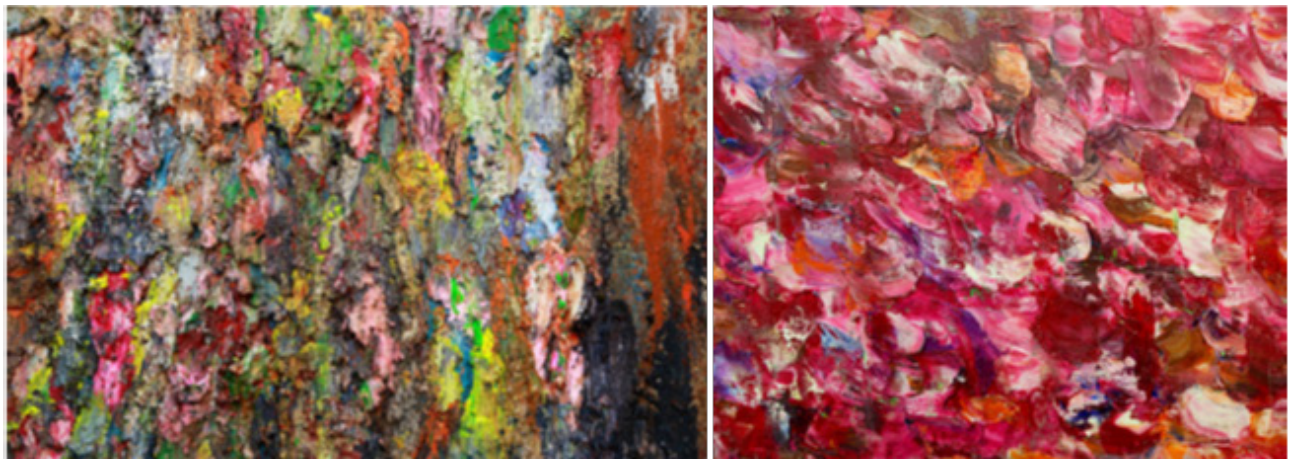
Edith Devaney

Exhibition Cataloge

SLIDE 20 In an interview I gave to curator Edith Devaney in early 2025, which outlines my thoughts as a response to her curatorial brief, and which was transcribed for the publication accompanying the exhibition "The Space We Inhabit" at the Malta International Contemporary Art Space (MICAS), (which incidentally closes this weekend after a very successful 3 month stretch, and where I have shown a large body of work from the last three years of production), I similarly describe this transference of light to paint and its filtering through my sight and my whole body, as being foundational to my approach to painting.



I describe the space that I inhabit during painting as a multidimensional space, serving as both a beginning and an end point, interacting with all senses and considering everything in between. It is one in which I connect with the medium, both physically and



intellectually, providing me with all of the possibilities imaginable in the way I engage with it. It is a holistic space that spans the entire production process and beyond, mashing together the diversities and dynamics of my studio; what I am reading at that moment and the music I am listening to; the realities of accessing the right frame of mind for the process, and also the material and chemical considerations involved in creating and using the media I work with. All these factors influence my mental, visual and somatic engagement with the work, ringfenced by the many reflections, elations, and doubts that somehow always carry me to a final outcome, irrespective of how successful that might be. I believe that the space of creation is a place in and of itself.

11.The media I work with

SLIDE 21 I work with a large variety of paintings and media, many times developing paintings and composites that react to my gesture in unique ways. In some ways, I do not make much of a distinction between the tangibility of the media I use and the 'painting space'. I inhabit while using it; they merge into one, becoming inextricably

linked. SLIDE 22 Personally, I am well aware of this, therefore I strive to be heightened by this vagueness and fluidity as much as possible keeping sharp in execution in order to optimize its potential. This vagueness is also purposefully extended to the point where deliberately, I blur the borders between the canons of drawing, painting, and sculpture, where I many times draw and incise in the thick wet paint. SLIDE 23 I believe what I am attempting to do is undermine any language around painting, challenging those we have historically considered through the medium itself, as well as continuously striving to discover fresh ways to interact with and deconstruct painting. SLIDE 24 I am extremely conscious of gesture in drawing and painting, questioning the relationship between the mark and my participation in its creation, and being aware of the tension and energy this relationship creates which I believe is obvious in the work.

SLIDE 25 At face value, the way I work can seem 'Impressionistic' in the sense that I mix the paints and apply them, refraining from mixing them on the canvas. I let them settle and then intervene in the work by putting in mid-tones or alternately complementary colors, at times drawing or incising patches of color with charcoal or alternately inserting or embedding other elements or varnishes in the paint layer. I gauge the vibrancy by looking at the paint marks from a distance. Through this way of working, I place myself in the viewer's shoes and let the viewing distance function as glue that holds the piece together and transmits the vibrancy of execution to the viewer. This process creates an active paint layer. Intervening in the paint layers also means overlaying paint to add depth, inserting mid- tones, letting some underlayers come through, clashing areas of dead paint with small flecks of brighter paint. Pointillists and Impressionists were my earliest inspirations through the way they understood the qualities of paint and the science of sight.

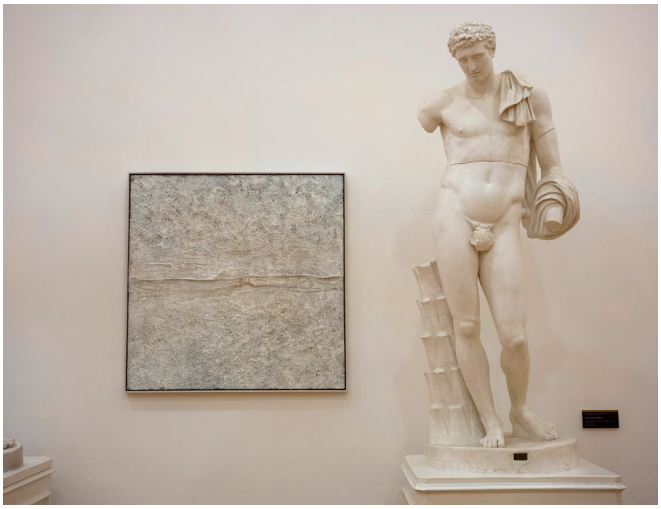
SLIDE 26 Although my paintings are abstract, I consider them in some ways to be quite figurative – as mentioned earlier, I started off as a photorealist, figurative painter, so in a way that has never left me. SLIDE 27 They represent my view of the world, with its biomorphic patterns and continual movement modified by light, creating a slowly shifting growth. SLIDE 28 However, my work is also none of these: it is paint. I am captivated by the strange dialogue between nature and materials. In actuality, the world as we see it is all interconnected – light to landscape, landscape to forms, forms to color – SLIDE 29 all I attempt to do is to recreate that sense of becoming, maintaining the connection while minimizing the direct relationship. I aim to keep the work as a continuous exploration through the vagueness and ambiguity of the ideals. SLIDE 30 Light, the biological essence of matter, and its mobility are hinted at; the substance is kept while all of the surrounding fat is removed.

12. The titles given to my work

SLIDE 31 Finally, I would like to share the process of naming the works. The titles I give to my works point the viewer towards a possible approach to their reading – it is usually a hint of something I might have read or music I have listened to that has the same sensibility as the work but not immediately related to it. The title anchors the work through a different sensibility. Titles come at the very end, and oddly enough, I spend a lot of time to arriving at these titles, researching them by trying to backtrack the many layered nodes that were instrumental in the work's creation. I play with a title to see how it resonates with me, what it means or how it is stated or written in other languages. The title extends the work's play while also opening new reading options.

SLIDE 32 (Explain slide**)**

GARDENS OF THE WIND, 2025, synthetic polymer and charcoal, on canvas, 150 x 100cm



ALBUS, 2020-2025, synthetic polymer, wax, pine needles, oils varnish on canvas, 120 x 120cm

SLIDE 33 In order to better understand my work, I will also write about it once I finish it. Oddly enough, writing about it helps me understand it better. It is exactly at that point of writing that I start to understand what I have really done, even though I would have previously thought it was rather odd for me to actually understand the work I had just created through the use of a different activity. Writing about the work is a form of translation. Given that my work often starts with linguistic reference, and seldom from a visual one, through writing, the circle is completed.

SLIDE 34 So, with these observations in mind, I return to my studio each day, hoping to gain a better understanding of how painting's meaning emerges not from my intentions alone, but from the ongoing negotiation between my body, the materials, and the rhythms we create together—a process that continues to teach me new things about what it means to make work in an age of limitless image possibilities.

Thank you...

THE SPACE WE INHABIT - MICAS, 2025

TESSARA, 2025, oil on canvas, 100 x 140cm

THE DISQUIET OF REMAINS - BETWEEN ASH AND DUST, 2025.
ash, dust, charcoal and synthetic polymer on wood panels,
2 panels of 245 x 120 cm each

NEPENTHOS, 2025,
mixed media and oil on canvas, 100 x 120 cm

NEPENTHOS (Series - The Islands of Ulysses)
Based on "nepenthe," a mythical drug mentioned in the Odyssey that banishes grief and painful memories. Helen uses nepenthe to help guests forget their sorrows, making it thematically linked to the lotus-eaters' blissful oblivion.

OUTLAND, Malta Pavilion, Venice Biennale, 2019

KEYNOTE

‘Whose heritage?’: multilingualism and the use of digital technologies as decolonial methodologies in practice-based research

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Deniz Sözen is a visual artist and researcher of mixed Turkish-Austrian heritage and a lecturer in History of Art at the University of Birmingham. She specializes in contemporary art and decolonial methodologies in the context of globalization and diasporic art. Recent publications include contributions to the Routledge Companion to African Diaspora Art History (ed. Eddie Chambers), and to the Third Text Special Journal Issue ‘Polyphony: method, voice, archive’. In 2022 she was awarded an ACE grant to curate the multilingual digital archival exhibition Maker Unknown exploring gaps and blind spots in the history, categorization and provenance of non-European artefacts in the Camberwell ILEA collection. Her work has been presented in different contexts internationally.

Abstract
The proposed artist talk will explore the aspect of multilingualism and the use of digital technologies to challenge fixed notions of belonging and identity through practice-based research. The presentation will focus on the body of work created as part of my practice-based PhD (The Art of Un-belonging, 2019) and the curation of an online archival exhibition project mobilizing multilingual narratives to respond to ‘gaps’ and ‘silences’ in the Western museum (Maker Unknown, 2022). Responding to the conference theme ‘Art and Migration’, the paper will situate my work in the wider context of decolonial interventions, contemporary art and digital (archival) practice, touching on questions around digitized art and the museum, the environment and ecology as well as the meaning, function, and transformative power of art in different cultural contexts.

My talk 'Whose heritage?: multilingualism and the use of digital technologies as decolonial methodologies in practice-based research' will focus on the body of work created as part of my practice-based PhD The Art of Un-belonging (2019) and a recent curatorial project titled Maker Unknown (2022), an online archival exhibition project mobilizing multilingual narratives to respond to 'gaps' and 'silences' in the Western museum.[1] Responding to the conference theme 'Art and Migration', I will situate my work in the wider context of decolonial interventions, contemporary art and digital (archival) practice, touching on questions around digitized art and the museum, the environment and ecology as well as the meaning, function, and transformative power of art in different cultural contexts.

Drawing on my position as a mixed Turkish-Austrian diasporic artist, my thesis The Art of Un-belonging asked how artists can more critically confront the ways in which they are often categorized by regional, cultural, or ethnic identity—and how these identities are commodified within the turbo-capitalist machinery and marketing of difference of the contemporary art world.[2] Building on this inquiry, my research set out to develop artistic strategies that challenge fixed notions of identity and belonging. The thesis aimed to question the Western binary logic that underpins dominant frameworks—particularly the oppositional constructs of self and Other, and the perceived division between nature and culture. Following Borgdorff's definition of artistic research I regard creative practice as 'the subject, context, method, and outcome of the research.'[3] Practice-based research opens alternative ways of knowing—aural, visual, tactile, verbal, sensual, and embodied. Unlike the written word, art engages with the world through experiential and affective registers. It can move beyond the constraints of language by embracing non-verbal and pre-verbal forms of knowledge, generated through performative, audio-visual, spatial, and material practices.

Surya Namaz (2018)

Let me begin by introducing the experimental video Surya Namaz[4]. The video is a personal investigation of yoga and namaz, the Muslim prayer ritual, exploring the potential of transcultural performance, opacity, and multilingualism, to undo fixed notions of belonging. The main protagonists are my aunt, a devout Muslim woman who lives in Anatolia, Türkiye, and my New York-born Nigerian-Puerto-Rican yoga teacher Marisol who is currently based in Switzerland. The video explores the practices of yoga and namaz, the Muslim prayer ritual, through a personal and multilingual narrative, destabilizing fixed notions of belonging and identity through opacity and transcultural embodiment. Alongside the multilingual voice-over (English, German, Turkish, Arabic and Sanskrit), filmic and sonic techniques, such as superimposition and partial translation are used to articulate the complexities of multiple belongings in the 'diaspora space'.[5]

The work is conceived as video-installation and to be projected life-size onto a wall. The point of departure and inspiration for the video-performance Surya Namaz were memories inscribed on my own body: Images of babaanne, my paternal grandmother performing namaz, the Muslim prayer ritual, that had come to my mind, while I was practising yoga. Flashes of memory and feelings of confusion, belonging-not belonging, longing and dispersion that I have tried to re-create through filmic means. In addition to the main projection, interviews with the main protagonists are presented on two monitors with headphones to further contextualize the work. The short documentary-style interviews introduce the individual perspectives of the main protagonists and their personal approach towards the distinct practices of yoga and namaz, the Muslim prayer ritual.

Surya Namaz combines the vertical movement of affiliation or "root identity" – my return to Karapınar, where my father is from and engagement with namaz – with the horizontal or diagonal movement of the relation- or route-identity – in the sense of "reaching out to meet other roots" by practising yoga with Marisol.[6] According to my analysis in the thesis, it is "through putting the culturally distinct practices of yoga, namaz and Catholic church rituals into relation with each other" that "the video simultaneously hybridises these ritualistic practices and interconnects them in rhizomatic ways, challenging dualistic thinking and assumptions of a singular root, by promoting a philosophy of multiple belongings."[7] My multiple selves echo in diverse frequencies, oscillating between the local and the global, the vertical and the horizontal, between roots and routes. They refuse fixed belonging—neither this nor that, neither here nor there—but inhabit an elsewhere.

Searching for ways to decolonize and transcend dualistic thinking, initially my project of un-doing belonging had focused on the exploration of binary conceptions of self/other only in relation to ethnic and cultural differences. While I initially set out to explore the question of belonging primarily from a language-centred perspective, my artistic research exploring belonging in relation to ceramics and coffee, the materials and media I use in my second project Kahvehane Kongresspark (2016) and Trans Plantations (2018) instigated or rather demanded a different approach. Working with coffee and ceramics led to a major shift in my thinking: through my hands-on engagement with the material, I suddenly became aware of my interconnectedness with matter. This led to an unexpected and sudden change of direction in my research. In what follows I will briefly introduce these works and share how the direction of my research shifted through my practice of working with coffee and ceramics – taking the notion of belonging further, and beyond the human.

Kahvehane Kongresspark (2016)

Kahvehane Kongresspark was a commission for Vienna's Urban Art Festival Soho in Ottakring in 2016. Inspired by the Turkish coffeehouse tradition, we transformed the former milk hall in Kongresspark into a temporary kahvehane and ceramics installation for two weeks. Visitors were served organic, fair-trade Turkish-style coffee in one hundred unique cups and saucers I crafted from Kütahya ceramics. Using ceramic transfer (decal) techniques, I decorated them with fragments of colonial maps, reflecting coffee's global and colonial histories.

The café became a stage for an interactive, multilingual performance with bharatanatyam artist Shane Shambhu, tracing coffee's journey and migratory history from Ethiopia through the Ottoman Empire to Vienna and across the entire globe. The performance explored shifting attitudes to coffee in Europe —from 'Muslim drink' to 'the devil's drink'—and the legacies of colonialism and exploitation that persist in today's global coffee trade[8].

Through my hands-on engagement with clay. I became aware of the agency of matter, which led to a major shift in my thinking: the Turkish clay – the cups and saucers I had imported from Kütahya resisted European glazes. By importing these cups from Türkiye, I imported part of its soil to the United Kingdom. The "Turkish" clay particles resisted my attempts to seal them. Multiple attempts to glaze the cups with English, Italian or French glazes failed miserably. The manufacturer was reluctant to share the recipe for the glaze with me: he insisted that the glaze (recipe) was a regional secret - in the end,

I had to go to Türkiye myself, to purchase the original glaze as ready-mixed powder. Carrying seven kilos of white powder in my suitcase, I was lucky not to be stopped at the airport. In possession of the right (secret) mix of matter, upon my return I was able to glaze the cups and completed my project without further complications.

Through this process, I realized why the Turkish word for glaze, 'sır', also means 'secret'. Ceramics is all about experimentation and learning how materials interact with each other. It takes a lot of effort, and trial and error. No wonder that local craftsmen and women would not share their secret with me. This experience made me wonder if the real secret – the composition of the glaze – transcends human knowledge as 'the secret of the earth', the unique chemistry of the land itself. This realization made me question the anthropocentric focus of my research and made me broaden the scope of my discussion by opening and re-inscribing the concept of belonging and identity beyond the human to include what Rosi Braidotti has coined as 'earth others'.[9]

Trans Plantations (2018)

Out of this project grew another incarnation of my artistic exploration of coffee: the multi-part installation Trans Plantations (2018). It brings together unglazed Turkish coffee cups and saucers, a silent video loop of colonial maps projected onto them, and a heap of coffee beans cast in porcelain, murmuring in multiple languages. This is the voice of coffee – of the plant and the bean – speaking in the first person, in his or her respective mother tongue, evoking memories of the plantation his or her relation to the soil and climate (change), interactions with humans, observations about conditions of labor, trade, transportation and different culturally specific ways of production and consumption.

The voices—fictional narratives of coffee beans speaking in their mother tongues—were created with collaborators from diverse backgrounds. The soundscape, mostly unintelligible to monolingual English speakers, asserts what Martinican poet and philosopher Édouard Glissant calls the "right to opacity,"[10] challenging the dominance of English in contemporary art.

Significantly, all three artworks engage with language, translation, and multilingualism in distinct yet interconnected ways. Surya Namaz features a multilingual soundtrack that is only partially translated. The interactive performance element of Kahvehane Kongresspark is delivered in multiple languages, incorporating exaggerated accents and regional dialects to explore the migratory trajectory of coffee. Meanwhile, the scripts of the 'coffee stories' in the sound installation Trans Plantations are recorded in a diverse range of languages—including Amharic, Italian, Egyptian Arabic, Cypriot Greek, Turkish, Brazilian Portuguese, and Colombian Spanish—inviting multi-layered interpretation.[11]

Together with its key attributes, opacity and errantry, Édouard Glissant's poetics of Relation was central to my research and formed the guiding framework for The Art of Un-belonging.[12] As stated in my thesis, "fundamental to Glissant's conception of Relation is the respect for the irreducible difference of the Other."[13] Glissant's theory of Relation advances a conception of difference that resists the notion of universality and the Western tradition of binary thought. Integral to this framework is opacity, which counters transparency, assimilation, and the Western "project of knowledge"[14] by preserving the irreducibility of the Other, as something that cannot be absorbed into

sameness. As Glissant observes, "Relation is made up of all the differences in the world and that we shouldn't forget a single one of them, even the smallest."[15] In this web of Relation, every element is bound to every other, remaining infinitely interconnected[16].

Translation as one of the artforms which following Glissant inscribes the multiplicity of the world is key to my practice.[17] Through my research I want to argue that rendering the diversity (of languages and by extension difference) audible, visible and/or legible in contemporary (diasporic) art practice is key, if we want to generate a shift in the audiences' mono-cultural/lingual imaginary.

Maker Unknown (2022)

This brings me to a more recent curatorial project I am going to present today – the multilingual archival exhibition Maker Unknown. Realized in collaboration with storyteller-author Vayu Naidu and artist-researcher Mukul Patel, Maker Unknown proposes to reimagine the Camberwell (ILEA) collection of non-European artefacts, exploring 'archival silences', such as the lack of information regarding provenance and addressing the legacy of empire through object-based stories in English, and North- and South-Indic languages[18].

> "Stuffed textile patchwork elephant with embroidery to the body, made in Nepal. The maker is unknown" (T300I)
>
> "Ink and watercolor print. The print depicts Ravana – a Hindu demon. Ravana is shown seated with multiple arms and heads. The print was handmade in India." (W608A)
>
> "Hand carved wooden block for printing. The hand block has a fine geometric pattern with a border to the top and bottom. There is a handle to the reverse. There are 5 hollow tunnels running the length of the hand block. Possibly Indian. The maker is unknown." (W596)

These catalogue entries belong to a historic collection held by The Camberwell Inner London Education Authority, comprising non-European artefacts[19]. Established in 1951 through a collaboration between the Council of Industrial Design and the London County Council, the collection was designed with a pedagogical aim: "to teach children the principles of 'good design' through the study of objects and materials."[20]

As we examine these entries, a recurring theme emerges—the 'unknowability' of the maker. The unknown, unrecorded, or absent maker prompts critical questions about how these objects were acquired, who made them, and what their provenance history might reveal. If we consider the archive as a 'space of pure knowledge' then this absence exemplifies the imperial entanglement between power and knowledge embedded in archival practices.[21]

Why is there such a lack of information on these objects that were removed from their original contexts to be handled by school children in post-colonial Britain? What stories lie hidden in their making and their handling? And why were non-European artefacts consistently labelled as 'folk' art, while Western artefacts are presented as examples of 'modern' design?

Taking these questions as a point of departure, Maker Unknown aimed to explore gaps and blind spots in the collection history and in the modes of classification, and provenance of non-European objects through a digital archival exhibition. We explored how critical fabulation, multilingual storytelling, and orality—especially when activated in digital spaces—can serve as decolonial methodologies. These approaches allow us to creatively intervene in existing archives and collections, particularly those holding non-European objects shaped by imperial histories.

The project asks: to what extent can these objects—such as a textile elephant or saree fabric from India—be understood as "agents of diaspora," as John Peffer suggests?[22] How can we "view these objects, in their very materiality, as performing diaspora?"[23] And as I would add, how could they connect dispersed people with their cultural heritage?

Rather than attempting to fill gaps in historical knowledge, Maker Unknown embraces critical fabulation—a term coined by Saidiya Hartman—as a speculative and imaginative method of engaging with the archive.[24] It's not about reconstructing a definitive past, but about listening to what's been silenced, and imagining what might have been.

The selected objects—ranging from a stuffed textile patchwork elephant to an ink and watercolor print of Ravanna, to a decorative plaster tiger—are given voice through short fictional vignettes. These are written and narrated by Vayu Naidu, a London-based author of Indian origin, and translated into seven North and South Indic languages, allowing the stories to resonate across linguistic and cultural boundaries.

The following fable, conceived in response to the "stuffed textile patchwork elephant" or object "T300I", exemplifies this method: I am going to play it in English first, and then in Hindi:

> My name is Haathi, and I am also a saathi – friend and companion. When I was made there were a few Maharajas left. There were emperors who looked after me better than their wives and wrote poetry to me. Memorable as animal and now I am an object, haathi , as a toymaker's joy. With a hand embroidered mirror blanket and headdress in bright desert colors, haathi bridges the idea of transport as it is a carrier, an animal worshipped as Ganesha to remove obstacles particularly in travel, with its vegetarianism to bring peace. Between 1951-1976, elephants for makers' markets were ceremonial - at temples, or state occasions. To have a "mobile" haathi, both as a toy and as a memory of decorative embroidery from Rajasthan or Kutch filled the shops. Elephants in the south carried logs of wood from forests for building and participated in temple rituals. Makers were unknown, but the gaze of the one who bought me was of India's grandeur. This changed.
>
> In 1971 the film Haathi mere Saathi was the biggest Indian film box office hit with a south Indian director MA Thirumugam and Bombay star Rajesh Khanna telling the story of an orphan rescued by elephants. This haathi carries many associations of loyalty, livelihood, and majesty. Do popular events influence makers and collectors? (Vayu Naidu; fable for 'T300I')

To highlight the transcultural memory and diasporic agency of the objects, the fables have been recorded in English, Hindi, Bengali, Punjabi, Tamil, Urdu, Gujarati, and Malayalam. As mentioned earlier, I have been inspired by Glissant who compellingly asserts in Introduction à une Poétique du Divers, that multilingualism means to practice (or create) in the presence of (or with an awareness of) all the languages of the world.[25] In this way, Maker Unknown reimagines the archive as a living, multilingual, digital space—one where sound, storytelling, and speculative biography can bring objects to life and open up new pedagogical possibilities. It's an invitation to rethink how we engage with collections shaped by colonial legacies: how might we use digital tools, such as low-cost 3D scanning, virtual reality or soundscapes, to decenter dominant narratives and amplify marginalized voices?

Unlearning Western approaches to the museum

Cultural assets dispersed in (ethnographic) museum collections across the 'Global North' were never intended to be displayed behind glass vitrines in the imperial metropolis. "Transposed into an alien aesthetic system", to quote Gloria Anzaldua, these 'objects' were part of different communities, central to their cosmologies and ritualistic practices.[26] Stripped of their original context and knowledge about maker and function, cultural assets were reduced to objects for contemplation in the Western museum. As Azoulay writes, this amounts to the "destruction of the politico-material world in which people had their distinct place – a memory which is still inscribed in these cultural assets."[27]

However, as Wayne Modest asserts, one should not limit their meaning to a past moment or ritualistic function, "but also engage with their histories, (…) and with the unequal power under which they moved."[28] Considering the colonial legacy of looting and the objectification of 'Non-European' cultural assets in Western museum collections in conjunction with the xenophobic rhetoric in the discourse around refugees and immigration, recent scholarship argues for ethnographic 'objects' in the museum to be considered as diasporic or 'migrants' in their own right.[29]

Ariella Aïsha Azoulay's film Un-Documented: Unlearning Imperial plunder draws a strong connection between the forced migration of objects and that of immigrants and asylum seekers who seek a new home in the countries of their former European colonizers, where their cultural assets are preserved in museums.[30] While the forced migration of objects is relatively well documented, often refugees and asylum seekers are lacking documents, and are criminalized and denied freedom of movement.

As Margareta von Oswald states, objects in ethnographic collections, regarded as 'foreign', 'Non-European' or 'other' have come to embody notions of difference and provoke questions about who and what can be defined as "Western" or "European".[31] As she writes, "it is therefore pertinent and urgent to ask: what does/can constitute a common "we"? Who is included and excluded from this common denominator, and on what bases? To what extent could it even be productive to think of objects as migrants in exile, and thus to think of "object diasporas", as the archaeologist Paul Basu suggests."[32] As Basu argues object diasporas create connections between communities, including museum professionals, different audiences and source communities.[33]

Considering the diasporic status of these objects in the museum, Bonaventure Ndikung refers to Glissant's definition of diaspora, as "the moment when one consents not to be a

single being and attempts to be many beings at the same time",[34] or what he has called "the passage from unity to multiplicity".[35] Through this lens, we could say that displaced objects in the Western museum embody a plurality of being, and as Ndikung and others have argued there may be potential for repair through their ability to mediate between different worlds and different communities.[36]

Challenging Western conceptions of art and the museum, I am interested in exploring ways to 'unlearn' Western approaches to the museum and museology rooted in the Eurocentric imaginary through the "act of self-assertion and self-creation" that Shu-mei Shih and Francoise Lionnet call for, taking an approach to decolonizing the museum that "requires a revolution in politics, thought, and language, all simultaneously, and is much more than a reaction against colonialism."[37]

In Vienna, a group of Mexican activists created what could be called a revolutionary decolonial intervention by inserting new audio data into the headsets of the Weltmuseum's collection. The Truth Audio Guide as the activists have called it, allowed visitors to the museum to hear the voice of Xokonoschtletl, an activist and descendent of the Aztecs who has been leading a long-term campaign for the repatriation of the Aztec feather crown to Mexico.[38]

This intervention created a lot of publicity and instigated a motion to the Austrian parliament to explore the options for safe transport and repatriation of the crown from Vienna to Mexico. As Khadija Carroll writes in an article reflecting on this intervention, "The movement to repatriate stolen objects and to decolonize the museum has made the repair of colonial wounds an ethical imperative."[39] Speaking of colonial wounds, it is crucial to consider that colonialism is not a thing of the past – in fact, its legacy is ongoing.

One of the risks of artistic interventions into museums – whether independent, such as the Truth Audio Guide, or commissioned – is that museums are quick to endorse these critiques and embed them into their programming – without implementing a structural change of the power dynamics in the museum. This has prompted scholars such as Françoise Vergès to argue for the impossibility of decolonizing the museum – calling to abolish the idea of the Western museum and to re-imagine a post-museum.[40]

As Marion Slitine has observed, an example of what a 'post-museum' could look like may be the Sahab Museum[41]– or Cloud Museum – featuring the collaborative work of 14 artists from Gaza – some of them have since been killed by Israeli bombardment. The project was instigated by the artist collective Hawaf, founded by French-Algerian visual artist Mohamed Bourouissa and three Gazan-born artists and architects who Bourouissa had met when he visited Gaza in 2021.[42] The key aims of their mission were to preserve Gaza's artistic, architectural, and archaeological heritage; with the hope to create a future museum in Gaza. The name of this virtual museum, Sahab refers to a "cloud" in Arabic – as in a cloud that would store data and preserve Palestinian cultural heritage. At the same time, the cloud could be seen as metaphor for an imaginary space of refuge and safety.[43]

The Sahab Museum, based on virtual reality technologies, was conceived around the idea of (re)building a community that would help to build a museum in Gaza – the Sahab Imaginary Museum.[44] In fact, one of the first pieces of this museum collection

was this large canvas, which was created by a group of young artists in Gaza in a collaborative workshop. In this painting depicting a large blue cloud, there are no walls or borders, and people can move freely. Each artist in the workshop was invited to select a work or object from their daily lives and donate it to the Sahab Museum, which then digitised the items. The scanned objects were then hidden within the framework of the painting using an augmented reality device.[45] The Sahab Museum was also showcased as part of SIGNAL, Mohamed Bourouissa's exhibition at the Palais du Tokyo in 2024.[46] As the collective states, "it is by building a community, and shaping the identity of the museum, that Sahab can be created. The more expansive the community, the broader and more inclusive the museum will be."[47]

The collective insists on the right to practice imagination in common, insisting on imagination as a tool for creation, resistance and emancipation – giving visibility to the plight of Gazan artists and Palestinian cultural heritage at risk of erasure. The project resonates with Shu-mei Shih and Francoise Lionnet's definition of decolonization as an "act of self-assertion and self-creation"[48], and as Slitine observed, it brings to mind the conception of the 'post-museum', articulated by Françoise Vergès[49] – transcending the rigid and vertical structures of the Universal museum, where objects are frozen in time and space. With its horizontal set-up and focus on community building, the Sahab Museum puts into practice notions of plurality, which are at the heart of Glissant's poetics of Relation, in which "each and every identity is extended through a relationship with the Other".[50]

FOOTNOTES

1. Deniz Sözen, The Art of Un-Belonging, PhD thesis, published by the University of Westminster and the British library's ETHOS e-thesis online service, https://doi.org/10.34737/qv976; Deniz Sözen (curator), Maker Unknown, www.makerunknown.org
2. See, for instance, Rasheed Araeen, 'The Success and Failure of the Black Arts Movement', in Shades of Black: Assembling Black Arts in 1980s Britain, ed. by David A. Bailey, Ian Baucom, and Sonia Boyce (Durham, NC: Duke University Press, in collaboration with Iniva and AAVAA, 2005), p. 29; Coco Fusco, 'Some Wrongs Aren't about Rights: On Recent Artistic Appropriation Controversies', Frieze, 190 (2017), 187–88; Nav Haq, 'Out of the Picture: Identity Politics Finally Transcending Visibility (Or: the Invisible and the Visible, Part Two)', in Don't You Know Who I Am? Art After Identity Politics, ed. by Anders Kreuger and Nav Haq (Antwerp: M HKA, 2014); Kobena Mercer, 'Ethnicity and Internationality: New British Art and Diaspora-based Blackness', Third Text 13.49 (1999), pp. 51–62.
3. Henk Borgdorff, The Conflict of the Faculties: Perspectives on Artistic Research and Academia (Leiden University Press, 2012), p. 147.
4. For my reflections on the work in regard to the 'body as the archive' see Deniz Sözen, 'Writing with Surya Namaz: the Body as a Living Archive of Diaspora', Third Text, Special Issue: Polyphony: Method, Voice, Archive, ed. by Khadija von Zinnenburg Carroll, Azadeh Sarjoughian and Stacey Kennedy, 38.1-2 (2024) https://doi.org/10.1080/09528822.2024.2327793.
5. Avtar Brah, Cartographies of Diaspora: Contesting Identities (London and New York: Routledge, 1996), p. 205.
6. Édouard Glissant, Introduction à une Poétique du Divers (Paris: Gallimard, 1996), p.23; my own translation.
7. Deniz Sözen, The Art of Un-Belonging, p. 31.

8. Kahvehane Kongresspark (2016), video-documentation, 8 min 2 s https://vimeo.com/175368263 [accessed 8 September 2025].
9. Rosi Braidotti, Transpositions: On Nomadic Ethics (Cambridge: Polity, 2006), p. 265.
10. Édouard Glissant, Poetics of Relation, trans. from the French by Betsy Wing (Ann Arbor: University of Michigan Press, 1997), p. 194.
11. Trans Plantations (2018), multilingual soundtrack, 20 min 54 s https://soundcloud.com/user-530978425/trans-plantations-version-june-2018 [accessed 7 September 2025].
12. Sözen, The Art of Un-Belonging.
13. Ibid., p.21.
14. Glissant, Poetics of Relation, p. 56.
15. Manthia Diawara, Conversation with Édouard Glissant aboard the RMS Queen Mary 2 (August 2009), trans. from the French by Christopher Winks, in The Global Contemporary and the Rise of New Art Worlds, edited by Hans Belting, Andrea Buddensieg and Peter Weibel (Cambridge, MA: MIT Press, 2013), pp. 35–40 (p.39).
16. Sözen, The Art of Un-Belonging.
17. Glissant, Introduction à une Poétique du Divers, p.45
18. See Sözen, Maker Unknown, www.makerunknown.org [accessed 8 December 2025]; For reflections on this project see Deniz Sözen and Vayu Naidu, 'Maker Unknown—Decolonial Methodologies for Digital Archival Practice' in Umwege Detours: Künstlerische Wissenspraktiken Als Dekoloniale Strategien. Artistic Knowledge Practices as Decolonial Strategies, edited by Amalia Barboza and Mariel Rodriguez (arthistoricum.net 2025), pp. 54-63, https://doi.org/10.11588/arthistoricum.1588.c22904
19. University of the Arts London, The Camberwell Inner London Education Authority (ILEA) Collection https://collections.arts.ac.uk/collections/camberwell_ilea [accessed 8 December 2025].
20. Ibid.
21. Paul J. Voss and Marta L. Werner, 'Toward a Poetics of the Archive: Introduction', Studies in the Literary Imagination 32.1 (Spring 1999), pp. i–viii.
22. John Peffer, 'Africa's Diaspora of Images' Third Text 19. 4 (July 2005), pp. 339-55.
23. Ibid., (p. 340).
24. Saidiya Hartman, 'Venus in Two Acts', Small Axe 12.2 (June 2008), pp. 1–14.
25. Glissant, Introduction à une Poétique du Divers, p.41.
26. Gloria Anzaldúa, Borderlands/La Frontera: The New Mestiza (San Francisco, 1987), p.91
27. Ariella Aïsha Azoulay, Potential History: Unlearning Imperialism (Verso, 2019).
28. Wayne Modest and others, 'Objects/Subjects in Exile: A Conversation between Wayne Modest, Bonaventure Soh Bejeng Ndikung, and Margareta von Oswald', L'Internationale Online, 9 March 2017, https://www.internationaleonline.org/research/decolonising_practices/89_objects_subjects_in_exile_a_conversation_between_wayne_modest_bonaventure_soh_bejeng_ndikung_and_margareta_von_oswald/ [accessed 8 December 2025].
29. Azoulay, Potential History; Modest and others,'Objects/Subjects in Exile'; Paul Basu, 'Object Diasporas, Resourcing Communities: Sierra Leonean Collections in the Global Museumscape', Museum Anthropology 34.1 (2011), pp. 28-42.
30. Ariella Aïsha Azoulay, Un-Documented – Unlearning Imperial Plunder, film https://www.youtube.com/watch?v=C1H4Pa0KPM8 [accessed 8 December 2025].
31. Modest, Ndikung, and von Oswald, 'Objects/Subjects in Exile'.
32. Ibid.
33. Basu, 'Object Diasporas, Resourcing Communities'.
34. Modest, Ndikung, and von Oswald, 'Objects/Subjects in Exile'.
35. Diawara, 'Conversation with Édouard Glissant', (p.36).
36. Modest, Ndikung, and von Oswald, 'Objects/Subjects in Exile'.

37. Françoise Lionnet and Shu-mei Shih, The Creolization of Theory (Durham, NC: Duke University Press, 2011), p. 17
38. Rainbow Lobster, Activist hacking in the Welt Museum in Vienna. Audio Guides of the Truth https://www.youtube.com/watch?v=wODwL0ajtyU
39. Khadija von Zinnenburg Carroll, 'Audio-Guide Polyphony: On Data Hacktivism in the Weltmuseum Wien', Texte zur Kunst (20 May 2022) https://www.textezurkunst.de/en/articles/khadija-von-zinnenburg-carrol-audio-guide-polyphony/ [accessed 8 December 2025].
40. Françoise Vergès, A Programme of Absolute Disorder: Decolonizing the Museum (Pluto Press, 2024)
41. 'Sahab Museum. A Place To Be', Sahab Museum (n.d.), https://sahabmuseum.community/workshops/ [8 December 2025].
42. Roxana Azimi, 'A Gazan Museum Takes Shape in the Clouds at Paris's Institut de Monde Arabe', Le Monde, 5 December 2023.
43. 'Sahab Museum. A Place To Be'
44. 'SAHAB MUSEUM: How to build a museum in Gaza 6 March 2025, 18:00', Index- The Swedish Contemporary Art Foundation, https://indexfoundation.se/talks-and-events/sahab-museum-how-to-build-a-museum-in-gaza [accessed 8 December 2025].
45. Azimi, 'A Gazan Museum Takes Shape'
46. Mohamed Bourouissa, SIGNAL, Palais de Tokyo, 16.02.2024 - 30.06.2024, https://palaisdetokyo.com/en/exposition/signal/, [accessed 8 December 2025].
47. Hawaf Collective, 'Sahab Imaginary Museum Statement', https://sahabmuseum.community/concept/, [accessed 8 December 2025].
48. Lionnet and Shih, The Creolization of Theory, p.17
49. Vergès, A Programme of Absolute Disorder
50. Glissant, Poetics of Relation, p. 11.

Bibliography

Anzaldúa, Gloria, Borderlands/La Frontera: The New Mestiza (San Francisco, 1987).

Araeen, Rasheed, 'The Success and Failure of the Black Arts Movement', in Shades of Black: Assembling Black Arts in 1980s Britain, ed. by David A. Bailey, Ian Baucom, and Sonia Boyce (Durham, NC: Duke University Press, in collaboration with Iniva and AAVAA, 2005).

Azimi, Roxana 'A Gazan Museum Takes Shape in the Clouds at Paris's Institut de Monde Arabe', Le Monde, 5 December 2023

Azoulay, Ariella Aïsha, Potential History: Unlearning Imperialism (London: Verso, 2019).

Azoulay, Ariella Aïsha, Un-Documented – Unlearning Imperial Plunder, film <https://www.youtube.com/watch?v=C1H4Pa0KPM8> [accessed 8 December 2025].

Bailey, David A., Ian Baucom, and Sonia Boyce (eds.), Shades of Black: Assembling Black Arts in 1980s Britain (Durham, NC: Duke University Press, in collaboration with Iniva and AAVAA, 2005).

Basu, Paul, 'Object Diasporas, Resourcing Communities: Sierra Leonean Collections in the Global Museumscape', Museum Anthropology, 34.1 (2011), pp. 28–42.

Borgdorff, Henk, The Conflict of the Faculties: Perspectives on Artistic Research and Academia (Leiden: Leiden University Press, 2012).

Brah, Avtar, Cartographies of Diaspora: Contesting Identities (London and New York: Routledge, 1996).

Braidotti, Rosi, Transpositions: On Nomadic Ethics (Cambridge: Polity, 2006).

Carroll, Khadija von Zinnenburg, 'Audio-Guide Polyphony: On Data Hacktivism in the Weltmuseum Wien', Texte zur Kunst (20.05.2022) <https://www.textezurkunst.de/en/articles/khadija-von-zinnenburg-carrol-audio-guide-polyphony/> [accessed 8.12.2025].

Diawara, Manthia, 'Conversation with Édouard Glissant aboard the RMS Queen Mary 2 (August 2009)', trans. by Christopher Winks, in The Global Contemporary and the Rise of New Art Worlds, ed. by Hans Belting, Andrea Buddensieg, and Peter Weibel (Cambridge, MA: MIT Press, 2013), pp. 35–40.

Fusco, Coco, 'Some Wrongs Aren't about Rights: On Recent Artistic Appropriation Controversies', Frieze, 190 (2017).

Glissant, Édouard, Introduction à une Poétique du Divers (Paris: Gallimard, 1996).

Glissant, Édouard, Poetics of Relation, trans. by Betsy Wing (Ann Arbor: University of Michigan Press, 1997).

Hawaf Collective, Sahab Museum https://sahabmuseum.community/workshops/ [accessed 8 December 2025].

Haq, Nav, 'Out of the Picture: Identity Politics Finally Transcending Visibility (Or: the Invisible and the Visible, Part Two)', in Don't You Know Who I Am? Art After Identity Politics, ed. by Anders Kreuger and Nav Haq (Antwerp: M HKA, 2014).

Hartman, Saidiya, 'Venus in Two Acts', Small Axe, 12.2 (June 2008), pp. 1–14.

Lionnet, Françoise, and Shu-mei Shih, The Creolization of Theory (Durham, NC: Duke University Press, 2011).

Mercer, Kobena, 'Ethnicity and Internationality: New British Art and Diaspora-based Blackness', Third Text, 13.49 (1999), pp. 51–62.

Modest, Wayne, Bonaventure Soh Bejeng Ndikung, and Margareta von Oswald, 'Objects/Subjects in Exile: A Conversation', L'Internationale Online, 9 March 2017 <https://www.internationaleonline.org/research/decolonising_practices/89_objects_subjects_in_exile_a_conversation_between_wayne_modest_bonaventure_soh_bejeng_ndikung_and_margareta_von_oswald/> [accessed 8.12. 2025].

Peffer, John, 'Africa's Diaspora of Images', Third Text, 19.4 (July 2005), pp. 339–55.

Rainbow Lobster, 'Activist Hacking in the Weltmuseum in Vienna'. Audio Guides of the Truth <https://www.youtube.com/watch?v=wODwL0ajtyU>.

Sözen, Deniz, The Art of Un-Belonging, PhD thesis (University of Westminster, 2019), available at https://doi.org/10.34737/qv976

Sözen, Deniz (curator), Maker Unknown, multilingual online archival exhibition <www.makerunknown.org> [accessed 8 December 2025].

Sözen, Deniz, 'Writing with Surya Namaz: the Body as a Living Archive of Diaspora', Third Text, Special Issue: Polyphony: Method, Voice, Archive, ed. by Khadija von Zinnenburg Carroll, Azadeh Sarjoughian and Stacey Kennedy, 38.1-2 (2024), pp. 28-41, https://doi.org/10.1080/09528822.2024.2327793

Sözen, Deniz, and Vayu Naidu, 'Maker Unknown—Decolonial Methodologies for Digital Archival Practice', in Umwege Detours: Künstlerische Wissenspraktiken Als Dekoloniale Strategien. Artistic Knowledge Practices As Decolonial Strategies, ed. by Amalia Barboza and Mariel Rodriguez (arthistoricum.net, 2025), pp. 54–63, <https://doi.org/10.11588/arthistoricum.1588.c22904>.

Vergès, Françoise, A Programme of Absolute Disorder: Decolonizing the Museum (London: Pluto Press, 2024).

Voss, Paul J., and Marta L. Werner, 'Toward a Poetics of the Archive: Introduction', Studies in the Literary Imagination 32.1 (Spring 1999).

University of the Arts London, The Camberwell Inner London Education Authority (ILEA) Collection<https://collections.arts.ac.uk/collections/camberwell_ilea> [accessed 8 December 2025].

KEYNOTE

Art's Constriction Areas in the Twentieth Century: Technology, Image, and Elitism

Bager AKBAY
Artıst, Desıgner, Educator

Storyteller of Robot Poet Deniz Yilmaz. Bager's artworks are exhibited in Ars Electronica, Todays Art, and Transmediale festivals. He is the co-author of Programming Scratch for Kids, co-founder of Iskele47 Studio and co-curator of Istanbul Maker Faire. Bager is currently a member of Amber Platform which hosts art and technology festivals since 2007 and Baska Bir Okul Mumkun NGO which works in the democratic school movement. Currently teaching in Todays Art History at Istanbul Mimar Sinan University and Marmara University and Programming for Puppeteers at Berlin Ernst Busch University and running an "Art Talk Show" at FLU TV.

Abstract
The distance between art and technology has grown in the twentieth century, and this rupture has led to art being pulled into different areas of pressure. Modernist tendencies have developed a cautious attitude towards engineering and mass production tools to an effort to protect the autonomy of art. During the same period, art has been gradually reduced to imagery; the intensive use of imagery in propaganda and advertising has increased the fear of art being instrumentalized. This process has paved the way for art to be pulled away from society and into an elite area, and over time, its content has weakened on a conceptual level. The defensive reflexes that art has developed against technology and imagery, their long-term effects, and examples of artists who are trying to overcome this constriction and establish new relationships with technology will be included.

KEYNOTE

A Subjective Look At Artificial Intelligence Through Art

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Abstract
Towards the end of the twentieth century, with the widespread use of computers, artists naturally wanted to benefit from this tool that provided them with the chance/opportunity to produce endless alternatives. However, it has been observed that the problems that mass production tools such as photography encountered in the beginning when they were looking for a place for themselves in the art world- originating from the traditionalist approach- continued with the same rejecting attitude in the use of computers as a tool. However, an increasing number of artists have seen technology not as a threat but as an opportunity, and artists who integrated technology into the creative process have produced works that were not possible before.

Art produced with the help of technological tools has produced solutions/movements that are different from or sometimes overlapping with the traditional understanding of art.

Those who see problems such as emotional depth and delicate touch as obstacles that technology will have difficulty in overcoming have tried to overcome these problems by incorporating traditional methods into their works. Thus; The works created with the help

of technology have become more impressive technically and have become a powerful result with the addition of human emotion and experience.

Today, new trends such as data-driven art, algorithmic aesthetics and interactive art can undoubtedly be considered as the footsteps of the art world of the future and will also form the basis for the answers to the following questions.

For example, will artificial intelligence be a power that completely changes art or will it continue to be a supporting tool for "human artists"? As every new technology has had different effects on art throughout history, will artificial intelligence make the creation process easier or will it be effective enough to change it radically?

In this study, in response to the questions above, Uğurcan Akyüz, as one of the pioneers of digital art in Türkiye since 1996 and a witness to this process, shares his experiences with examples from his art chronology and works, aiming to leave a note on history with a "subjective approach".

Keywords
Art, artificial intelligence, technology, digital art, contemporary art, traditional art, creativity, ethics, originality

INTRODUCTION:

Throughout human history, the meaningful transmission and reproduction of information between individuals and societies have persisted as a fundamental problem. This problem gained a new dimension with the invention of writing approximately three thousand years ago. Writing, by enabling its lasting permanence and sharing, has become one of the most important turning points in cultural development. However, recent problems such as standardization and the production of common meaning also continue. Different writing systems in different geographies have shown diversity, just as languages have; this diversity has limited the universal level (Benjamin, 2008).

The transformation and standardization of sounds, concepts, emotions, thoughts, and actions into writing through signs is still not entirely possible today, even with words. Especially in international markets established for economic reasons, the problem of "universal, common, or understandable language" remains relevant despite developments. This division arises not only from the sharing of individual experiences but also from the construction of social memory in an uncertain way.

The relationship between art and technology has similarly undergone a transformation throughout history. Throughout human history, art has gained new forms of expression alongside technological advancements; the effects of writing, printing, photography, and computers on art have led to various debates (Manovich, 2001; Paul, 2015; Shanken, 2009). This transformation continues to bring about new ways of thinking about the formation of systems.

The ability of artificial intelligence arose from the question "Can machines think?" posed by Alan Turing in the 1950s, and the term was introduced into terminology by John McCarthy in 1956 (Floridi, 2014). In Türkiye, Ord.Prof.Dr. Cahit Arf addressed this issue with his presentation titled "Can a Machine Think and How Can it Think?" at the Public Conferences held at Erzurum Atatürk University in 1958/59 (Figure:1). Today, the question of whether artificial intelligence is merely a tool or a collaborative creator is being debated (Gunkel, 2020). This discussion raises the question of how the artist strikes a balance between their subjective side and algorithmic production.

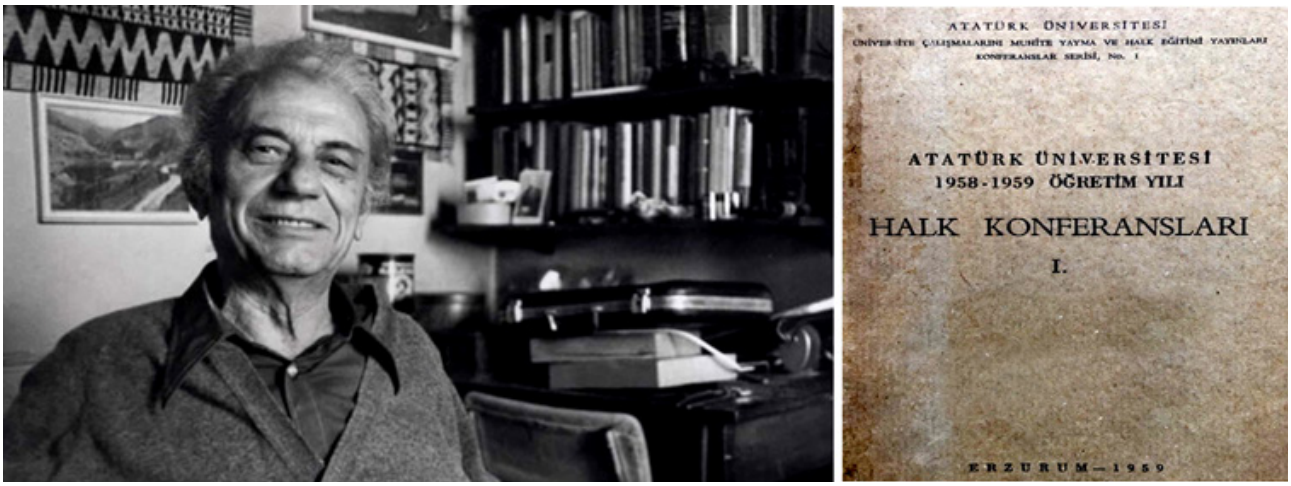

Figure 1: Ord.Prof.Dr. Cahit Arf, (1910-1997) and Publication Cover

Problems of information transfer and standardization, a process that began with the invention of writing, have been carried through distinct phases with the spread of printing and the emergence of technologies such as photography and cinema. Today, with the expansion of AI-powered systems, this problem has gained a new dimension. Digital paintings and their expansion are causing widespread dissemination of creative discussions, both in the art world and in public perception (Boden, 2016). The effects of artificial intelligence on visual and handicraft arts, as well as literature and performance arts, increase the possibility of a departure from traditional art. However, whether this is a novelty or the realization of a dream remains to be seen. Indeed, the 1990s were a period when digital art struggled to gain acceptance and faced intense opposition.

Digital art stands out as a contemporary form of expression where aesthetics meets aesthetics. The transformation of traditional art canvases into digital screens and graphic tablet pens. However, this is not merely a change of tools, but a new way of thinking about the nature of art. By offering limitless possibilities to artists and designers, it takes creative expression to a new dimension. Digital artworks, produced using tools such as computers, software, solutions, and artificial intelligence, are analyzed digitally both during the production process and the presentation phase. Thus, digital art fully transforms the traditional understanding of art into a creative means of expression using money.

This study examines the close relationship between artificial intelligence and contemporary art practices through the lens of diversity, difference, and possibilities, drawing on Akyüz's pioneering perspective.

RESEARCH AIM AND SCOPE:

This study aims to explore the diversity, differences, and possibilities that AI-assisted art brings to contemporary art understanding by bringing together artists' production practices, critics' evaluations, and social perception from a subjective perspective. While opening a discussion on possible directions for the future of art, the study centers on the question of whether AI is merely a tool or a creative partner collaborating with humans.

The main objective of the research is to examine the effects of AI capabilities on contemporary art practices from a subjective point of view. The question of how AI is positioned within the continuity of the art-technology relationship—whether it is a new creative partner or merely a tool—is central to the study. In this context, the role of algorithms, datasets, and digital technologies in art production processes will be discussed, and possible directions for the future of art will be evaluated.

It is a known fact that the art-technology relationship has undergone continuous transformation throughout human history. The problems of information transfer and standardization, which began with the invention of writing, were taken to a different stage with the spread of printing; The emergence of photography, cinema, and digital technologies has profoundly transformed the forms of artistic expression. Today, artificial intelligence stands as the most current link in this chain of transformation.

FROM DIGITAL ART TO ARTIFICIAL INTELLIGENCE:

The widespread adoption of computer technology since the late 1980s has opened new avenues of expression for artists. With the overcoming of resolution limitations, digital productions have moved into exhibition halls, thus ushering in a new phase in the relationship between art and technology (Figure:2).

Figure 2: Two different works by Uğurcan Akyüz from his early period (1990).

In this context, Uğurcan Akyüz's digital painting exhibition, held at the Leicester City Gallery in 1994, is seen not only as a technical innovation but also as a turning point in the institutional and social acceptance of digital art (Akyüz, 1994). While paving the way for the use of computers as a tool for artistic expression, the exhibition served as a manifesto inviting rethinking the subjective and universal dimensions of art (Figure:3). The digital works produced with the limited hardware capabilities of that period shed light on the discussions surrounding artificial intelligence-supported art today. Akyüz's pioneering approach in the 1990s demonstrated the courage to view technology not merely as a tool, but as a partner that expands the artist's

subjective world. This perspective is also evident in works produced with artificial intelligence today. In some works, artificial intelligence is used as a formal means of expression, while in others, the possibilities of creativity are highlighted with surrealist potentials. Thus, new layers are added to the original existence of the artwork.

The discussions currently taking place on AI-based art can be read as a natural continuation of the process that began with Akyüz's 1994 exhibition. Just as the meeting of computer technology with art created a paradigm shift in that period, artificial intelligence algorithms are on the verge of a similar transformation today. Therefore, artificial intelligence should be considered not only as a tool, but also as a potential co-creator that can shape the future of art. Looking at art history, every new form of expression initially faced objections, but over time gained acceptance and contributed to the evolution of art. The intense debates surrounding digital art in the 1990s bear a resemblance to the questions facing AI-assisted art today (Elgammal, Liu, Elhoseiny & Mazzone, 2017). In this context, artists working with AI raise the question of whether machines are merely tools or collaborative creators.

Figure 3: Posters from Uğurcan Akyüz's exhibitions in Leicester, UK in 1994 and Ankara in 1996.

In recent years, AI has begun to position itself in the art world not only as a technical support but also as a creative collaborator. Paintings produced by algorithms, music composed by AI, and scripts written by AI inevitably raise the question: Are these works truly art, or merely a reflection of human creativity?

Should artistic imagery rely solely on technical skill, or should it possess a "soul"? Here, AI is both a tool and a source of inspiration. Painters can combine classical styles with contemporary interpretations, and writers can create stories from different perspectives. This collaboration makes art more accessible, more diversified, and more innovative. Today, the impact of artificial intelligence on artistic imagery is not merely a technological issue, but also significant in terms of how it transforms humanity's relationship with creativity. AI is not only redefining art; it is also shedding new light on the human imagination. Artificial intelligence is a field of technology that enables machines to exhibit human-like thinking, learning, and problem-solving abilities. Studies are often focused on developing algorithms that mimic human thinking methods, but they are not limited to this. The concept of artificial intelligence that can learn and potentially evolve independently of human intelligence in the future is a product of the idea of creating perhaps even superhuman beings that can assist humanity in its efforts to understand the universe and nature. In this context, artificial intelligence is the embodiment of curiosity, imitation, and an independent creative process.

The relationship between technology and art throughout history encompasses a wide range, extending to contemporary AI-based productions. This study specifically examines Uğurcan Akyüz's works, exhibitions, and evaluations of these exhibitions during his transition from digital to artificial intelligence. Specifically:

1994 – Estranged Visual Verse (Leicester City Gallery, Leicester, England)
This exhibition, as one of the first international initiatives by a Turkish artist in the field of digital painting, represents the participation of digital art in global circulation. As a bold move proving that computer technologies can be used as a means of artistic expression, the exhibition contributed to opening up the discussion of digital aesthetics in the international art scene.

Figure 4: Three different works from Uğurcan Akyüz's 1994 exhibition in Leicester, UK

This exhibition represents one of the first international initiatives by a Turkish artist in the field of digital painting, showcasing the participation of digital art in global circulation. The widespread adoption of personal computers in the early 1990s and the subsequent use of digital technologies in artistic production heralded a new era in art history. Estranged Visual Verse stands out as one of the early and pioneering examples of this transformation.

The exhibition is positioned not only as an individual achievement but also as a historical turning point where digital art entered global circulation and Turkey's pioneering role in this field became visible. The exhibition enabled a Turkish artist to participate in the global art scene through digital aesthetics, thus making visible on an international scale Turkey's development of technology-based approaches in contemporary art production. This demonstrates that digital art is not solely a Western-centric phenomenon, but is also produced by artists from different geographies. Estranged Visual Verse was a bold statement proving that computer technologies could be used as a means of artistic expression (Figure:4).

It demonstrated that digital tools are not merely a technical aid, but also a constitutive element of an aesthetic language. In this context, the exhibition contributed to opening up the discussion of digital aesthetics in the international art scene. While digital art exhibitions of the 1990s were generally considered experimental and marginal, this exhibition, held within an international gallery context, strengthened the legitimacy of digital art.

The pioneering role of a Turkish artist in this field can be considered a significant milestone in the historical writing of digital art. The exhibition title, Estranged Visual Verse, brings together the

concepts of alienation and visual poetry. This conceptual framework demonstrates that digital art is not only a technical innovation but also a field of cultural and philosophical inquiry. Alienation refers both to the impact of technology on human experience and to the divergence of digital visuality from traditional art forms.

1996 – Visual Installations (Turkish-British Cultural Association, Ankara)
This exhibition is a turning point in terms of the institutional acceptance of digital art in Turkey. It showed that digital painting could be considered not only a technical experiment but also a form of cultural expression; thus, it paved the way for the discussion of digital art in academic and artistic circles.

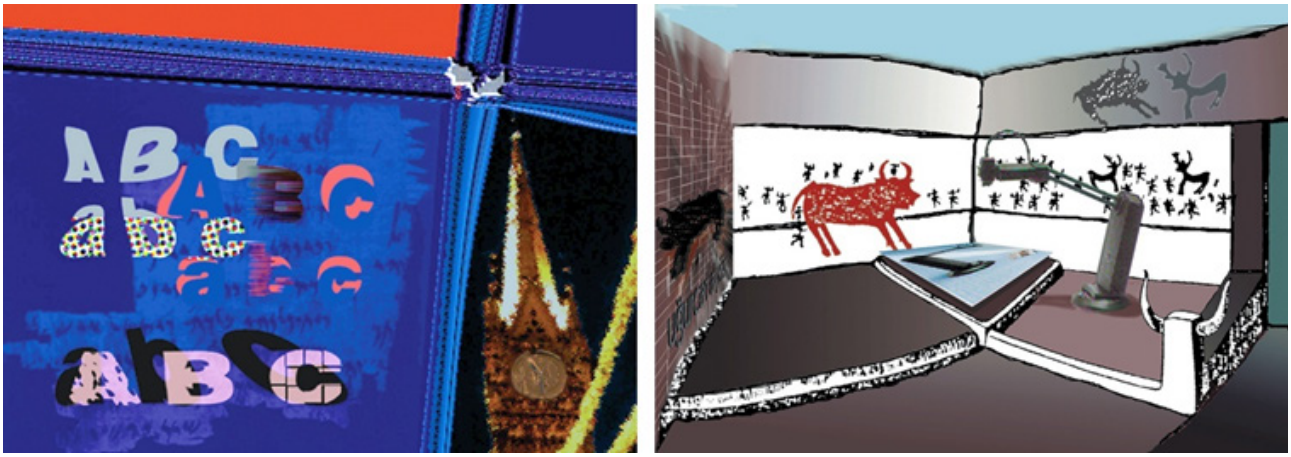

Figure 5: Two different works from Uğurcan Akyüz's exhibition in Ankara in 1996s.

The exhibition "Visual Installations" marked the first time digital art was exhibited in Turkey within the context of an institutional gallery, ensuring that digital aesthetics were taken seriously by art institutions (Figure:5). This led to digital art moving from being a marginal pursuit to being accepted as a legitimate form of expression in the art world. The exhibition demonstrated that digital painting is not only a technological innovation but also a cultural and artistic narrative tool. The concept of "Installations" shows that digital visuality can be reconstructed within a cultural context and that the artist can create an original aesthetic with digital tools. This exhibition can be considered a critical turning point in the historical writing of digital art in Turkey. The international expansion of the Estranged Visual Verse exhibition, which opened in England in 1994, was followed by the institutional acceptance process in Turkey; thus, digital art gained visibility at both global and local levels. The exhibition paved the way for discussions of digital art in academic circles; it encouraged the consideration of digital aesthetics as a research topic in art education and art history disciplines. In this context, the pedagogical dimension of digital art also became visible.

1998 – Visual Stories (National Lottery Art Gallery, Ankara)
This exhibition, through the concept of "story," highlighted the narrative dimension of digital art and reproduced the practice of visual storytelling in the digital environment. It stands out as an example emphasizing the intersection of local culture and digital technology.

2001 – External Stories (Eylül Art Gallery, Ankara)
This exhibition, where digital art is positioned as a window to the outside world, questions the relationship between individual experience and technological representation. The externality established by the artist with digital tools added a new dimension to the aesthetic debates of the period.

2004 – Ministry of Culture State Painting and Sculpture Competition Award
This award constitutes a critical threshold in art history as the beginning of the recognition of digital art by official institutions in Turkey (Figure:6). The State Painting and Sculpture Competition, organized by the Ministry of Culture, has functioned for many years as an institution that reinforces the legitimacy of traditional painting and sculpture disciplines. Therefore, the awarding of a digital artwork in this competition is not only an individual achievement but also an event documenting the paradigmatic transformation of art institutions.

Figure 6: Uğurcan Akyüz's work, "City and Life," 100x190 cm,
which received the Ministry of Culture and Tourism Art Award in 2004. CMi

Prior to this award, digital art was mostly seen as an "experimental" or "alternative" pursuit. The award ensured the acceptance of digital art as a legitimate discipline in the institutional art environment and paved the way for art institutions in Turkey to open up to technology-based production methods. This award is a turning point in the historical writing of digital art in Turkey. The fact that digital art became visible not only through individual exhibitions but also through state-supported competitions strengthened its place in art history. The award redefined the aesthetic criteria of art institutions. Digital aesthetics, alongside the traditional understanding of painting and sculpture, have been included among the evaluation criteria. This has led to a broadening of the definition of art and the acceptance of an interdisciplinary approach at the institutional level. The state's recognition of digital art has increased its value in the eyes of society. This development has ensured that digital art is seen not only as a form of individual expression but also as a field of cultural production. This award symbolizes the transformation of digital art from an "experimental" to an "institutional" art form. The recognition of digital aesthetics by art institutions shows that the boundaries of art have expanded in the postmodern era and that technological tools have begun to play a central role in aesthetic production.

2004 – Natural Stories (Akdeniz Art Gallery, Ankara)
This exhibition, which brings together nature and digital technology, questions the boundaries between the organic and the artificial. It can be considered an example of digital art developing new aesthetic perspectives through representations of nature.

2007 – Recent Stories (Atlas Art Gallery, Ankara)
This exhibition, aiming to establish a direct connection with the viewer, highlights digital interpretations of daily life. It has been a step that strengthens the interaction of digital art with the social context.

2007 – Cyprus Stories (Ismet Vehit Güney Art Gallery, Nicosia, TRNC)
This exhibition is a landmark event demonstrating the regional spread of digital art and being the first digital painting exhibition held in the Turkish Republic of Northern Cyprus. Documenting that digital art is beginning to gain acceptance not only in central cultural centers but also in different geographies, this event created a new aesthetic opening in the regional art scene. The Cyprus Stories exhibition was not only a regional event but also a cultural exploration of digital art.

Figure 7: Uğurcan Akyüz, 2007, "door no:99", 70x100cm, CMi

Figure 8: Uğurcan Akyüz, 2007, "window", 70x100cm, CMi

The exhibition is positioned as a historical turning point that accelerated the acceptance of digital art in the regional art scene by combining diversity and geographical context:
The exhibition demonstrates that digital art is not limited to its institutional acceptance in Turkey, but also meets cultural diversity on a regional scale. In the context of Cyprus, digital aesthetics have opened a new field of expression by combining with local cultural sensibilities. Cyprus is historically a crossroads of different cultures. This exhibition reveals how digital art can be reinterpreted in this multi-layered cultural context. Digital aesthetics has functioned as a tool carrying the historical and cultural burden of the geography. Being the first digital painting exhibition opened in the TRNC, it is a critical turning point in art history. The acceptance of digital art by regional art institutions demonstrates that it has moved beyond being an experimental endeavor and become an institutional and cultural form of expression. The exhibition shows that digital art contributes not only to aesthetic experiences but also to discussions of regional identity and belonging. Cyprus's cultural diversity has been transformed into a visual dialogue space through digital aesthetics. The title "Cypriot Stories" emphasizes the narrative power of digital art (Figure:7-8). The concept of story shows that digital visuality is not only a technical innovation but also a cultural and historical narrative tool.

2009 – Natural Expansions (Atlas Art Gallery, Ankara)
This exhibition, presenting new openings of digital art through the theme of nature, emphasizes the harmony between technology and nature. It stands out as an example where digital aesthetics are combined with ecological sensitivities.

2011 – Colors of the World (Hacettepe University, Ahmet Göğüş Art Gallery, Ankara)
An exhibition that reinforced the acceptance of digital art in the academic environment. It established an intercultural dialogue with global color palettes. This exhibition, which reinforced the acceptance of digital art in the academic environment, established an intercultural dialogue through global color palettes. It made visible the pedagogical and theoretical dimensions of digital art within the university context.

2011 – The Color of World (National University of Arts, Seoul, Korea)
This exhibition is a significant turning point representing the opening of digital art to the art scene in the Far East. This event, realized in Korea by an artist from Turkey, is not only an individual success but also a concrete demonstration of the global circulation of digital art (Figure:9). The exhibition revealed how digital aesthetics are perceived and reproduced in different cultural contexts.

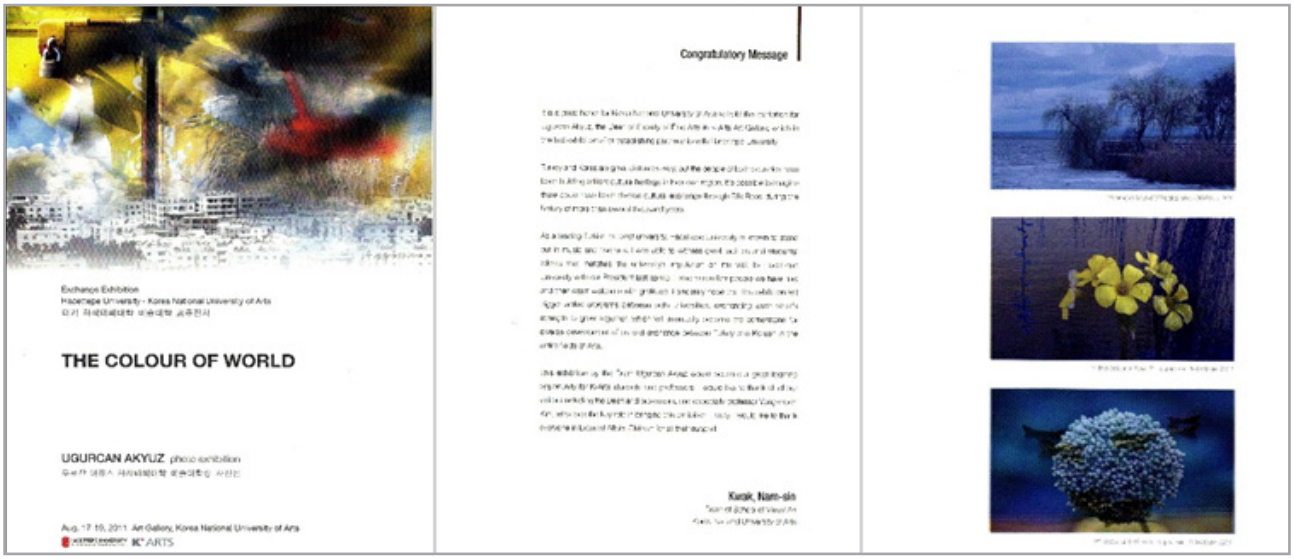

Figure 9: Invitation to Uğurcan Akyüz's exhibition in Seoul, Korea in 2011

The exhibition enabled the meeting of digital art practices originating in the West with aesthetic sensibilities in the Far East. When the elements of color, nature, and symbolism in Korea's traditional art understanding encountered digital aesthetics, a new field of interpretation was opened. This exhibition has increased the international visibility of a Turkish artist through digital art, demonstrating that Turkey is developing technology-based approaches in contemporary art production. Thus, Turkey has positioned itself as an actor contributing not only to local but also to global art discussions. The title "The Color of World" emphasizes the potential of digital art to create a universal language. Color has been used as a common means of expression across cultures; this commonality has been transformed into a visual experience through digital technologies. The exhibition shows that digital art is not only a Western-centric phenomenon, but is also accepted and incorporated into production processes in different geographies. In this context, it can be considered an example that expands the place of digital art within global art history.

2012 – The Blessings of the World (Ziraat Bank Art Gallery, Istanbul)
This exhibition, where social and cultural values meet digital art, questions the culture of production and consumption through the concept of "blessing." It has made visible the relationship between digital art and socio-economic contexts.

2013 – Stories of the World (Atatürk Cultural Center, Nicosia, TRNC)
This exhibition, where global narratives merge with digital art, has enabled the transformation of intercultural stories into a visual language. It has reinforced the function of digital art as a universal narrative tool.

2015 – Colored Expansions (Marburg, Germany)
This exhibition, which participated in the current discussions of digital art in Europe, made visible digital experiences expanding through color. It represents the meeting of digital art with contemporary aesthetics in the European art scene.

2017 – Migrant Stories: People and Birds (Koç Foundation Art Gallery, Gölcük)
This exhibition is one of the strongest examples that reveals the intersection of digital art with social issues. Centering on the phenomenon of migration, the exhibition explores themes of mobility, belonging, and identity through the metaphor of humans and birds (Figure:10).
The exhibition questions the nature of digital aesthetics. Here, digital aesthetics functions not only as a visualization tool but also as a theoretical framework that allows for the rethinking of social experiences. This exhibition is positioned not only as an aesthetic experience but also as an example documenting the capacity of digital art to interact with social and political issues: The exhibition makes visible the individual and collective dimensions of migration through digital art. The experience of human displacement is addressed on a metaphorical plane parallel to the migratory movements of birds; thus, an analogy is established between natural and social migration processes.

Digital aesthetics is used to question the effects of the migratory experience on identity. The human and bird metaphor symbolizes the fragility of belonging and the continuous process of redefining identity. The increasing global migration movements in the 2010s have strengthened the historical context of this exhibition.

The exhibition has shown that digital art can directly relate to contemporary social issues. This exhibition proves that digital art can develop not only an aesthetic experience but also a political and ethical sensitivity. When the theme of migration is processed with digital tools, it opens up a space for both visual and intellectual questioning for the viewer. The exhibition "Migrant Stories" can be considered a turning point where digital art intersects with social issues. This exhibition demonstrates that digital art is not only a technological innovation but also a form of expression that falls within the realm of social responsibility in contemporary art.

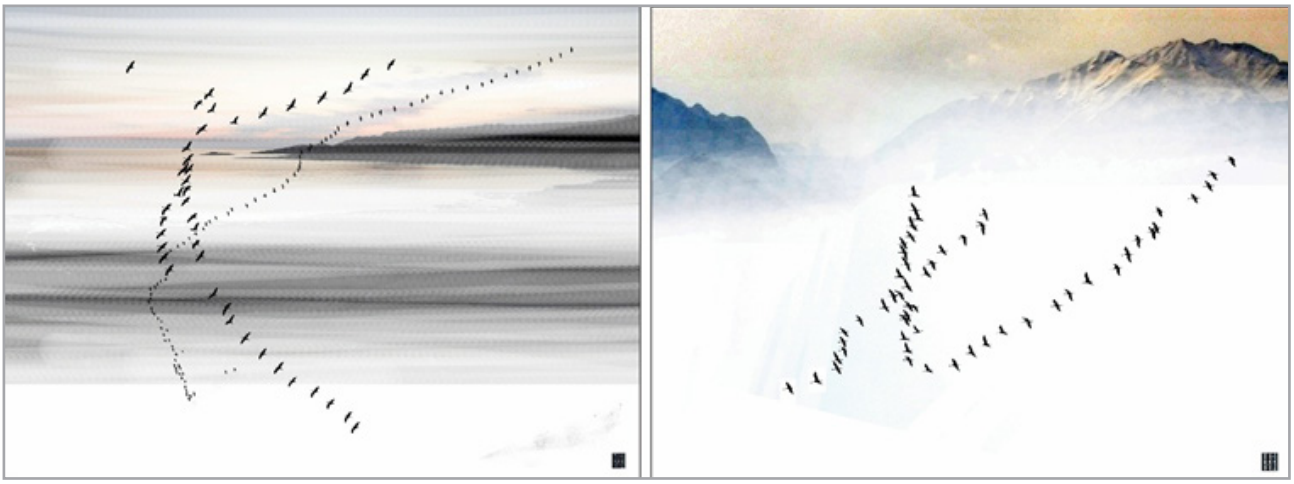

Figure 10: Two different works from Uğurcan Akyüz's exhibition
at the Koç Foundation Art Gallery, Gölcük, in 2017

2019 – Auswahl: Menschen und Vögel (Stadtallendorf Municipality Gallery, Germany)
This exhibition, which brings the theme of migration into a European context, shows how digital art interacts with social and cultural issues. It reinforced the acceptance of digital art in the contemporary art scene in Europe.

2020 – Pandemic Stories (ArtAntakya, Online)
It demonstrated the adaptation of digital art to the online exhibition format during the pandemic. It proved the power of art to maintain its presence in the digital environment during times of crisis (Figure:11). Adapting to the online exhibition format during the pandemic, this work

proves the power of art to maintain its presence in the digital environment during times of crisis. It demonstrates the flexibility and adaptability of digital art to current conditions.

2020 – Hybrid Art Experiments
This period can be considered a critical threshold where digital art gained a new aesthetic dimension by combining with artificial intelligence. These unique works, which combine artificial intelligence with traditional painting techniques, constitute early examples of the hybrid art concept and have become one of the concrete indicators of technological transformation in art history. The hybrid art experiments of 2021 are positioned not only as a technical innovation but also as a historical threshold that created a transformative effect on the subject of art, its aesthetic language, and its cultural context.

Figure 11: Hybrid two works by Uğurcan Akyüz from the pandemic period

The combination of artificial intelligence algorithms and traditional painting techniques simultaneously refers to both the historical roots of art and its contemporary technological possibilities. This approach has made visible the tension between continuity and transformation in art. Hybrid artworks demonstrate that digital art is not limited to computer-based production alone, but can develop a new aesthetic language in conjunction with artificial intelligence. This language offers a unique visual experience born from the collaborative production process of human creativity and machine learning. These experiments can be considered a turning point in the evolution of digital art. The digitalization process, which began in the 1980s, expanded with institutional acceptance and global expansion in the 2000s; and with the integration of artificial intelligence in the 2020s, it reached a hybrid aesthetic plane. Hybrid art can be read as a reflection of the post-digital era. Here, the artist becomes a subject who not only uses technology but also collaborates with it. Artificial intelligence is positioned as a "co-creator" in the artist's production process; this redefines the subject-object relationship in art. Hybrid art experiments show how contemporary art responds to current technological developments. Works produced with artificial intelligence not only offer the viewer an aesthetic experience but also provide an opportunity to question the effects of technology on cultural life.

Each of these exhibitions can be positioned not only as an individual art event, but also within the context of the historical evolution of digital art and the transformation at the intersection of artificial intelligence and art.

For a subjective background example to understand chronologically how AI-assisted art is positioned in a historical context, see Appendix-3: "The Historical Background of Uğurcan Akyüz's Works on Art and Artificial Intelligence."

CONTEMPORARY ART PRACTICES:

One of the most striking findings of the research is that AI-assisted art intensifies ethical and ontological discussions through the concepts of ownership, originality, and responsibility. Ethical discussions necessitate a redefinition of art. Artists' experiences reveal that AI plays both a facilitating and limiting role in the production process. Establishing a fair, transparent, and reliable process regarding the use of AI is critical for the healthy adoption of technology as a tool. Because the more capable we make a tool, the more important it becomes to be aware of its effects and limitations (Figure:12). However, we must not ignore the ethical dimension of the creative process on this journey. How can artistic originality be preserved with the contribution of AI? Who is the true creator of a work of art? These questions force us to confront not only technology but also what lies at the core of art.

Figure 12: Two different works by Uğurcan Akyüz, using artificial intelligence programs.

Therefore, this section discusses the relationship between AI-assisted art and issues such as ownership, creativity, originality, and ethical responsibility. Considering both the artist's production practices and the evaluations of critics, the diversity, differences, and possibilities that AI-assisted art brings to the contemporary understanding of art are examined from a subjective perspective.

THEORETICAL FRAMEWORK:

The relationship between art and technology can be discussed historically not only in an instrumental context but also at the epistemological and ontological levels. Walter Benjamin's discussions on Technical Reproducibility demonstrate how the "aura" of a work of art changes in technological reproduction processes. In the context of artificial intelligence, this discussion is brought up again through the originality and reproducibility of the work of art.

The capacity of AI algorithms to produce new combinations leads to a re-examination of theories of creativity and originality. At this point, human-machine collaboration stands out as a paradigm that expands the definition of art. However, it can be said that issues of ownership and ethical responsibility constitute the most critical areas of debate in AI-assisted art. Every

new technological tool used in the production processes of art has led to a redefinition of aesthetic values, creativity, and originality. Therefore, different theoretical approaches need to be considered together in order to understand AI-assisted art.

- The Relationship Between Technology and Art: Technology has transformed not only the means of art production but also its forms of expression and social perception. Walter Benjamin's discussions on Technical Reproducibility show how the "aura" of a work of art changes in technological reproduction processes. In the context of artificial intelligence, this discussion is brought to the forefront again through the originality and reproducibility of the work of art.

- Ethical and Ownership Debates: One of the most critical dimensions of AI-assisted art is the issues of ownership and ethical responsibility. To whom does the copyright of a work produced by an AI algorithm belong? To the artist, to the programmer who developed the algorithm, or to the datasets that enabled the creation of the work? It necessitates redefining the legal and ethical dimensions of art.

- Social and Cultural Perspective: Art is not only the product of individual creativity but also a reflection of the social and cultural context. AI-powered art accelerates cross-cultural interaction through global datasets and algorithms; it also presents new opportunities and risks in terms of preserving and making visible local cultural uniqueness. In this context, AI can play both a unifying and a divisive role in the globalization process of art.

- Ontological Dimension: The essence of art has been defined as "the aesthetic expression of human experience." AI-powered art fundamentally questions this definition: If a work of art is produced by a non-human entity, what criteria will be valid for that work to be considered "art"? From an ontological perspective, this debate necessitates rethinking the definition of art.

FINDINGS AND DISCUSSOIN:

The findings of the research show that the art-technology relationship has gained a new dimension in every period within its historical continuity. The problem of information transfer, which began with the invention of writing, was taken to a different phase with the spread of printing; technologies such as photography and cinema have fundamentally transformed the forms of artistic expression. These transformations have always brought with them debates: questions such as whether photography is art, the aesthetic values of cinema, and the originality of digital art, parallel the debates that AI-powered art faces today.

Today, artificial intelligence algorithms are used not only as a technical tool in art production but also as an active component of the creative process. Digital paintings, visual compositions, poetic texts, and performance art have gained new aesthetic dimensions with AI-supported productions. Findings show that AI stands out particularly in three areas:

- Formal Innovation: The visual and auditory arrangements produced by algorithms challenge traditional aesthetic rules.

- Creative Collaboration: Artists have begun to see AI not only as a tool but also as a collaborative production partner.

- Social Perception: AI-supported artworks are now finding widespread acceptance in exhibitions and biennials; they evoke both admiration and skepticism in viewers.

Artists' experiences reveal that AI plays both a facilitating and limiting role in the production process. While some artists see AI as a new field of expression, others are concerned about the loss of originality and control. While critics acknowledge that AI-assisted art expands the definition of art, they emphasize the need to redefine aesthetic values.

The discussions demonstrate that the diversity and differences that AI-assisted art brings to the contemporary understanding of art hold significant potential to shape the future of art. AI is considered not only a tool but also a new paradigm in art production processes. However, this paradigm necessitates resolving issues such as ownership, originality, and ethical responsibility.

CONCLUSION AND RECOMMENDATIONS:

This study examines the current position of AI-assisted art within the historical continuity of the art-technology relationship and evaluates the resulting debates from various perspectives. The findings reveal that AI can be viewed not only as a technical tool in art production but also as an active component of the creative process. The use of algorithms and datasets transforms the formal and aesthetic aspects of art, necessitating a redefinition of concepts such as ownership, originality, creativity, and ethical responsibility.

Historically, every new technological development has changed the forms of artistic expression. As seen in photography, cinema, and digital art, AI is prompting a rethinking of the definition and production processes of art. In this context, AI-assisted art holds a powerful potential to shape the future of art. However, for this potential to be realized, ethical, legal, and cultural debates need to be deepened and resolved.

Artists' experiences and critics' assessments show that AI-assisted art offers both a new field of expression and raises concerns about originality and loss of control. This dual nature can be considered a natural process in the evolution of art. Throughout history, every new form of expression has initially sparked controversy, but over time has increased the diversity and richness of art. Recommendations:

- Development of an Ethical Framework: Establishing ethical principles in the production of AI-assisted art will increase the trust of artists and viewers.
- Legal Regulations: New legal regulations should be created covering AI-generated works regarding ownership and copyright issues.
- Preservation of Cultural Context: AI-generated works should enrich cultural diversity, and local contexts should be protected.
- Artist-AI Collaboration: AI should be positioned not as a replacement for the artist, but as a partner supporting the creative process.
- Education and Awareness: The use of AI tools should be taught in art education programs, and young artists should be encouraged to create works using these technologies.
- Improving Social Awareness: To ensure the acceptance of AI-assisted art in society, exhibitions, workshops, and discussion platforms should be widespread.

GENERAL ASSESSMENT:

In conclusion, artificial intelligence has the potential to position itself not only as a tool in the future of art, but also as a creative partner producing alongside humans. This partnership can contribute to the diversification of art on a global scale, increase cross-cultural interaction, and the emergence of new aesthetic paradigms. However, preserving the human experience and cultural context that constitute the essence of art is critically important for the sustainability of AI-assisted art.

Art has always been a universal form of human expression. By combining the aesthetic understanding of the past with new art forms, it is possible to both remain connected to our roots and boldly explore the future. These two aspects can make art richer, more diverse, and more meaningful. Uğurcan Akyüz's works can be considered a concrete example of this approach.

REFERENCES:

Akyüz, U. (1994). Digital Painting Exhibition. Leicester City Gallery, Leicester, UK.
Akyüz, U. (1997). Experiences That Strengthen Existential Moments, Siyah&Beyaz Newspaper,
Akyüz, U. (1998). Illustrated Dreams, Radikal Newspaper, January 26.
Akyüz, U. (1998). Academic Problems and Art Education, Teacher's World, p:220, pp:6-7, April.
Akyüz, U. (1998). Technology and Illustration, Art Essays, v:7, p:13-19, HÜ. GSF, Ankara.
Akyüz, U. (1999). Every Human/Designer is Creative, Turkish British Cultural Association, Ankara.
Akyüz, U. (2002). Do Our Tools Determine Our Thoughts, or Education? Information Technologies Congress Proceedings, pp:6-8, Pamukkale University, Denizli.
Arf, C. (1959). Can a Machine Think and How Can It Think? 1958/59 Public Conferences Proceedings, Atatürk University, Erzurum.
Benjamin, W. (2008). The work of art in the age of mechanical reproduction. London: Penguin.
Brooks, R. (1990), Elepha nts Don't Play Chess, Robotics and Autonomous Systems, 6 (1–2): 3–15,
Boden, M. A. (2016). AI: Its nature and future. Oxford: Oxford University Press.
Crevier, D. (1993). AI: The Tumultuous Search for Artificial Intelligence. New York, NY: Basic Books.
Dreyfus, H. (1972), What Computers Can't Do, New York: MIT Press, ISBN 978-0-06-011082-6
Dreyfus, H.; Dreyfus, S. (1986), Mind over Machine: The Power of Human Intuition and Expertise in the Era of the Computer, Oxford, UK: Blackwell
Dreyfus, H. (1979), What Computers Still Can't Do, New York: MIT Press.
Elgammal, A., Liu, B., Elhoseiny, M., & Mazzone, M. (2017). Creative adversarial networks, generating "art" by learning about styles and deviating from style norms. arXiv preprint.
Floridi, L. (2014). The fourth revolution: How the infosphere is reshaping human reality. Oxford University Press.
Gunkel, D. J. (2020). Deconstruction and the digital: Artificial intelligence and the humanities. Cambridge, MA: MIT Press.
Harnad, S.; Scherzer, P. (2008), First, Scale Up to the Robotic Turing Test, Then Worry About Feeling, Artificial Intelligence in Medicine, 44 (2): 83–89,
Haugeland, J. (1985), Artificial Intelligence: The Very Idea, Cambridge, Mass.: MIT Press.
Hofstadter, D. (1979), Gödel, Escher, Bach: an Eternal Golden Braid.
Manovich, L. (2001). The language of new media. Cambridge, MA: MIT Press.
Moravec, H. (1988), Mind Children, Harvard University Press
Paul, C. (2015). Digital art (3rd ed.). London: Thames & Hudson.
Penrose, R. (1989), The Emperor's New Mind: Concerning Computers, Minds, and The Laws of Physics, Oxford University Press, ISBN 978-0-14-014534-2
Russell, S.J.; Norvig, Peter (2003), Artificial Intelligence: A Modern Approach (2nd ed.), Upper Saddle River, New Jersey: Prentice Hall, ISBN 0-13-790395-2

Searle, J. (1980), Minds, Brains and Programs, Behavioral and Brain Sciences, 3 (3):417–457.
Shanken, E. A. (2009). Art and electronic media. London: Phaedon.
Turing, A. (1950), Computing Machinery and Intelligence Mind, LIX (236):433-460,
Saygin, A. P. (2000). Turing Test: 50 years later. Minds and Machines. 10 (4):463-518.
Noah W-F. and Nick M., eds. (2003). The New Media Reader. Cambridge: MIT Press, pp. 663–677.

Appendix-1: Published Catalogs

2013 Akyüz, U. "Stories of the World", Atatürk Cultural Center, 36 pages, 30cm x 21cm, Nicosia.
2012 Akyüz, U. "Blessings of the World", Ziraat Bank Art Gallery, 36 pages, 24cm x 24cm, Ist.
2011 Akyüz, U. "Colors of the World", Ahmet Göğüş Art Gallery, 36 pages, 30cm x 21cm, Ank.
2011 Akyüz, U. "Colours of World", National Uni. of Arts Gallery, 16 pages, 24cm x 18cm, Seoul.
2009 Akyüz, U. "Natural Openings", Atlas Art Gallery, 32 pages, 30cm x 24cm, Ankara.
2007 Akyüz, U. "Recent Stories", Atlas Art Gallery, 32 pages, 24cm x 24cm, Ankara.
2004 Akyüz, U. "Natural Stories", Akdeniz Art Gallery, 36 pages, 30cm x 21cm, Ankara.
1998 Akyüz, U. "Visual Stories", Milli Piyango Art Gallery, 36 pages, 30cm x 21cm, Ankara.

Appendix 2: Conferences

2025 Akyüz, U. "Art and Artificial Intelligence", Aksaray University GETSA Center, Aksaray.
2025 Akyüz, U. "Artificial Intelligence in the Context of Necessity", İçel Art Club and MTO Collaboration, Mersin.
2025 Akyüz, U. "A Subjective Perspective on Artificial Intelligence Through Art", Cappadocia University, Göreme.
2025 Akyüz, U. "From Text to Structure: Information, Art and Artificial Intelligence", Mersin Branch of the Chamber of Architects.
2025 Akyüz, U. "Artificial Intelligence from Historical to Contemporary", Çukurova University, Seyhan Municipality, Adana.
2025 Akyüz, U. "From Line to Data Flow: The Historical Transformation of Art", İçel Art Club, Mersin.
2023 Akyüz, U. "Art, Technology and Modernity" Çukurova University Turkish Studies Center, ÇUTAM, Adana.
2020 Akyüz, U. "New Media, Old Us", Mersin University, Faculty of Fine Arts, Mersin.
2017 Akyüz, U. "Digital World and Art Education", Koç Foundation, Gölcük.
2017 Akyüz, U. "An Approach to Technology in Art and Science" Zagreb, Coratia.
2017 Akyüz, U. Dimililer, R.; Zeybek, H.; Yonuk, A.; "The Humanized Technology in Art and Education" Girne, North Cyprus
2017 Akyüz, U. "An Approach to Art, Science and Education" Girne, North Cyprus
2016 Akyüz, U. "Art, Education and Academy", Skopje, Macedonia.
1999 Akyüz, U. "Every Human/Designer is Creative", Turkish British Cultural Association, Ank..
1998 Akyüz, U. "Communication and Digital Image Processing", A.I.B. University, Bolu.
1998 Akyüz, U. "Beyond the Image", AFSAD, Ankara.
1998 Akyüz, U. "Image and Communication", S. Demirel University, Faculty of Fine Arts, Isparta.
1998 Akyüz, U. "Photo Manipulations", Faculty of Fine Arts, Hacettepe University, Ankara.
1997 Akyüz, U. "Technology and Design", Turkish Armed Forces, Military Academy, Ankara.
1997 Akyüz, U. "The ABCs of Photoshop", Faculty of Fine Arts, Hacettepe University, Ankara.
1997 Akyüz, U. "Photoshop Filters", Faculty of Fine Arts, Hacettepe University, Ankara.
1995 Akyüz, U. "Visual Installations with Computers", Faculty of Fine Arts, Hacettepe Uni. Ank.

Appendix 3: Historical Background of U.Akyüz's Works on Art and Artificial Intelligence:
With the widespread use of personal computers, Akyüz developed photographic, graphic design, and digital painting techniques, thus becoming a pioneer in artistic applications. The following personal chronology lists the recorded interactions between art and academia:

1994 The exhibition "Estranged Visual Verse" opened at Leicester City Gallery in England, was one of the first international initiatives by a Turkish artist in the field of digital painting.
1996 The exhibition "Visual Installations" opened at the Turkish British Cultural Association Gallery in Ankara was a pioneering step in terms of the institutional acceptance of digital art in Türkiye.
1998 "Visual Stories", National Lottery Art Gallery, Ankara.
1999 A work by Akyüz was exhibited for the first time in the Ministry of Culture State Painting and Sculpture (MC.SPE) competition. This was a first in the history of Turkish art and the beginning of the recognition of digital art by official art institutions.
2000 Another work by Akyüz was exhibited in the (MC.SPE) Competition.
2001 "External Stories", Eylül Art Gallery, Ankara.
2003 Three works by Akyüz were exhibited in the (MC.SPE) Competition.
2004 The first award given to a digital work in the (MC.SPE) Competition marked the beginning of digital art being rewarded by official art institutions.
2004 "Natural Stories", Akdeniz Art Gallery, Ankara.
2007 "Recent Stories", Atlas Art Gallery, Ankara.
2007 The exhibition "Cyprus Stories", opened at the İsmet Vehit Güney Art Gallery in the Turkish Republic of Northern Cyprus, demonstrated the regional spread of digital art.
2009 "Natural Expansions", digital painting exhibition at Atlas Art Gallery, Ankara.
2011 "Colors of the World", Hacettepe University, Ahmet Göğüş Art Gallery, Ankara.
2011 "The Color of World" exhibition at National University of Arts, Korea, introducing digital art to the Far Eastern art scene.
2012 "Blessings of the World", Ziraat Bank Art Gallery, Istanbul.
2013 "Stories of the World", Atatürk Cultural Center, Nicosia.
2015 "Coloured Expansions" exhibition in Marburg, Germany.
2016 One of his works was accepted to the Presidential Residence of Bosnia and Herzegovina.
2017 "Migrant Stories: People and Birds", Koç Foundation Art Gallery, Gölcük.
2018 Four of his works were accepted to the History Museum of Bosnia and Herzegovina.
2019 The exhibition "Auswahl: Menschen und Vögel" opened at the Stadtallendorf Municipal Gallery in Germany, bringing digital art into the contemporary art scene in Europe.
2020 Artificial intelligence became a part of contemporary art; Akyüz began to incorporate this technology into artistic production processes.
2020 "Pandemic Stories", ArtAntakya, online solo exhibition.
2021 He produced original works by combining artificial intelligence with traditional painting techniques; this approach can be considered one of the examples of hybrid art.
2025 He gave six conferences on the relationship between artificial intelligence and art at different institutions.

KEYNOTE

Artificial Intelligence Use, and Ethics in Fine Arts

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Prof. Dr. Hafize Keser is a retired faculty member at Ankara University, Faculty of Educational Sciences, specializing in Educational Technology. She completed her bachelor's, master's, and doctoral studies at Ankara University, focusing on educational programs, technology integration, and computer-assisted instruction. Throughout her career, she has conducted extensive research in areas such as technology-enhanced learning, online education, human-computer interaction, cybersecurity, cyberbullying, and teacher training in information technologies. She has served as the head of several departments at Ankara University and supervised numerous master's and doctoral theses in the field of educational technology. Prof. Keser has published widely in international journals, presented at global conferences, and contributed to major academic projects. Her work continues to influence the development of digital learning environments and the training of future educators.

The Use of Artificial Intelligence in the Conservation and Digital Transfer of Cultural Heritage

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Abstract
Art and craft products that constitute the tangible and intangible heritage of human history, particularly millennia-old textiles such as Anatolian rug art, are now finding new opportunities for conservation and digital preservation through Artificial Intelligence (AI) technologies. While the documentation, conservation, and transmission of these artifacts, which deteriorate over time, pose a significant challenge, AI offers innovative solutions in this field. This study examines the potential of AI in cultural heritage preservation, with a specific focus on cultural properties such as historical textiles. Developed AI-powered systems can analyze these artifacts, identify and classify motifs from different regions and periods, and complete missing fragments. This enables the provision of detailed information on the origin, meaning, and dissemination of motifs, laying the groundwork for ethnographic and artistic research. Furthermore, AI algorithms, by completing missing motifs and restoring colors in damaged textiles, will facilitate the digital revitalization and transfer of these valuable artifacts. This study presents examples from Turkey and abroad to demonstrate how AI contributes not only to textile conservation but also, more broadly, to the digital documentation, artistic interpretation, and increased public access to cultural heritage. This innovative approach is expected to assist museum professionals while also adding a new dimension to cultural heritage education through digital content. Future research should focus on areas such as AI support in museum education, gamification, and measuring visitor experiences to further enhance user participation and innovative design processes.

Keywords
Artificial intelligence, cultural heritage, textile conservation, digitalization, preservation

1.INTRODUCTION

Textiles, whose raw materials are organic, are ethnographic, sociological, and anthropological products that reflect the lifestyle, artistic understanding, myths, beliefs, and daily life stories of the societies they belong to. These tangible examples, which reflect a society's cultural identity, are important for the transmission of traditional knowledge to future generations (Yanar and Gültekin, 2021). As part of cultural heritage, textile artifacts shed significant light on the cultural and social structure of the periods they belong to, as well as on the history of textile production (Hasanova, 2022).

The most important stage in the restoration and conservation of historical textiles is documentation. Documentation is the process of determining the current state of a cultural asset through drawings and photographs of varying scales and characteristics. Accurate conservation and the achievement of its purpose are only possible with proper documentation. Written and visual documents are the fundamental data for all conservation efforts, providing information on the current condition and damage to cultural heritage, as well as solutions to address that damage. These data are also an important means of transmitting cultural heritage to future generations and introducing it to the public.

Today, various techniques are used for documentation, and this process is rapidly evolving alongside technological advancements. The documentation process, which involves collecting, combining, and evaluating data of varying qualities, progresses in tandem with conservation efforts (Tepeyurt, 2019). Before starting the restoration of historic textiles, analyses must be conducted. The results from these analyses are crucial for documentation and selecting appropriate methods for conservation and restoration. To perform these analyses, it is first necessary to define the textile and determine its identity through restitution studies, i.e., to define the design's compositional features. In recent years, to accelerate this process, 3D studies, digital documentation, and even AI have been widely used to identify the object and to reconstruct missing parts.

This study examines the application of artificial intelligence under two headings: first, its use in cultural heritage conservation and restoration, and second, its application in museology and museum education.

2. METHODOLOGY

This study used a systematic literature review within a qualitative research approach to examine current and potential applications. The systematic review process was rigorously applied to identify the most suitable and reliable sources to answer the research questions.

The search was conducted across academic databases (e.g., Google Scholar, Web of Science, and Scopus), as well as reports and projects published by authoritative institutions in the fields of cultural heritage and artificial intelligence (e.g., European Parliament reports and Google Arts & Culture projects). The keyword sets included the core concepts that define the study's scope: 'Artificial intelligence (AI)', 'cultural heritage', 'textile conservation', 'digitalization', 'museology', and their Turkish equivalents. The searches specifically focused on publications from 2017 onwards, corresponding to the period when AI applications became widespread in the cultural heritage field.

The titles and abstracts of the retrieved studies were examined, and those directly relevant to the research aims were selected first. The inclusion criteria for the studies were as follows:

- Studies concerning specific AI technologies such as artificial intelligence, machine learning, natural language processing (NLP), or generative AI.
- Studies focusing on the application of these technologies in cultural heritage conservation, restoration, motif analysis, digital transfer, or museum education.
- Publications containing case studies or application-based research that enrich the qualitative data (examples, application results, interpretations).

Articles that described only technical AI models or merely mentioned cultural heritage were excluded. After reading the full texts of the selected literature, the data were grouped by meaning and application, then synthesized. This synthesis was conducted through a thematic analysis that clarified the role of AI and identified gaps in the existing literature. As a result of this process, the data were systematically categorized according to the two main thematic areas on which the study focuses: (1) The Use of Artificial Intelligence in the Conservation and Restoration of Cultural Properties and (2) The Application of Artificial Intelligence in Museology and Museum Education.

3. FINDINGS

3.1 The Use of Artificial Intelligence in the Conservation and Restoration of Cultural Properties

In historical textiles, restitution is a drawing-based study that provides information about the original or a specific historical state of a worn, fragmented, aged, or torn textile. These scaled drawings, which provide information on the textile's current state, document structural damage and previous interventions in a report. Archival records, photographs of the work, and other artistic elements from the period in which the work was created are also important auxiliary resources. Before beginning the application, the work to be restituted should be documented using visual techniques, such as photographs and/or videos.

Restitution is carried out for two purposes: conservation. Because they are organic, textile artifacts are at risk of loss if not properly preserved. Therefore, the restitution of a textile work can enable its reproduction in case the original work is lost. When the condition of the original work is poor, it can be stored and restituted reproductions displayed to visitors in museums (Karavar, 2017).

Written and visual documents of a culture, including the current state of cultural heritage, any damage it has sustained, and all information related to a solution for that damage, constitute the fundamental data for conservation work. This data is also an important tool for transmitting cultural heritage to future generations and introducing it to society. For this reason, traditional textiles such as rugs are also considered documents due to their cultural, historical, and artistic significance. Whether in a museum, a private collection, or passed down as a family heirloom, traditional textiles like rugs must be accurately and completely documented. An accurate and complete documentation study not only allows different examples to be matched but also enables the reproduction of the example being studied (Karavar and Aktürk, 2020).

Figure 1. 18th-century Kula Sarı Kulu Rug restitution work (Karavar and Aktürk, 2020).

Bozkurt (2020) states that rugs are not merely decorative but also serve as a means of communication that reflects the weaver's feelings, thoughts, and beliefs. Therefore, they serve as an important resource for understanding the motifs, cultural values, and belief systems used in traditional textiles. Motifs on Anatolian textiles have been used for centuries by people as a tool to express their feelings, expectations, and beliefs. These motifs are not only decorative elements but also symbols that reflect society's cultural and psychological accumulation (Oyman, 2019). A semiotic approach is used to analyze the motifs in textiles and reveal their symbolic meanings. The meanings of motifs such as Hands On Hip, Bird, Tree of Life, and Ram's Horn are closely tied to beliefs, traditions, and mythology in Turkish culture (Bozkurt, 2020). Akpınarlı and Üner (2017) concluded that the figurative symbols and motifs on Central Anatolian rugs reflect the beliefs, values, lifestyles, and worldviews of the people of that period. Menekşe and Ulvi (2024) discuss the digitalization and archiving of textiles with historical Turkish motifs using photogrammetric methods. Photogrammetry is a technique for creating 3D models of objects from photographs. In their study, high-resolution orthophotos, 3D models, and point clouds were generated from textiles featuring historical Turkish motifs using photogrammetry. The resulting digital data was used for archiving 3D drawings of the motifs as vector data in a digital environment. The study states that using terrestrial photogrammetry techniques for documenting cultural designs (Anatolian motifs in rugs and carpets) for future generations provides a great advantage in terms of digitalization, as it enables the creation of dense point clouds from photos that are as accurate as those from terrestrial laser scanners (Menekşe and Ulvi, 2024). Along with this study, the use of AI in the field is seen to be widespread, and it has been determined that work such as motif generation, artistic design, and converting AI-generated outputs into NFTs are frequently performed.

3.1.1 Examples of AI-Based Studies on Motifs

In Turkey, within the scope of the "AI-Supported Motifs from Tradition to Future" project, supported by the Ankara Development Agency's 2024 Social Innovation and Social Development Technical Support Program, the Ankara Institute of Maturation

provided AI-supported design training to teachers and master instructors with the aim of reinterpreting traditional Turkish handicrafts and motifs with artificial intelligence. The participants used AI tools to transform traditional motifs into modern designs.

Gürgüler (2023) examines how traditional rug art is reinterpreted in the context of conceptual art, focusing particularly on two artists: Rudolf Stingel and Şakir Gökçebağ. Stingel gave a new meaning to the space in his installation at the Venice Biennale by making traditional Turkish rugs interact with the Palazzo Grassi's architectural structure. Gökçebağ, on the other hand, removed rugs and other everyday objects from their original context and presented them in a new arrangement, endowing them with an aesthetic dimension. Both artists use traditional motifs and materials to offer a new perspective on contemporary art. This study examines the application of AI in the analysis, preservation, and reinterpretation of traditional motifs. The work has sparked an important discussion about how traditional arts can survive and take on new meanings in the digital age.

Azerbaijani artist Orkhan Mammadov's NFT Project processes more than 150,000 rug and carpet images with AI to create new speculative forms and presents them as NFTs. AI-powered search tools make it easy to search for specific motifs, colors, or styles. Tag: AI rugs, which generate unique and original rug designs using artificial intelligence algorithms. Algorithms inspired by traditional motifs can generate an infinite number of variations in color, pattern, and composition. These algorithms create new and unique patterns inspired by traditional rug design (https://myth-ai.com/tag/ai-rugs/). These examples demonstrate various approaches to utilising AI in the design of rug and carpet motifs. AI contributes to the preservation of cultural heritage and the discovery of new design possibilities by combining traditional handicrafts with contemporary technology.

Artificial Intelligence (AI) is used effectively in the conservation and study of cultural heritage not only for the reproduction or sustainability of historical textiles but also for the development and preservation of other tangible and even intangible cultural heritage elements. With the rapid development of digital technologies, AI plays an important role, especially in the preservation and transmission of historical artifacts to future generations. In this context, computer vision technologies play a critical role in integrating AI into cultural heritage conservation efforts.

Computer vision methods, such as object recognition, enable AI to accurately detect and document the features of cultural artifacts, contributing to their preservation and analysis. In the field of cultural heritage, AI also benefits from technologies such as natural language processing (NLP) and computer vision. These technologies are reshaping the processes of documenting, restoring, and increasing the accessibility of historical and art works. Computer vision models can analyze artworks to help conservation and restoration experts with tasks such as detecting and repairing faded colors, completing missing parts, and repairing damage. AI detects and simulates original colors and textures, allowing conservators to make more informed decisions during the restoration process. In this way, the conservation of cultural heritage and its transmission to future generations can be carried out more effectively (https://www.ultralytics.com/tr/blog/ai-in-art-and-cultural-heritage-conservation).

Figure 2. Side-by-side comparison of a damaged original artwork and its AI-restored version.

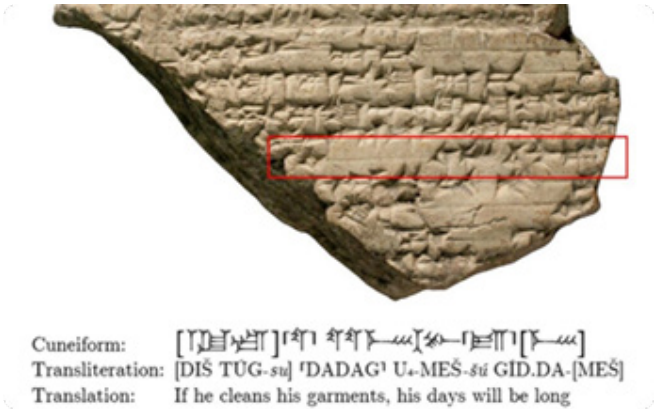

Figure 3. A historic inscription carved on stone and AI-powered computer vision translating the ancient text.

Büyükkuru (2023) focuses on the conveniences provided by digital technologies in the documentation, preservation, interpretation, and presentation of cultural heritage. He emphasizes the potential of technologies such as 3D modelling, augmented reality, virtual reality, web-based applications, and digital archiving to make cultural heritage more accessible and engaging. He also states that these technologies support the use of cultural heritage in education and tourism.

Ballı (2020) emphasizes that digitization and technological developments are changing how art is produced and experienced. He states that AI offers new forms of expression and creative possibilities for artists, and is reshaping the boundaries and definitions of art. He examines various application areas, including the production of artworks with AI algorithms, AI-based interactive art installations, and AI-supported art analysis and criticism. While discussing the effects of AI in the field of art, he states that it expands the boundaries of art, offers new experiences, and transforms the ways art is produced, experienced, and perceived. Although there are different opinions on their uses and no common agreement on their definitions, artificial intelligence has begun to be widely used in different areas in the creative cultural industries.

Drubay (2018) evaluated the use of artificial intelligence in cultural mediation based on three different fundamentals: (1) artificial intelligence as a virtual friend, (2) artificial intelligence as a historical researcher, and (3) artificial intelligence as a digital duplicator (Drubay, 2018). Examples of artificial intelligence demonstrating these three fundamentals are already in use at museums around the world. For example, the "DOT"

application is used as an AI chatbot that communicates with visitors via mobile devices about the works at the Akron Art Museum in the USA. Working to help museum visitors learn about objects increases the opportunities for learning. AI can interpret these possibilities more quickly and accurately than the human brain. Among the projects developed for this purpose, examples such as the Metropolitan Museum of Art and Microsoft Joint Project "Art Explorer" stand out, in which AI predicts the date and place of production of works in museums, which collection series they belong to, and with which other works they show similarities through big data analysis and visual recognition.

In a rapidly evolving era, museum audiences are no longer seeking authority but rather communication, dialogue, and experience. Museums can provide such a platform with AI support for communication and experience (Wang, 2021:6). According to the European Parliament (2023), the use of artificial intelligence in cultural heritage offers important opportunities for preserving the past and for transferring digitized archives and other data to the future. In the report titled "Artificial Intelligence in the Context of Museums and Cultural Heritage: Complex Challenges and New Opportunities," the parliament states that the preservation of cultural heritage is of great importance for carrying historical and cultural values into the future. AI is used in various ways to digitize, restore, and analyze cultural heritage within the scope of providing revolutionary solutions in the field of cultural heritage and museums and contributing to the preservation and promotion of heritage. The 3D scanning and digital archiving of cultural assets ensure their preservation and increase their accessibility. While the risk of physical damage to original cultural assets decreases, more people can access these works on digital platforms, extending beyond the walls of existing museums (Portalés, 2018; Kremers, 2020; Pisoni et al., 2021).

Artificial intelligence is increasingly being utilised as a vital tool in the restoration of cultural assets. In the reconstruction of damaged cultural assets or those with missing parts, AI algorithms are brought to life with digital modelling in a way that is consistent with the original design and construction techniques, opening up a significant area for the user. Significant developments are occurring in AI-based cultural heritage research, with the emergence of new designs and models (Gîrbacia, 2024).

Furthermore, AI is also used to analyze and interpret cultural heritage more efficiently. Text and language analysis plays an important role in reading old inscriptions and documents and making data that has deteriorated and been lost over time understandable again. For example, Rembrandt's famous painting, The Night's Watch, was cut and deformed at the bottom and left edges at one point in its history. Thanks to AI technologies, the missing parts were reconstructed, and the restored painting is now on display again at the Rijksmuseum in Amsterdam. Another striking example is the completion of Beethoven's unfinished Tenth Symphony using AI.

It is important to remember that, for AI to be successful, it requires expert input and data from researchers. While AI is an important tool, the human factor is fundamental to its proper scientific use. Additionally, "human participation" is very important in AI-based projects. The Heritage Quest project started researching archaeological heritage in April 2020. More than 6,500 volunteers actively participated in this citizen science project, which received funding from the Horizon Europe program, and recorded grave sites, charcoal kilns, and various artifacts in the context of local history and culture. The results showed that agriculture was practiced intensively in these regions 3,000–

2,000 years ago, thereby changing the understanding of local history. This project is an example of a large-scale archaeological scientific project where citizens were involved for the first time (Bourgeois, 2024).

It is now possible to prevent the trafficking of cultural assets using AI. In this context, ENIGMA stands out as a multinational project funded by the European Union and aiming to protect cultural heritage. This project aims to protect cultural goods and artifacts from human-caused threats. The primary objective of the project is to contribute to the identification of cultural assets, ensure their traceability, and conduct provenance research. Additionally, the monitoring and protection of threatened heritage sites are also among the project's focus points. It can be said that ENIGMA offers a solution against various threats targeting cultural heritage. These threats include the theft of cultural artifacts from museums, private collections, and religious buildings, trafficking and illegal trade, the destruction of archaeological sites, and damage to artifacts. These threats are further increased by the effects of armed conflicts and natural disasters. ENIGMA aims to ensure the security of cultural heritage by using technological tools and methods to protect it against these threats. The project uses advanced analyses and algorithms to ensure the security of cultural heritage and protect it from threats. AI, in particular, can perform big data analysis to track the digital footprints of cultural artifacts and prevent counterfeiting or illegal trade. Additionally, AI-based systems are utilised as a crucial tool for monitoring and protecting threatened heritage sites (Abate et al., 2023; Patias and Georgiadis, 2023).

Orta (2024) emphasizes the importance of intangible cultural heritage (ICH) for the continuity of cultural identity and diversity. He states that elements such as traditions, performing arts, handicrafts, and oral expressions form the basis of ICH. The author argues that AI, data science, and machine learning can be powerful tools for preserving and transmitting ICH to future generations. He shows that these technologies can be used in the digital archiving of ICH elements, content analysis, supporting artistic production, education, and information activities, and conservation and restoration work.

Artificial intelligence, as an innovative tool in cultural heritage studies, is used and presented to users with different content by Google Arts & Culture. Many projects are being carried out to preserve and digitalize intangible cultural heritage, and support is being provided for capacity-building in ongoing projects. Google Arts & Culture, in collaboration with museums, galleries, and cultural heritage institutions around the world, makes digitized artworks and cultural heritage objects accessible online. By leveraging AI to augment the existing program, detailed analyses of the works are conducted, enabling users to examine art in greater depth. Google's "Art Transfer" feature increases user interaction with cultural heritage by applying the style of an artwork to a photo (Philipsen, 2024).

AI is frequently used to re-create ancient cities in 3D, both in museums and at visitor centers in archaeological sites. The Ancient Olympia Project involves transforming the ancient city of Olympia, Greece, into a virtual experience using AI. This project utilized AI algorithms to generate detailed 3D models of ancient ruins, facilitating more accurate restoration work. Additionally, it facilitates visitor participation by allowing users to explore ancient structures in a virtual environment. IBM Watson's AI technologies have been used to support the digital restoration of artifacts at the British Museum. This project used AI algorithms to complete lost or damaged parts of ancient artworks. This

type of restoration plays a crucial role and is frequently employed, particularly in the reconstruction of damaged or missing ancient artefacts.

The "RePAIR" Project is supported by the European Commission and developed to protect cultural heritage using AI technologies. The "RePAIR" (Restoration of European Architectural Heritage through AI and Robotics) project aims to digitally restore historical buildings with AI and robotic technologies. AI algorithms are used to analyze historical buildings and optimize restoration processes (Cigola & Ceccarelli, 2008). The AI Music Project (Preserving Traditional Music) aims to effectively use AI to preserve traditional music. AI technologies are especially used to digitize and preserve traditional music genres that are on the verge of disappearing. In the project, AI algorithms analyzed traditional musical works, helped to recreate lost parts, and kept the musical aspect of cultural heritage alive in the digital environment. In a similar vein, Bosi et al. (2024) introduced an innovative technology for preserving audio documents archived on open-reel magnetic tape, which served as the basis for the international Audio Recording Preservation (ARP) standard. By using the ARP standard, archives have been accelerated in clarifying the preservation conditions of tapes and a powerful tool has been prepared to automatically correct errors that may occur during the digitization process. This technology has provided an efficient solution for managing both small and large collections of digitized analog items. This section presents examples of artificial intelligence in conservation. In the field of museology, examples are presented of how it is used in museum education with some applications.

3.2 The Application of Artificial Intelligence in Museology and Museum Education

Artificial intelligence, one of the most significant technologies of our time, holds great potential for transformation in museum education, particularly through chatbot applications. This technology transforms a museum visit from a guided tour into an interactive, participatory experience. Museum education packages, developed over time with visitor feedback, have heightened the need for more precise, scientific results, reinforcing the importance of AI-supported interactive environments.

The primary goal of AI-supported museum education is to move beyond a didactic approach and to transform visitors from passive recipients into active, engaged participants. These systems create spaces where visitors can set their own rules without hesitation, shape storytelling and games, and find answers to their questions through reflection and questioning. Visitors' expectations of receiving clear, simple answers encourage museums to heed this call and accelerate technological integration. This shared change is the most important factor ensuring the effectiveness and continuity of museum education for all age groups. AI, acting as an assistant, enables museum educators to exchange information more effectively and healthily. In this context, the use of AI in museum education, which is currently seen as a hypothesis, will inevitably become a necessity in the coming years and a standard feature of a widespread museum education system (Aslan, 2022).

Sunar and Ateş, in their study on digitalization and the use of artificial intelligence (AI) in museology, reveal that museums are overcoming their physical limitations by making their collections accessible in a virtual environment and that AI applications are used in many areas, from museum guidance to artifact analysis, to personalize the visitor experience. According to the findings, publications on the subject have increased significantly, especially after 2017, and the countries with the most publications are

China, the USA, and the UK. The change in keywords over the years shows that research has shifted from mobile applications and smart systems to more advanced technologies such as the metaverse, deep learning, and generative artificial intelligence. The article identified gaps in the literature on topics such as AI support in museum education, gamification, and measuring visitor experiences and recommended that these areas be prioritized for future research. In conclusion, it is emphasized that the development of academic studies in museums closely parallels technological advancements (Sunar and Ateş, 2025).

Tabier and Bakanay (2023) examined how artificial intelligence (AI) technologies can be utilised in preschool education, particularly in museum education settings. In their study, they state that museums are transforming from static information centers into dynamic, interactive learning centers due to digitalization and focus on the role of AI in this transformation. It is emphasized that AI has the potential to offer personalized education by understanding students' learning styles and needs and also provides pedagogical support to teachers. It is stated that integrating AI into education from an early age can increase children's cognitive and problem-solving skills. They emphasize that museum education is an approach that supports experiential learning and bridges the past and the future. In this context, they highlight that AI-supported applications transform a museum visit into a more interactive and lasting learning experience. Examples of these applications include chatbots at the Anne Frank House, IBM's "Art of Art" mobile application, and Google's art and culture projects.

Diksoy (2024) states that museums are turning into dynamic education and entertainment centers with the support of artificial intelligence (AI) applications. These technologies offer visitors unlimited interaction possibilities beyond human capability through guidance systems, artifact analysis, and interactive exhibitions. Examples given by Diksoy include digital kiosks used for ticketing and information, the "Dot" chatbot digital guide at the Akron Art Museum, and robots that play games or greet visitors at the Istanbul Museum of Robots. In addition, the museum experience has been enriched with applications such as an AI tool at the Metropolitan Museum of Art that finds visually similar works and creates new connections, a mobile application at the Pinacoteca Museum that allows visitors to chat with artworks in real-time, and the Atatürk hologram used at the Abidinpaşa Mansion Museum in Ankara. Diksoy also states that AI technologies provide access to museums for people with special needs, such as the visually impaired, enabling them to become active participants.

4. DISCUSSION

This study thoroughly examines the transformative role of Artificial Intelligence (AI) in the conservation and digital transfer of cultural heritage, supported by findings from historical textiles. The results demonstrate that AI-supported systems provide an innovative solution to the core challenge of preserving artifacts made of organic materials that are susceptible to gradual deterioration.

The success of AI in restitution and restoration efforts—such as completing missing motifs and restoring faded colors—signifies a paradigm shift, moving conservation practices from manual, drawing-based methods to high-accuracy, technology-driven analysis. The advanced capabilities of AI systems to identify and classify motifs provide crucial groundwork for ethnographic and artistic research by yielding detailed information about

their origins and meanings (Bozkurt, 2020; Oyman, 2019). This interpretive capability aligns with the perspective that textiles are not merely decorative items but symbolic communication tools reflecting society's cultural and psychological accumulation.

In the field of museology, the findings reveal that AI is fundamentally altering the visitor experience. Museums, supported by AI, are transitioning from didactic centers to interactive and participatory platforms that fulfill the contemporary visitor's search for communication, dialogue, and experience. Applications such as the DOT chatbot and Art Explorer embody the roles of a "virtual friend" and a "historical researcher" (Drubay, 2018), accelerating this institutional transformation. Furthermore, AI enhances museum inclusivity by facilitating access for individuals with special needs, such as the visually impaired.

The scope of AI's application, as evidenced by large-scale projects like the restoration of Rembrandt's The Night Watch, the completion of Beethoven's Tenth Symphony, and the prevention of illicit trafficking (ENIGMA project), highlights its significant utility in the sector. Moreover, the findings reveal that the use of AI extends beyond conservation applications and often involves commercialization-focused endeavors, such as motif generation, artistic design, and the conversion of generated outputs into Non-Fungible Token (NFT) format. This broad spectrum of use underscores the opportunities AI offers for the preservation and transmission of cultural heritage, supporting the European Parliament's perspective.

Despite these advances, the systematic review exposes substantial gaps in the current literature. Specifically, the scarcity of studies on AI support in areas such as museum education, gamification, and visitor experience measurement is notable. This finding underscores the need to prioritize these areas for future academic investigation. This study contributes to the field by systematically mapping AI's dual potential—for physical conservation and for enhancing public access—thereby providing both practical and theoretical insights for museum professionals and ethnographic researchers.

5. CONCLUSION AND FUTURE PROJECTIONS

This study demonstrates that artificial intelligence is a transformative tool for the conservation, documentation, and promotion of cultural heritage. The digital transfer of cultural assets, such as historical textiles with organic structures that wear out over time, the analysis of their motifs, and the completion of missing parts are now possible thanks to AI-supported systems. This innovative approach supports museum professionals while also enabling cultural heritage to reach a wider audience through digital content. Artificial intelligence is used in a wide range of applications, from preventing the illicit trafficking of historical artifacts to restoring lost artworks. Museums, with applications such as AI-supported guides, virtual reality (VR), augmented reality (AR), holograms, and interactive games, are shifting away from a traditional didactic approach and transforming visitors from passive recipients into active and engaged participants. This transformation increases museums' attractiveness, thereby increasing the number of visitors and the depth of the connection to cultural heritage.

AI-supported systems can lay the groundwork for ethnographic and artistic research by providing detailed information on the origins and meanings of motifs in historical textiles. The conducted reviews have shown gaps in the literature on topics such as

AI support in museum education, gamification, and measuring visitor experiences. Therefore, future research can focus on these areas. Furthermore, the development of AI-supported models to enhance user participation in the preservation of intangible cultural heritage and innovative design processes should be encouraged

6. ETHICAL STATEMENT AND CONFLICT OF INTEREST

This study is based on a systematic literature review and does not involve human subjects, animal experimentation, or clinical trials. All sources used have been properly cited and referenced to maintain academic integrity.

The author declares no conflicts of interest regarding the publication of this paper.

REFERENCES

Abate, D., Agapiou, A., Toumbas, K., Lampropoulos, A., Petrides, K., Pierdicca, R., ... & Zingaretti, P. (2023). Artificial Intelligence to Fight Illicit Trafficking of Cultural Property. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 48, 3-10. https://dx.doi.org/10.5194/isprs-archives-XLVIII-M-2-2023-3-2023.

Akpınarlı, H. F., & Üner, İ. (2017). İç Anadolu Bölgesi Halılarında Görülen Figüratif Sembol ve Motifler. Art-e Sanat Dergisi, 10(20), 630-651.

Aslan, A. A. (2022). Yapay Zekânın Müze Eğitimi Alanında Kullanılması. Sanat ve Tasarım Dergisi, (30), 1-14.

Ballı, Ö. (2020). Yapay Zekâ ve Sanat Uygulamaları Üzerine Güncel Bir Değerlendirme. Sanat ve Tasarım Dergisi, (26), 277-306.

Bosi, M., Canazza, S., Pretto, N., Russo, A., & Spanio, M. (2024). From Tape to Code: An international AI-based standard for audio cultural heritage preservation. Don't play that song for me (if it's not preserved with ARP!). IEEE Access.

Bourgeois, Q., Kaptijn, E., Verschoof-van der Vaart, W., & Lambers, K. (2024). Assessing The Quality of Citizen Science In Archaeological Remote Sensing: Results From The Heritage Quest Project In The Netherlands. Antiquity, 98(402), 1662-1678.

Bozkurt, S. (2020). Geleneksel Türk Halı Sanatında Kullanılan Motiflerin Anlamları: Sındırgı-Yağcıbedir Halıları Üzerine Göstergebilimsel Bir Analiz. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi, 8(1), 697-731.https://doi.org/10.19145/e-gifder.641272.

Büyükkuru, M. (2023). Kültürel Mirasın Aktarımında Dijital Teknolojilerin Kullanımı. Nevşehir Hacı Bektaş Veli Üniversitesi SBE Dergisi, 13(İhtisaslaşma), 134-150.

Cigola, M., & Ceccarelli, M. (2008). A robot application for analysis, survey and conservation of historical architectures. Robotics and automation in construction, 2(20), 329-354.

Diksoy, İ. (2024). Müze Eğitiminde Yapay Zekâ Uygulamaları. L. Mercin (Ed.), Dijital Çağda Yeni Nesil Görsel İletişim Tasarımı ve Paradigmalar içinde (s. 44-57). Pegem Akademi.

Drubay, Diane. (2018). https://medium.com/@WeAreMuseums/humansversus-machines-who-is-the-better-museum-mediator-8be6938fe89d.

European Parliament (2023). Briefing on Artificial Intelligence In The Context of Cultural Heritage and Museums: Complex Challenges And New Opportunities. Retrieved from https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/747120/EPRS_BRI(2023)747120_EN.pdf

Gîrbacia, F. (2024). An Analysis of Research Trends for Using Artificial Intelligence in Cultural Heritage. Electronics, 13(18), 3738.

Gürgüler, M. (2023). Geleneksel Tekstil Sanatı Halı ve Kavramsal Sanat. Uluslararası İnsan ve Sanat Araştırmaları Dergisi, 8(1), 85-97.

Hasanova, R. (2022). Tarihi Tekstillerde Rekonstrüksiyon. Milli Saraylar Sanat Tarih Mimarlık Dergisi, (22), 114-129. https://myth-ai.com/tag/ai-rugs/ https://www.ultralytics.com/tr/blog/ai-in-art-and-cultural-heritage-conservation

Karavar, G. (2017). Halı ve Düz Dokumaların Koruma Uygulamalarında Belgelemenin Önemi ve Tasarımcının Rolü. Yedi, (17), 103-109.

Karavar, G., Aktürk, D. F. (2020). 18. Yüzyıl Kula Yöresi "Sarı Sulu" Halısı. Euroasia Journal of Social Sciences & Humanities, 7(16), 109-119.

Kremers, H. (Ed.). (2020). Digital Cultural Heritage. Cham, Switzerland: Springer.

Menekşe, E., Ulvi, A. (2024). Türk Motiflerinin Fotogrametrik Yöntemlerle Dijitalleştirilmesi ve Arşivlenmesi. Türkiye Fotogrametri Dergisi, 6(1), 14-22. https://doi.org/10.53030/tufod.1377753.

Orta, N. (2024). Somut Olmayan Kültürel Mirasın Korunmasında Yapay Zekâ, Veri Bilimi ve Makine Öğrenmesinden Yararlanma. RumeliDE Dil ve Edebiyat Araştırmaları Dergisi, (38), 748-777.https://doi.org/10.29000/rumelide.1439731.

Oyman, N. R. (2019). Bazı Anadolu Kilim Motiflerinin Sembolik Çözümlemesi. Arış Dergisi, (14), 4-22. https://doi.org/10.34242/akmbaris.2019.119.

Patias, P., & Georgiadis, C. (2023). Fighting Illicit Trafficking of Cultural Goods—The ENIGMA Project. Remote sensing, 15(10), 2579.

Philipsen, L. (2024). Deep Art History: Inferences Between Google Arts & Culture and Art Museums. In Critical Digital Art History (pp. 100-122). Intellect.

Pisoni, G., Díaz-Rodríguez, N., Gijlers, H., & Tonolli, L. (2021). Human-Centered Artificial Intelligence for Designing Accessible Cultural Heritage. Applied Sciences, 11(2), 870. https://doi.org/10.3390/app11020870.

Portalés, C., Rodrigues, J. M., Rodrigues Gonçalves, A., Alba, E., Sebastián, J. (2018). Digital Cultural Heritage. Multimodal Technologies and Interaction, 2(3), 58. https://doi.org/10.3390/mti2030058.

Sapirstein, P. (2015). Photogrammetry As A Tool For Architectural Analysis: The Digital Architecture Project At Olympia. In Archaeological Research in the Digital Age. Proceedings of the 1st Conference on Computer Applications and Quantitative Methods in Archaeology, Greek Chapter. Rethymno, Crete, March 6-8 2014 (pp. 129-139). IMS-FORTH, Rethymno.

Sunar, H., Ateş, A. (2025). Müzelerde Teknoloji ve Yapay Zekâ Kullanımı Üzerine Yapılan Çalışmaların İncelenmesi. Beykent Üniversitesi Sosyal Bilimler Dergisi, 18 (1), 43-62.https://doi.org/10.18221/bujss.1666693.

Tabier, E., & Bakanay, Ç. D. (2024). Okul Öncesi Eğitimde Müze Eğitim Ortamları ve Yapay Zekâ Uygulamaları. Journal of Social, Humanities and Administrative Sciences (JOSHAS), 9(65), 3082-3088. DOI : 10.29228/JOSHAS.70500.

Tepeyurt Merev, A. (2019). Tarihi Tekstillerde Bozulma Nedenleri ve Restorasyon Öncesi Yapılması Gereken İşlemler (Master's thesis, Fatih Sultan Mehmet Vakıf Üniversitesi, Lisansüstü Eğitim Enstitüsü).

Wang, B. (2021). Digital Design of Smart Museum Based on Artificial Intelligence, Mobile Information Systems, (6) 1-13. https://doi.org/10.1155/2021/4894131.

Yanar, A., Gültekin, H. (2021). Arkeolojik Tekstillerde Koruma Yaklaşımları ve Etik. İDİL Dergisi, (78), 260-273. doi: 10.7816/idil-10-78-08.

Fashion Design as Craft, Art, and Science

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Abstract
Fashion design is an increasingly popular field, yet a common conceptual definition of the field has not yet been established. Current definitions state that fashion design is a traditional craft that became an art form in the mid-19th century. While the debate continues whether fashion design is a craft or an art, fashion design became an academic discipline after the Second World War. In this case, fashion design is both a craft (i.e., a profession, even an engineering discipline), an art (especially in creativity and aesthetics), and a science. The paper describes fashion design in terms of these three dimensions and proposes a conceptual definition. Secondly, it emphasises the need to strengthen the scientific identity of fashion design. In science, two criteria determine the identity of a particular field: the field's ability to develop its own methods and theories. Fashion design discipline is well developed in terms of methods (sketching and illustration, pattern making, draping, etc.), but fashion design theories have not yet achieved the expected development. Fashion theories in the literature are located at the intersection of the social sciences and the arts, but original fashion design theories are not yet quantitatively and qualitatively adequate. Valid evidence for this observation is the insufficient coverage of fashion design theories in the curricula and textbooks of institutions offering fashion design education. The two problems addressed in this paper have been solved using the literature review method commonly used in the social sciences.

Keywords
Art, craft, fashion, fashion design, fashion designer, fashion system, science

1.INTRODUCTION

The term 'fashion' is a description that evokes the new and the different, but is generally used in relation to clothing. Fashion, tangibly wearable objects, is also a symbolic and inclusive value system that reflects personality, social status and culture through these objects; even garments considered outdated or unfashionable are part of fashion. Fashion is a significant economic sector worldwide; political decisions and scientific and technological developments determine the direction of this sector. Fashion has become institutionalised and systematised since the mid-19th century. At the very centre of this system lies fashion design. Despite the central importance of fashion design, a common definition has not yet been established. Existing definitions emphasise its artistic or craft characteristics, while its scientific nature is not mentioned. This study problematises this negative situation, examines its causes, and proposes a definition of fashion design that could be agreed upon. Secondly, the scientific identity of fashion design is reviewed and discussed. Two fundamental criteria determine and consolidate the scientific identity of a particular field: the field's ability to develop its own unique methods and theories. Fashion design has unique and advanced methods, such as pattern making and draping, but fashion design theories are insufficient in quantity and quality. Very little space is given to theory courses in fashion design education, and most of the existing knowledge is transferred from the fields of industrial design, social sciences, and fine arts. With a few exceptions, there are no courses or books entitled "Fashion Design Theories" in the curriculum or scientific publications of the fashion design departments. For this reason, this study examines these two current and urgent problems in the field of fashion design using a literature review technique.

The aim of this study is to conceptualise fashion design within a three-dimensional framework of craft, art and science, and to contribute to the strengthening of its scientific identity by discussing existing conceptual models and offering recommendations for the development of theory-based courses in the field. As a result of this examination, a common definition of the concept is proposed, and it is recommended that academic organisations reorganise the fashion design discipline with a view to its scientific credibility. Regarding theory development, it is suggested that theories should be developed based on existing models and metatheories. This problem-solving approach aims to raise awareness among fashion designers, academics, educators, those who develop and implement educational programmes, and, of course, the ultimate target audience of fashion design (the public).

The two issues problematised in the study have either not been addressed at all in the relevant works in the literature, or have been addressed only partially or indirectly. The statement expressed as the first problem, "There is no common definition of fashion design," has not been encountered in the scientific publications examined. Regarding the second problem, "The identity of fashion design," there are indirect references. For example, Giorgio Riello and Peter McNeil, in their work "The Fashion History Reader - Global Perspectives" (2010), and Desiree Smal and Carol Lavelle, who refer to them in their conference paper "Developing a Discourse in Fashion Design: What is Research for Fashion Design?" (2011), report that fashion studies have developed as an interdisciplinary field and that fashion design "remains weak as an academic subject." The authors point out that the academic contributions of fashion design have been constructed by borrowing from other disciplines such as art history and sociology. Thus, an original fashion design discourse has not been developed. In her work "Fashion Research and Its Discontents", academic Efrat Tseëlon stated that fashion research is

mostly data-driven and devoid of theory (2001, p. 35). Academic Sue Jenkyn Jones, on the other hand, reported that fashion literature is full of publications such as designer biographies, technical guides, or the cultural history of fashion. Still, there are few publications on topics such as fashion design education or transforming creative thinking into a marketable product (2005, p. 7). The issues addressed in this study have been examined under three main headings, suitable for problematisation: Fashion Design as a field of "Craft", "Art" and "Science".

2.METHOD

This study was conducted using the literature review technique, one of the scientific research techniques. Review models are research approaches that aim to describe a situation that existed in the past or currently exists as it is. Karasar defines general review models that allow for singular or relational examinations as 'review arrangements made on the whole universe or a group, sample or sample taken from it, to reach a general judgement about the universe consisting of many elements' (2012, pp. 77-80).

In line with this, as the research primarily focused on defining the field of fashion design, priority was given to fashion encyclopaedias, fashion dictionaries, and fashion history books. In addition, theory and approach books were scanned, and postgraduate theses and prominent articles in the literature were examined.

The data in the main sources examined (such as theoretical approaches, conceptual discussions, and factual evaluations) are mostly qualitative. Quantitative data (such as statistical information) were also used in some places in the analysis.

The table titled "Academic Organisation of Four-Year Fashion Design Programmes in Türkiye, 2025" presented in the appendix of this study was created by the researcher. This table identifies 35 departments offering four-year undergraduate programmes in "Fashion Design" and "Textile and Fashion Design" within faculties affiliated with higher education institutions in Türkiye. The city, university name, status (state/foundation), faculty name, department name and curricula of the relevant departments were comprehensively examined. Departments that were being established at the time of the research and had not yet started accepting students, and textile departments that did not include "Fashion Design" in their name, were excluded from the scope.

3.ANALYSIS

Today, the fashion design debate continues at a conceptual level, with three distinct groups: (1) those who view fashion as a type of craft, (2) those who view fashion as a type of art, and (3) those who view fashion as a unique field (science) at the intersection of art and craft. Below, the representatives and arguments of these three groups are generally introduced. As a result of this debate, a definition of fashion design that could achieve consensus has been proposed, and it has been emphasised that fashion design, particularly in its scientific dimension, needs to be theoretically developed.

3.1. Fashion Design as Craft

The terms "craft" and "art" are sometimes used interchangeably, but are distinct concepts. In the dictionary, craft is defined as:

"The processing of materials such as wood, iron, fabric, etc., based on manual skills and experience that do not require creativity as in art" (Erzen, 1997, p. 1960), or as "an activity based on manual labour that requires a certain level of education, experience and skill to meet people's material needs; a profession" (Milliyet, 1993, p. 12710). The distinction between craft and art began during the Renaissance and became established in the 18th century. In earlier periods, artists who produced works of art were also referred to as craftsmen (Erzen, 1997, p. 1960; Svendsen, 2006, p. 90).

The name of the traditional tailoring craft comes from the French word tailleur, meaning "the person who cuts fabric." Menswear tailoring (Tailoring) and women's tailoring (Dressmaking) are two fundamental and unchanging craft methods (Time-Life Books, 1974, pp. 8-9). Regarding gender, "tailor" is used for male tailors and "seamstress" for female tailors. A distinction is also made between tailors who are merchants and those who are not: "Merchant tailors keep fabrics on the shelves of their shops. If the customer wishes, they can choose fabric from here and save themselves the trouble of searching for fabric" (Diyarbakırlıoğlu, 2010, p. 289). To fully understand the craft dimension of fashion design, the tailoring profession must first be clearly defined. The Career Discovery Encyclopedia (Ferguson, 2009, pp. 48-49) summarises the question "What Tailors and Dressmakers Do?" as follows: "tailors cut, sew, repair, and alter garments... They use their knowledge of various fabric types to assist customers with their style and fabric choices." It also adds that employment prospects have declined due to increased factory production.

Looking at the historical development of tailoring, it is known that until the sewing machine was invented by Elias Howe in 1846, almost all garments were produced by hand in homes or craft workshops, and that from the Middle Ages to the 18th century, tailors who made custom garments for the elite undertook production with immense effort (Frings, 2014, p. 5; Roetzel, 15 November, 2017). At the beginning of the Industrial Revolution, factories equipped with spinning jennies, steam-powered looms, cotton gins, and sewing machines replaced craft workshops, and some tailors became factory workers (Cunningham, 2003, p. 11). Towards the end of the 19th century, fashion designers began to emerge, distinct from the tailoring profession. Charles Frederick Worth, the Callot sisters, Jeanne Paquin, Jacques Doucet, and Jeanne Lanvin are considered the first fashion designers (Sterlacci, 2005, p. 36). Worth (1825–1895) was the pioneering fashion designer who separated fashion design from tailoring (Peterson, 2002, p. viii). Worth, the dressmaker and fashion designer of Empress Eugénie, wife of Napoleon III, opened a fashion house in Paris in 1858, where he produced custom designs for European and American elites who had enough money to commission bespoke garments. Worth was the first designer to create garments from his selected fabrics, rather than those chosen by his clients, and to showcase his designs on live models (Ferguson, 2008, p. 1521). Among those who transformed the craft of tailoring into fashion design after Worth were Jeanne-Marie Lanvin (1867-1946), Paul Poiret (1879-1944), Jean Patou (1887-1936), and Coco Chanel (1883-1971), who hold a special place in the history of fashion. Like artists, these designers signed their garments by adding labels, proving themselves as arbiters of taste in dress (Cunningham, 2003, p. 3; Svendsen, 2006, pp. 90-91).

French fashion houses established a professional organisation in 1868, under the leadership of Worth, to prevent the imitation of their designs. This organisation was named the "The Haute Couture Trade Union" (Chambre Syndicale de la Haute

Couture). This initiative contributed to Paris becoming the world capital of fashion. Legally registered in 1945, the association is now known as the "French Federation of Haute Couture and Fashion" (Fédération Française de la Haute Couture et de la Mode) (Mcellin, 17 November, 2022). The primary function of this organisation is to organise the twice-yearly collection shows and to help protect designs by granting copyright to its registered designers. In addition, promising fashion designers can receive training at the organization's school (Peterson, 2002, pp. viii-ix; Springsteel, 2015, p. 10).

Bespoke tailoring for men's suits and coats has developed in the UK on Savile Row in London. The handmade luxury clothing shops here have approximately five hundred years of history. For example, Norton & Sons was founded in 1821. "Although bespoke is not a protected label like couture, the Savile Row Bespoke Association, founded in 2004, has attempted to establish a standard by setting minimum requirements for the prestigious use of a garment's name." (Springsteel, 2015, p. 10). From the early days of the Industrial Revolution until the 1920s, French design in women's clothing and British tailoring in men's clothing were considered the pinnacle of quality (Roetzel, November 15, 2017). After the Second World War, the tailoring profession began to decline with the rise of ready-to-wear clothing. According to Menswear writer Bernhard Roetzel, tailors who claimed to produce the "most fashionable" garments at the beginning of the 20th century now emphasise that they are "timeless." A significant reason for this is that the ready-to-wear sector has replaced custom-made clothing (November 15, 2017).

The above section defines tailoring as a craft and briefly outlines its historical development. As can be understood from this information, tailoring and fashion design are distinct professions, despite their overlapping areas. Although the craft nature of fashion design is based on the traditional tailoring/dressmaking profession, fashion design has been definitively separated from tailoring with the aesthetic concept developed by Charles Frederick Worth (1825-1895). As a result of the analysis, it can be comfortably stated that fashion design is a unique field of art and design, but it is also a craft because it requires technical skills in one dimension.

Due to this breadth of movement within the field of fashion design, designers can define themselves as designers like architects or engineers, artisan designers like painters or sculptors, or craftsman-designers like tailors or seamstresses, depending on which end of the spectrum they are closer to. One must be careful when labelling fashion designers, because rigid distinctions such as "designers are either artisans or artists" may not always be valid. First and foremost, how designers see themselves is valid information, and designers may define themselves differently based on their origins. For example, when fashion journalist Susannah Frankel asked Belgian fashion designer Martin Margiela in an interview, "Do you think fashion is an art or a craft?", Margiela replied: "Fashion is a craft, a technical know-how and not, in our opinion, an art form. Each world shares an expression through creativity though through very divergent media processes." (Frankel, 2001, p. 35).

3.2. Fashion Design as Art

While the concept of "craft" is relatively easy to define, defining the concept of "art" is quite difficult; indeed, according to some critics, there is no single agreed-upon answer to the question "What is art?" (Canaday, 1980, p. 3). This situation stems from the fact that "art" is a multidimensional concept and that the concept's meaning can

vary according to historical and cultural context. The Britannica Dictionary provides seven different definitions of the concept of "art" (2025, July 15): The one that could support the assumption that "fashion design is a form of art" is that art is "an activity undertaken to create something beautiful or to express important ideas or feelings". Another definition describes art as "human creativity separated from the natural world." According to John Canaday (1980, p. 362), who proposed this definition, what drives humans to create and explains the magic of art is a kind of quest for satisfaction, which cannot be precisely defined. Whatever the answer to the question "What is art?" would be, it can be said that art enriches life infinitely.

Sung Bok Kim, in his essay titled "Is Fashion Art?", states that the debate surrounding this question began with the 1983 retrospective exhibition of Yves Saint Laurent's 25-year career at the Costume Institute of the Metropolitan Museum of Art in New York, but in fact, the origins of the debate are quite old (1998, pp. 51-52). In the West, between 1850 and 1920, anti-industrial and anti-technological movements (romanticism, naturalism, etc.) initiated a broad-based "Modern Design Movement" centred on the idea of "beauty in nature". Artists who developed within this movement supported the liberation (body reform) movement, particularly in women's fashion, and guided the "Aesthetic Dress" fashion. Fashion houses like Worth, Grace et Cie., Liberty's, and Mariano Fortuny created corsetless aesthetic dresses from soft, flowing fabrics and unusual colours. It was believed that these dresses would improve women's health, and an understanding prioritising ease of movement in the fashion silhouette, supported by modern artists, became dominant (Cunningham, 2003, p. 164).

As defined by fashion and art historian Anne Hollander, "Clothing [fashion] is a visual art form, an image creation that uses visible identity as a tool" (1988, pp. 311-313). According to Sung Bok Kim, fashion's most important feature is an "aesthetic" pursuit, which elevates it to the status of art (1998, pp. 51-52). Sociologist Elizabeth Wilson, who agrees with Hollander and Kim's views, argues that fashion is a cultural phenomenon and a branch of modern art. It is also a form of mass entertainment (2003, pp. 9, 60). Behavioural scientist George B. Sproles defines fashion as a complex, process-oriented phenomenon, and the typical characteristic of fashion products is that they are aesthetic; any fashion theory must necessarily include aesthetic components (1985, p. 63).

Those who claim that fashion and fashion design are not art include Diana Vreeland, former editor of Harper's Bazaar and Vogue magazines, and former special advisor to the Costume Institute at the Metropolitan Museum of Art in New York. Vreeland has persistently defended the view that "fashion is not art," emphasising that art can only inspire designers with its spiritual and extraordinary aspect. According to Vreeland, fashion is concerned with daily life and has a physical vitality, whereas the vitality of art is not so tangible... (Zelenko, 1981, p. 88). Art critic Michael Boodro is also among those who claim that fashion is not art. Boodro states, 'Art is for art's sake, fashion is an industry... Art is the creation of individuals illuminated by sublime inspiration and is superior to commerce... Fashion, however, is not art. Fashion is meaningless and insignificant.' Art is eternal, while fashion designs are transient.' (1990, pp. 120-123, 127). Vreeland and Boodro's distinction between fashion and art is based on the commercial aspect of fashion. However, there are also those who see this aspect as an advantage. Among them, Richard Martin believes that thanks to this natural advantage, the public shows more interest in and is more knowledgeable about fashion than art (Turner, 1996, p. 16; cited in Kim, 1998, p. 57).

As a result of all the discussions presented above, art, craft and science systems constitute categorically different fields, but they reflexively influence each other and provide mutual benefits. Howard Saul Becker argues that fashion designers can be either craftsman-artists or artist-craftsmen, depending on their tendencies; the former prioritise function in their creations, such as 'comfort' or 'durability', while the latter place greater importance on aesthetic values. According to the author, most luxury fashion designers are artist-craftsmen, while most industrial fashion designers are craftsmen-artists (2013, pp. 322-323, 339-346). An important point highlighted in this paper is that fashion design is a scientific field beyond the debate of craftsmanship and artistry.

3.3. Fashion Design as a Scientific Discipline

The third perspective on the identity of fashion design argues that the current debate over whether fashion design is craft or art is meaningless—because it is both—and that it is more realistic to discuss the scientific dimension of fashion design.

Throughout history, fashion design education has been said to have followed three developmental stages. The first stage (the classical period) spans from the beginning of the Renaissance to the mid-19th century. During this period, fashion was not widespread among the general public but was more concerned with the clothing styles of the aristocracy. In this classical period, the tailoring profession was organised within guilds, and professional knowledge was passed down from generation to generation within an apprenticeship, journeyman, and master hierarchy. Towards the end of the period, the "fashion design" profession emerged within the Haute Couture framework. The second phase (modern period) covers the period from the mid-19th century to the mid-20th century. Haute Couture design peaked during this period, while the ready-to-wear industry emerged and developed rapidly. In the second phase, "fashion schools" were established to train the designers and other professionals needed by the fashion industry. These schools are not part of the formal university system but private educational institutions that teach technical and artistic knowledge. The fact that professional expertise and skills began to be trained in these institutions using formal methods based on a curriculum rather than traditional methods is an important development in fashion history. The third stage (postmodern period) covers the mid-20th century to the present day. During this period, the fashion system became institutionalised and a global phenomenon; in this latest period, while historical fashion schools continue to exist, "fashion design" has taken its place in the university system as a scientific discipline, but its position is controversial.

Today, the classification of Natural Sciences, Formal Sciences, and Social Sciences is widely accepted (Tutar, 2020, pp. 14–19). In this three-part classification, "fashion design" falls under the Social Sciences category (Kawamura, 2016, p. 97). However, since "Fashion Design" is located at the intersection of scientific fields, its place in the scientific system is relative. In this case, a more detailed classification is required. The Frascati Manual 2015 relatively meets this need. This manual is an international standard prepared by the Organisation for Economic Co-operation and Development (OECD) since 1963 to define, classify, and measure countries' scientific research and development (R&D) activities. In the Frascati Manual, R&D activities in science are divided into six categories: Natural Sciences, Engineering and Technology, Medical and Health Sciences, Agricultural and Veterinary Sciences, Social Sciences, and Humanities and Arts (OECD, 2015, p. 59).

In this six-category classification, "fashion design" falls under the "Arts" group within the "Humanities and Arts" category. However, it is interesting to note that fashion design now intersects with the other five categories due to its inclusion of new features such as "algorithmic pattern making," "digital pattern making," "wearable technology," "smart fabrics," "environmentally friendly materials," and "sustainable clothing." Due to its multidisciplinary nature, fashion design cannot be definitively placed within a specific scientific discipline category. This issue is also clearly visible when examining the place of fashion design within academic organisations. Taking the academic organisation in Türkiye as an example, fashion design departments are found in eight different types of faculties (Table 1). As stated in the introductory problem statement, this is a significant issue in clarifying the scientific identity of fashion design. As a proposed solution to this problem, fashion design departments could be grouped with other design departments with a predominantly artistic nature, such as textile design, graphic design, and stage design, under the name "Faculty of Theoretical and Applied Artistic Design Sciences".

Another critical issue in fashion design as a scientific discipline is the "method and theory" problem. In terms of knowledge production, the most fundamental function of science is the explanatory function, whereby humans, curious about the reasons behind the things around them, seek answers to the question "why?" in accordance with the scientific method. The most advanced form of explanation is "theory" (Karasar, 2012, pp. 9-10).

Given that the most fundamental function of science is explanation, it is expected that the discipline of fashion design convincingly explains the processes of design, production, presentation, consumption, and change in clothing or, more generally, fashion. It has been suggested that "fashion design is, by its very nature, an interdisciplinary field and therefore requires an interdisciplinary methodological approach in academic studies" (e.g., Gerrie, 2023, p. 21). There is even a debate about whether fashion (and therefore its design) should be included in the social sciences (e.g., Tickner, 1977, p. 56) or the arts (e.g., Wilson, 2003, p. 48; cited in Barnard, 2014, p. 19). However, the fundamental condition for a particular field in science to gain an independent disciplinary identity is its ability to develop its own methods and theories (Tseëlon, 2001, p. 436). According to this condition, it can be said that the proposed interdisciplinary multiple methods and theories are appropriate for the field of "fashion studies" rather than "fashion design". Over the last 20-30 years, academics and practitioners such as social scientists, artists, technology engineers, businesspeople, and marketers have been able to conduct separate or joint studies in fashion studies. Numerous fashion-related theories have also been developed in this field, such as design, textile, color, and cultural theories. The disciplines that produce these theories have their own ideas and conceptual frameworks to explain the fashion system (Riello & McNeil, 2010, p. 7; Barnard, 2014, p. 19). In this context, the discipline of fashion design should also develop as a discipline that contributes to the field of fashion studies with its own conceptual framework and theories. Otherwise, there is a risk that the field of fashion design will be occupied by other disciplines. It is known that the field of fashion design possesses advanced "methods and techniques" such as sketching, illustration, pattern making, draping, sewing, fabric manipulation, technical drawing, fitting, and CAD (computer-aided design) software (GITD, 28 July, 2023):

Two solid pieces of evidence demonstrate that the fashion design discipline, which is competent in methodology, is deficient in theories; There are no scientific publications in the literature and no courses in school curricula under the title "Fashion Design

Theories/Approaches" (Table 1). The relevant publications in the literature are "fashion theories" rather than "fashion design theories". The problem of the lack of fashion design theories in education is also experienced in countries where the fashion design discipline is institutionalised. For example, Valerie Steele, director of the Fashion Institute of Technology (FIT) Museum, has stated that theory is not given much space in the undergraduate courses at FIT, one of the most established fashion schools. According to the author, the only exception is the elective course "Clothing and Society" taught by Yuniya Kawamura. Even in this course, it is not fashion design theories that are addressed; instead, various sociological approaches, such as fashion, appearance, identity, system, and culture, are used. Steele states this situation stems from fashion design education prioritising marketing over creativity (Skjold, 2008, pp. 77-80). In their work Thinking Through Fashion - A Guide to Key Theorists (2016), Agnès Rocamora and Anneke Smelik highlight that social and cultural theories such as Marxism, feminism, and structuralism dominate the field of "fashion studies" and label sixteen scholars, most of whom are sociologists, as "key theorists who speak about fashion" (JD Institute of Fashion Technology, 11 September, 2023). Interestingly, fashion designers are not included among these theorists. This is a significant issue because when fashion designers' perspectives are not reflected in theories, the creative, aesthetic, functional, and conceptual processes involved in fashion design and production cannot be adequately explained.

One of the theoretical frameworks of fashion design is "design approaches". Volonte has argued that design approaches, which vary according to the designer, have a specific geographical logic and has attempted to validate this using the example of Milan. According to the research findings, Milanese designers have developed a design approach based on respect for the body, creative restraint, attention to consumer needs, conservatism, and commercial profit (2012, pp. 399-402). Based on this and similar examples, fashion design theories are expected to explain design approaches within the framework of the ecological circles of the fashion system (designer, community, society, and inter-societal levels). "Fashion design theories" with all this content and scope will prove the scientific competence of the field. Furthermore, these theories are also necessary for "students studying fashion design to be able to create unique visual and conceptual strategies in the fashion industry" (Skjold, 2008, p. 65).

Many authors who acknowledge that the fields of textile and fashion design have failed to develop original theories suggest that existing conceptual models and metatheories should be rapidly theorised to overcome this problem (Hutton, 1991; Nagasawa, 1991; Rudd, 1991; Lipovetsky, 1994; Skjold, 2008, et al.). Without exceeding the scope of this study, it would be useful to introduce a few of these briefly:

Some studies in the literature could be referred to as "Fashion Design Process Models". Examples of such studies include Kathryn McKelvey and Janine Munslow's work entitled "Fashion Design: Process, Innovation & Practice" (2012) and Fiona Dieffenbacher's work entitled "Fashion Thinking - Creative Approaches to the Design Process" (2021). In these models, the Fashion Design process consists of five fundamental stages: [1] Analysing the Brief, [2] The Design Process, [3] Prototyping, [4] The Chosen Range or Collection, and [5] Promotion. In this model, which focuses on the process rather than the outcome, fashion design is theorised as a cyclical and creative system.

Another example that can be theorised in fashion design is the "Designer's DNA/ Signature Model". This model claims that fashion designers develop a recognisable and consistent design language throughout their collections. For example, a piece bearing the signature of Coco Chanel is recognised by elements such as timelessness, simplicity, comfort, tweed fabric, quilted patterns, and pearls, while a piece bearing the signature of Cristobal Balenciaga is recognised by adaptations of the "three-quarter length dress sleeve" (Crane, 2003, p. 201).

Other conceptual models are expected to be theorised in fashion design. The "Clothing Comfort Model" developed in social psychology can be adapted to fashion design to balance functionality and aesthetics. Richard H. Nagasawa conducted a metatheory analysis to identify and define the fundamental elements of this model (1991, pp. 56–58).

As another example, the "Fashion Narrative Theory" from fashion theories can also be adapted to the field of Fashion Design. This adaptation could involve the designer conceptualising the fashion collection they are preparing as if it were a novel's chapters or main characters (Dieffenbacher, 2021).

Another model example is the "Zero Waste Fashion Design Approach," developed in the industrial sector in the 1970s and adopted in the field of fashion design in the 2000s. This model "refers to fashion design that does not waste fabric during production by integrating pattern cutting into the design process." Among those who have endeavoured to theorise this approach, Swedish Fashion Designer Rickard Lindqvist is a pioneering figure. The designer has stated that he is "working on an alternative pattern cutting system derived from real moving bodies interacting with fabric" (Rissanen & McQuillan, 2023, pp. 1-3, 46-48).

4. RESULTS

This study began with two fundamental problems observed by the researcher in the field and comprehensively expressed in the Introduction: the lack of a common conceptual definition of the field and the need to strengthen its scientific identity.

As discussed in the introduction of the study, the two issues addressed in the article were primarily examined through a review of the existing literature. The literature either fails to address the relevant topics, addresses them only partially, or addresses them indirectly. The statement "there is no common definition of fashion design," which is expressed as the first problem, has not been found in scientific publications (I apologize if any overlooked publications exist). Regarding the second problem, "the identity of fashion design," there are indirect references.

After reviewing the relevant literature, a curriculum review was conducted using Türkiye as an example. According to Barnard's observation, in the UK and the US (as well as in Türkiye and many other countries), fashion design theories are included in educational curricula as "complementary studies" outside the studio or as one of the elective courses with a weight of 20-30%. This situation reveals that decision-makers and implementers of education systems perceive complementary studies, which encompass the examination of art and design theory, as a conceptual deviation that is distant and unnecessary from the primary practical and applied subjects of art and design (2014, p. 9).

The table provided in the appendix of the paper lists 35 different four-year active education programs in "fashion design" and "textile and fashion design" departments under faculties affiliated with higher education institutions in Türkiye. When examining the curricula of these departments, it is evident that the limited theoretical courses are based on a scientific approach grounded in "fashion theories" rather than "fashion design theories." Only Yeditepe University and Eskisehir Technical University offer four courses directly titled "theory/approach in fashion design," and only one of these courses is compulsory. This analysis clearly demonstrates the need to develop theories in the field of fashion design. Comprehensive models that can be theorized in this field are discussed in the analysis section of the study.

5. DISCUSSION AND CONCLUSION

The fashion system, with its economic, socio-cultural, and ecological dimensions, and the field of fashion design at its core, is gaining increasing importance worldwide. The definition of fashion design as "the art and process of examining materials and fabrics and creating new garments in line with aesthetic understanding" (JD Institute of Fashion Technology, January 20, 2021) is somewhat inadequate for this professional and multifaceted field, which combines creativity and technical skills. This is because, contrary to popular belief, fashion design is not limited to clothing. Accessories, such as jewelry, shoes, hats, and bags, are also essential components of fashion and must be carefully designed. Since design activities are carried out according to specific methods and techniques, science and technology are integral to the design process. Since design objects are traded, fashion design is also linked to the economic sector. Furthermore, the raw materials extracted from nature and the waste generated during the production and consumption of clothing and accessories are also relevant to ecology. Consequently, the lack of a standard definition for such a broad field in the literature is a serious problem. The multidimensional nature of the concept makes definition difficult. Based on this, the study proposes a three-dimensional conceptualisation of fashion design. The proposed definition is as follows: "Fashion design is a multidimensional field of theory and practice that involves the use of technical skills (craft) in certain stages of clothing and accessory production, the expression of aesthetic and cultural ideas (art), and the systematic development of design knowledge, innovation, and research (science)." A similar definition, but with less emphasis on craftsmanship, can be found in the article "Art and Science in Textile and Fashion Design (Tekstil ve Moda Tasarımı Açısından Sanat ve Bilim)" by academic Nuray Erbıyıklı. According to the author, Fashion Design is "an applied field encompassing concepts such as creation, technique, innovation, aesthetics, and science." In other words, fashion design is "a field where the scientific approach to technique and technology merges with creative thinking and aesthetics... design is both science and art." (2011, p. 48).

The second issue addressed and examined in the study was determining the place of fashion design within the classification of sciences and establishing its scientific identity. As a second finding of the study, this problem, which should be addressed particularly by academics, can only be overcome through the development of theoretical frameworks.

The pace of change in this interdisciplinary and broad field keeps designers under constant pressure to maintain their creative momentum. New developments in mass production and information technology are progressively shortening the time between design and the final product entering the retail environment, prompting brands to seek

new and diverse products to expand their reach continually. In such an industry, the need for well-trained personnel is inevitable. In line with this, state universities and private colleges offering education in this field organize bachelor's degree programs and specialized courses to train designers for the fashion industry (McKelvey & Munslow, 2012, p. 1). Fashion design has advanced through various application methods, but gaps in the theoretical aspect are clearly evident when examining the curricula of academies offering education in fashion design.

The scope of the study encompasses 35 undergraduate programs that offer a four-year education under faculties affiliated with higher education institutions in Türkiye. Departments that were being established at the time of the research and had not yet begun accepting students, as well as textile departments that did not include "fashion design" in their names, were excluded from the scope. In addition, the curricula of the 35 departments that comprised the sample were obtained from the universities' own websites and information packages, focusing on course names rather than course content. Although many of the departments examined included courses such as "Fashion History" as compulsory subjects, which covered fashion diffusion, essential fashion designers, and fashion trends, more evidence is needed to establish their scientific validity.

6. RECOMMENDATION AND FUTURE DIRECTIONS

As explained in detail in the fashion design section, the introduction of formal, curriculum-based teaching methods in fashion design education represents a significant development in the history of fashion. Fashion schools, established in the late 19th century due to the emergence of the ready-to-wear industry and the need for educated personnel to work in this sector, have undergone significant evolution and change from the mid-20th century to the present day. It is thought that the stagnation of theoretical developments in the field of fashion design, which has been the subject of academic studies for about a century, stems from the fact that research into the scientific aspects of the field has been neglected. At the same time, the literature has focused on debates about whether fashion design is a craft or an art.

In scientific studies, however, the work of researchers in the social sciences, such as economists, sociologists, and psychologists, tends to take precedence over that of fashion designers. Naturally, in these studies, the researcher's area of expertise determines their perspective on fashion design. For example, while an economist approaches fashion design with a focus on marketing and sales strategies, a sociologist develops theories focusing on social inequality and class conflicts. Although these studies make a valuable contribution to the field, to establish its scientific identity, it is necessary for fashion designers well-versed in the fashion industry and design processes to increase their research in this area. Based on the analysis conducted in this article, it is believed that defining fashion design as a field that encompasses craft, art, and science will make a significant contribution to the literature.

This study in the field of fashion design has led to the development of some fundamental recommendations for adopting a more scientific approach in fashion design education. First, it is recommended that courses titled "fashion design approaches/theories" be included as compulsory courses in the curricula of the 35 departments examined in the study. This will increase interest in fashion design theories and strengthen the scientific identity of the field.

Secondly, as a developing country, Türkiye must establish sectoral dominance in the fashion industry, as it has in tourism, construction, and textiles, to transition into a category of developed countries. In this regard, it would be more beneficial to separate fashion design education from the "textile" component. Although the two fields feed off each other, textile design and fashion design are considered separate fields, and it is thought that the scope of fashion design education is reduced in combined programs.

Ultimately, for Türkiye to become a major player in fashion design, Istanbul must join the global network of fashion cities as part of a comprehensive initiative. In addition to other activities to be carried out for this purpose, it is recommended that the "Istanbul Fashion Design University" be established, which will provide education exclusively in the field of fashion design. Looking at examples around the world, there are higher education institutions that focus entirely on fashion and design, such as the Fashion Institute of Technology (FIT), Polimoda, Istituto Marangoni, ESMOD, LCF – London College of Fashion in the West, and Bunka Fashion College, known as Japan's first fashion school, in the East. These fashion schools offer curricula with varying scopes depending on the specialization areas of fashion design education.

Redesigning the curriculum for fashion design education, which encompasses various professions within the industry, would also be an effective development. For example, a model where individuals specializing in haute couture design after their education and designers entering the ready-to-wear sector take courses according to their areas of expertise would be more effective. Similar to the proposed model, Parsons School of Design in New York, established in 1896 and ranked among the world's top ten fashion schools, has an innovative academic structure consisting of five schools: School of Art and Design History and Theory; School of Art, Media, and Technology; School of Built Environments; School of Design Strategies; and School of Fashion (Yezhova et al., 2018, p. 91). These developments and future work in the field will elevate its scientific identity to a significant position.

City	University Name	Status	Faculty Name	Department Name	Is there a course called "Fashion Design Theories/Approaches/Methods/ Techniques" in the curriculum?
İzmir	Izmir Ekonomi University	Foundation	Faculty of Fine Arts and Design	Textile and Fashion Design	Fashion Theory (Compulsory)
Adana	Çukurova University	State	Faculty of Fine Arts	Textile and Fashion Design	-
Istanbul	Istanbul Ticaret University	Foundation	Faculty of Architecture and Design	Textile and Fashion Design	Colour Theory and Applications (Compulsory)
Istanbul	Mimar Sinan University of Fine Arts	State	Faculty of Fine Arts	Textile and Fashion Design	Drawing Presentation Methods 1-2 (Compulsory) Colour Theory 1 (Elective) Colour Theories (Elective)
Istanbul	Istanbul Technical University + (FIT)	State	Faculty of Textile Technologies and Design	Fashion Design	-
Isparta	Süleyman Demirel University	State	Faculty of Fine Arts	Textile and Fashion Design	-
Istanbul	Istanbul Aydın University	Foundation	Faculty of Fine Arts	Textile and Fashion Design	Design Theory and Methods (Compulsory)
Istanbul	Haliç University	Foundation	Faculty of Fine Arts	Textile and Fashion Design	Design Theories (Elective)
Ankara	Atılım University	Foundation	Faculty of Fine Arts, Design and Architecture	Textile and Fashion Design	Design Principles and Methods (Elective)
Istanbul	Yeditepe University	Foundation	Faculty of Fine Arts	Textile and Fashion Design	Interdisciplinary Approaches to Colour in Fashion Design (Elective) Contemporary Art Theories and Concepts (Elective) Theories of Art and Culture (Elective) Feminist Approaches in Fashion Design (Elective) Analytical Approaches in Fashion Design (Compulsory)
Istanbul	Istanbul Bilgi University	Foundation	Faculty of Applied Sciences	Textile and Fashion Design	Design Anthropology: Theory and Practice (Elective) Contemporary Art Theory and Practice 1-2 (Elective) Art and Theory (Compulsory)
Istanbul	Istanbul Okan University	Foundation	Faculty of Art, Design and Architecture	Textile and Fashion Design	-
Ankara	Başkent University	Foundation	Faculty of Fine Arts, Design and Architecture	Textile and Fashion Design	Colour Theory (Compulsory) Fashion Presentation Methods (Elective)
Gaziantep	Gaziantep University	State	Faculty of Fine Arts	Textile and Fashion Design	Innovative Approaches in Textile Design (Compulsory)
Istanbul	Istanbul Nişantaşı University	Foundation	Faculty of Art and Design	Textile and Fashion Design	-
Uşak	Uşak University	State	Faculty of Fine Arts	Textile and Fashion Design	-
Çankırı	Çankırı Karatekin University	State	Faculty of Art, Design and Architecture	Textile and Fashion Design	Aesthetics and Art Theories (Elective)

Izmir	Izmir Katip Çelebi University	State	Faculty of Art and Design	Textile and Fashion Design	-
Istanbul	Doğuş University	Foundation	Faculty of Art and Design	Textile and Fashion Design	Design Theories (Elective)
Antalya	Akdeniz University	State	Faculty of Fine Arts	Textile and Fashion Design	-
Istanbul	Beykent University	Foundation	Faculty of Fine Arts	Textile and Fashion Design	Contemporary Art Theories (Compulsory)
Istanbul	Işık University	Foundation	Faculty of Art, Design and Architecture	Textile and Fashion Design	-
Ankara	Ankara Hacı Bayram Veli University	State	Faculty of Art and Design	Fashion Design	-
Konya	Selçuk University	State	Faculty of Architecture and Design	Fashion Design	-
Erzurum	Atatürk University	State	Faculty of Fine Arts	Textile and Fashion Design	-
Eskişehir	Eskişehir Technical University	State	Faculty of Architecture and Design	Textile and Fashion Design	Colour Theory (Compulsory) Creative Approaches in Clothing Design (Elective)
Kahramanmaraş	Kahramanmaraş Sütçü İmam University	State	Faculty of Fine Arts	Textile and Fashion Design	Innovative Approaches in Textile Product Design (Elective) Design Methods (Elective) Experimental Methods in Print Design (Elective) Original Textile Printing Methods (Elective)
Mersin	Mersin University	State	Faculty of Fine Arts	Textile and Fashion Design	Smart Textiles and Innovative Approaches (Elective)
Çanakkale	Çanakkale Onsekiz Mart University	State	Faculty of Fine Arts	Textile and Fashion Design	Fashion Theories (Elective)
Niğde	Niğde Ömer Halis Demir University	State	Faculty of Fine Arts	Textile and Fashion Design	-
Pamukkale	Pamukkale University	State	Faculty of Architecture and Design	Textile and Fashion Design	Design Theories (Elective)
Istanbul	Istanbul Topkapı University	Foundation	Faculty of Fine Arts, Design and Architecture	Textile and Fashion Design	Design Approaches in Historical Environments (Elective)
Istanbul	Istınye University	Foundation	Faculty of Fine Arts, Design and Architecture	Textile and Fashion Design	Drawing and Illustration Techniques (Compulsory) Design Theories (Elective)
Istanbul	Bahçeşehir University	Foundation	Faculty of Architecture and Design	Textile and Fashion Design	Fashion Theory (Elective)
Izmir	Dokuz Eylül University	State	Faculty of Fine Arts	Textile and Fashion Design	Innovative Approaches in Textile Product Design (Elective)

Table1 :
Academic Organisation of Four-Year Fashion Design Programmes in Türkiye, 2025

Conflict of Interest: There is no situation in this study that could give rise to a conflict of interest.

Ethical Approval: Ethical approval is not required for this descriptive study, which was conducted in accordance with the literature review method.

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REFERENCES

Barnard, M. (2014). Fashion theory - an introduction. Routledge.
Becker, H. S. (2013). Sanat dünyaları. (E. Yılmaz, Trans.). Ayrıntı.
Boodro, M. (1990). Art and fashion. Artnews, September 1990, 120–127.
Canaday, J. (1980). What is art? An introduction to painting, sculpture and architecture. Alfred A. Knopf, Inc.
Crane, D. (2003). Moda ve gündemleri – giyimde sınıf, cinsiyet ve kimlik. Ayrıntı.
Cunningham, P. A. (2003). Reforming women's fashion 1850-1920 - politics, health, and art. The Kent State University.
Dieffenbacher, F. (2021). Fashion thinking - creative approaches to the design process. Bloomsbury.
Diyarbakırlıoğlu, M. A. (2010). Kaybolan meslekler ve son ustalar. İstanbul Ticaret Odası.
Erbıyıklı, N. (2011). Tekstil ve Moda Tasarımı açısından sanat ve bilim. Akdeniz Sanat, 4(7), 48-50.
Erzen, J. N. (1997). Zanaat. Z. Rona & M. Beykan (Eds.), Eczacıbaşı sanat ansiklopedisi – Cilt 3 (p. 1960).
Ferguson (2008). Fashion designers. L. Likoff (Ed.), Encyclopedia of Careers and Vocational Guidance, J. G. Ferguson Publishing Company. 13th ed. (pp. 1521-1525).
Ferguson (2009). Tailors and Dressmakers. L. Likoff (Ed.), Career Discovery Encyclopedia – Volume 8, 7th ed. (pp. 48-49).
Frankel, S. (2001). Visionaries: interviews with fashion designers. V&A Publications.
Frings, G. S. (2014). Fashion - from concept to consumer. Pearson.
Gerrie, V. (2023). Borderless fashion practice - contemporary fashion in the metamodern age. Rutgers University.
Hollander, A. (1988). Seeing through clothes. Penguin.
Hutton, S. S. (1991). Concept clarification in textiles and clothing: a continuing agenda. In S. B. Kaiser, & M. L. Damhorst (Eds.), Critical linkages in textiles and clothing subject matter: theory, method and practice - ITAA Special Publication #4, (pp. 49–54). International Textile and Apparel Association, Inc.
JD Institute of Fashion Technology (2021, January 20). Fashion Designing is a Combination of Arts and Science. https://jdinstitute.ac.in/fashion-designing-is-a-combination-of-arts-and-science/
JD Institute of Fashion Technology (2023, September 11). Importance of theory in fashion design. https://www.jdinstitute.edu.in/importance-of-theory-in-fashion-design/
Jones, S. J. (2005). Fashion design. Watson-Guptill Publications.
Karasar, N. (2012). Bilimsel araştırma yöntemi – kavramlar ilkeler teknikler. Nobel Yayınevi.
Kawamura, Y. (2016). Moda-loji: moda çalışmalarına giriş. (Ş. Özüdoğru, Trans.). Ayrıntı.
Kim, S. B. (1998). Is fashion art? Fashion Theory, 2(1), 51-72.
Lipovetsky, G. (1994). The empire of fashion - dressing modern democracy. (C. Porter, Trans.). Princeton University.
Mcellin, S. (2022, November, 17). Chambre Syndicale de la Haute Couture. https://iandrummondvintage.com/blogs/fashion-history/chambre-syndicale-de-la-haute-couture
McKelvey, K., & Munslow, J. (2012). Fashion design: process, innovation & practice. Wiley.
Milliyet. (1993). Zanaat. A. Benk (Ed.), Büyük Larousse sözlük ve ansiklopedisi – Cilt 24 (p. 12710).
Nagasawa, R. H. (1991). Issues and new directions: a call for metatheorizing in textiles and clothing. In S. B. Kaiser, & M. L. Damhorst (Eds.), Critical linkages in textiles and clothing subject matter: theory, method and practice - ITAA Special Publication #4, (pp. 55–60). International Textile and Apparel Association, Inc.

OECD (2015). Frascati manual 2015. Organisation for Economic Co-operation and Development.
Peterson, A. T. (2002). Introduction. In A. T. Kellogg, A. T. Peterson, S. Bay, & N. Swindell (Eds.), In an influential fashion: an encyclopedia of nineteenth- and twentieth-century fashion designers and retailers who transformed dress, (pp. vii-xv). Greenwood.
Riello, G., & McNeil, P. (2010). Introduction: the fashion history reader; global perspectives. In G. Riello, & P. McNeil (Eds.), The fashion history reader - global perspectives, (pp. 1-14). Routledge.
Rissanen, T., & McQuillan, H. (2023). Zero waste fashion design. Bloomsbury.
Rocamora, A., & Smelik, A. (2015). Thinking through fashion - a guide to key theorists. I.B.Tauris.
Roetzel, B. (2017, November 15). The history of bespoke tailoring: now and then. https://www.gentlemansgazette.com/the-history-bespoke-tailoring/
Rudd, N. A. (1991). Textiles and clothing in higher education: strengthening linkages and conceptual identity. In S. B. Kaiser, & M. L. Damhorst (Eds.), Critical linkages in textiles and clothing subject matter: theory, method and practice - ITAA Special Publication #4, (pp. 24–32). International Textile and Apparel Association, Inc.
Schoeser, M. (2003). World textiles - a concise history. Thames & Hudson.
Skjold, E. (2008). Fashion research at design schools. Backhausen Aps.
Smal, D. & Lavelle, C. (2011). Developing a discourse in fashion design; what is research for fashion design? In A. Breytenbach & L. Faber (Comp.), 20/20 Design Vision - Conference Proceedings of The Sixth International DEFSA Conference, (pp. 192-198). Design Education Forum of Southern Africa. http://www.defsa.org.za
Springsteel, L. J. (2015). Becoming a fashion designer. Wiley.
Sproles, G. (1985). Behavioral science theories of fashion. In M. R. Solomon (Ed.), The Psychology of fashion, (pp. 55–70). Lexington.
Sterlacci, F. (2005). Fashion designer. In V. Steele (Ed.), Encyclopedia of clothing and fashion – vol. 2, (pp. 35-38). Thomson Gale.
Svendsen, L. (2006). Fashion: a philosophy. (J. Irons, Trans.). Reaktion.
The Britannica Dictionary. (2025, July 15). Art. https://www.britannica.com/dictionary/art
Tickner, L. (1977) Women and trousers - unisex clothing and sex role changes in the twentieth century. In Leisure in the twentieth century - history of design: Fourteen papers given at the Second Conference on Twentieth Century Design History 1976 (pp. 56-67). Design Council Publications.
Time-Life Books (1974). The art of sewing - basic tailoring. Ed. C. Kerwin. Time-Life Books.
Tseëlon, E. (2001). Fashion research and its discontents. Fashion Theory, 5(4), 435-451.
Turner, D. (1996). Couture de force. Artforum, March 15–17, 116.
Tutar, H. (2020). Bilim ve bilimlerin sınıflandırılması. In S. Ünal (Ed.), Sosyal bilimlerde araştırma yöntemleri (pp. 4-24). Atatürk Üniversitesi Açıköğretim Fakültesi.
Volonte, P. (2012). Social and cultural features of fashion design in Milano. Fashion Theory, 16(4), 399-431. https://doi.org/10.2752/175174112X13427906403723
Wilson, E. (2003). Adorned in dreams - fashion and modernity. I.B. Tauris.
Yezhova, O.V., Pashkevich, K.L., & Manoilenko, N.V. (2018). Comparative Analysis of Foreign Models of Fashion Education. Revista Romaneasca pentru Educatie Multidimensionala, 10(2), 88-101. https://doi.org/10.18662/rrem/48
Zelenko, L. S. (1981). Is fashion art? American Artist, 45(473), 87–88.

Nevsehir Ürgüp Mustafapaşa Cultural Heritage Information Design Proposal

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Abstract
Today, the increase in the number of visitors in touristic regions has amplified the need for clear, accessible, and universally understandable informational design solutions. In Mustafapaşa, Ürgüp (Nevşehir), the absence of informational panels in cultural heritage buildings and the reliance on verbal explanations constitute the main problem of this study. This research proposes a multilingual and inclusive informational design system for five selected heritage structures, featuring readable typography, raised legends for individuals with visual impairments, and QR codes that provide quick digital access to catalogues in four languages. The study is based on qualitative research methods, including literature review, field observation, and the examination of existing applications in Ankara. The proposed design aims to support accessibility, enhance visitor experience, and contribute to the international visibility and preservation of cultural heritage. If implemented, the system will ensure that visitors—local, foreign, and disabled—can access accurate information independently and effectively, fostering cultural awareness and strengthening heritage conservation.

Keywords
Accessibility, Cultural Heritage, Design, Information Design, Urgup.

1. INTRODUCTION

As the population and tourist numbers in cities continue to grow, cultural heritage structures, which have survived from the past to the present, need to feature informational designs that are easily understandable to all visitors, convey information accurately, and have a universal design. Furthermore, the need for informational designs that not only inform and guide users but also promote cultural heritage structures internationally, ensure their integration with their surroundings, and have an aesthetic appeal is increasing. Cultural heritage refers to all knowledge, beliefs, values, and behaviors accumulated by people from the past to the present, preserved, and transmitted to future generations through continuous and enriched processes, as well as the objects that are tangible reflections of these accumulations (Gumuscu, 2018: 108).

The overall goal of this study is to inform all visitors, whether local or foreign, whether they are mobile or visually impaired, about the historical structures located in the Nevsehir Urgup Mustafapasa district, using relief information in Turkish, English, German, Russian, and even Braille, and to promote the international recognition of these cultural values. The study also aims to provide rapid and understandable access to cultural heritage information in different languages whenever needed through QR code technology. This study fosters a sense of belonging and a sense of conservation awareness in the city, thereby fostering the protection of these values. The article generally employs qualitative research methods and a literature review. Document analysis techniques are also employed. With its rapidly growing population and tourists from around the world, travelers in the Nevsehir-Urgup area will be able to easily access information about historical buildings in Turkish, English, German, and Russian through the informational designs presented. Furthermore, considering the prevalence of visually impaired individuals today, Braille information will make life easier for the visually impaired. The study will enhance understanding of the importance of informational design in cultural heritage buildings and will guide future studies.

2. DESIGN

Today, design, a part of human life and a key factor in improving and facilitating the quality of life, is not merely a model, mold, or ornament; it is a creative act undertaken for a specific purpose (Becer, 2015: 32). The concept of design, which lies at the heart of all art forms, encompasses a wide range of fields, including orientation design, environmental graphic design, and informational design, depending on its intended use, production method, and functional characteristics.Informational design is defined as the translation of the complex, scattered, or unprocessed information we frequently encounter in our environment into meaningful knowledge (Baer, 2008: 12).

In Ankara, informational designs can be found at the Social Sciences University of Ankara, the Turkiye Is Bank Museum, and the historical buildings on Anafartalar Street. Informational designs generally include the name of the building, its architect, construction date, and a QR code (Figure 1).

Figures 1. Ankara National Cultural Heritage Information Design

Based on the problem of the general lack of informational activities in the historical cultural heritage structures in Nevsehir Urgup Mustafapasa and the fact that visitors mostly need explanations and a guide, informational designs and catalogues were prepared for 5 structures with the aim of informing visitors, regardless of whether they are local or foreign or disabled, about the structures, making these values known internationally and thus ensuring that the structures are protected.

3. NEVSEHİR URGUP CULTURAL HERITAGE INFORMATION DESIN PROPOSAL

Below, within the scope of the study, the information designs prepared for the cultural heritage structures of Marasoglu Bridge, Cami-i Kebir, Constantine and Helena Church, Cappadocia University Cankut Bagana and Cansever Mansion located in the Mustafapasa district of Nevsehir will be examined (Figure 2).

Figures 2. Nevsehir Urgup cultural heritage, information design

Cultural heritage structures, which serve as a social mirror and shed light on the city's history and identity, should be considered for visitors of all types local and foreign, elderly, young, children, disabled, and even illiterate. Informational designs should be designed to prevent any obstacles and ensure everyone can benefit from them. Given the hot summer and cold winter climates of the Urgup region, the use of plexiglass is considered durable, easy to work with, drill, and cut.

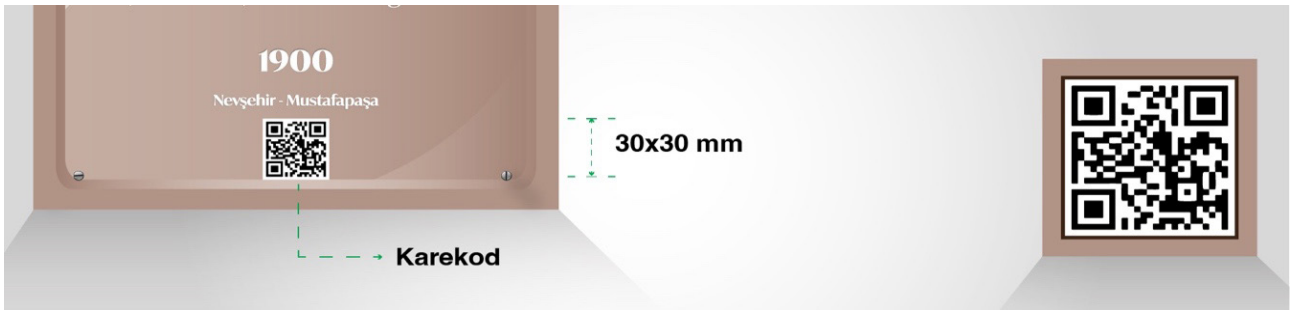
The cultural heritage informational designs for Mustafapasa, Urgup district, Nevsehir, include typography, raised legends for visually impaired individuals, numerals, and QR codes that allow access to catalogs prepared with smart device cameras.

The contrast between the background and typographic elements in the design of the informational design is a key element in ensuring readability. White typography on a dark background creates a strong contrast and enhances readability (Uebele, 2007:

67). The brown color of signs on Nevsehir's streets and avenues, coupled with the stone structure of the Cappadocia region, influences color selection during the design phase, and the same color tone is preferred for informational designs. White on a brown background and legends affects the readability of the letters, supports the message's transmission to the user, and emphasizes informational elements.

When implementing informational designs, one of the most crucial steps to consider is ensuring that they are compatible with the intended location, have readable legends, are resistant to heavy use and outdoor conditions such as rain, dust, and mud, and even possess universal design features that enable communication with users with different languages (Wyman, 2009: 73). Universal design is defined as the design of a sign, service, or form in a way that can be understood or used by everyone (Uslu and Shakouri, 2014: 8). Universal design aims to ensure that everyone, regardless of the user's gender, age, health status, or cultural background, can benefit from and access a product or environment equally. Considering the high tourist traffic in the Nevsehir-Urgup region and the visually impaired population in our country, the prepared informational designs are designed to be easily understood and readable by all people, whether local or foreign, old or young, or disabled. The universally applicable designs include Turkish and English descriptions of the historical building, its architect, or owner, as well as Braille information for visually impaired individuals. The Braille descriptions allow visually impaired individuals to access information without needing assistance or companionship, providing them with a barrier-free lifestyle.

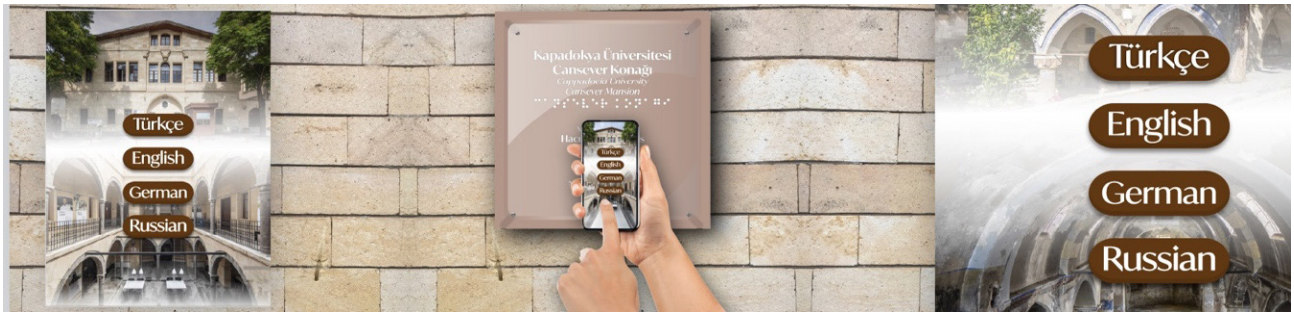
To complement the square format of the informational designs, QR codes placed at the bottom of the square design will allow users to easily, quickly, and clearly access information and visuals about the building. These QR codes, which can be read with a smart device's camera from approximately 60 meters away, direct visitors to the catalogs prepared in Turkish, English, German, and Russian. In addition, it allows visitors to learn important information about the structure, which they cannot see in their daily lives and need to do research, without needing a guide or someone else with knowledge to explain it, and it allows cultural heritage structures to be advertised on a global scale (Figure 3)



Figures 3. Nevsehir Urgup cultural heritage, information design, qr code

The informational designs are positioned in accordance with accessibility standards. This allows visitors to easily access information whether sitting, standing, or using a wheelchair.

By scanning the QR code on the informational design, an interface with catalog options in Turkish, English, German, and Russian is opened without the need for any additional software or device (Figure 4).



Figures 4. Nevsehir Urgup cultural heritage, catalogue, interface

4. **METHODOLOGY**

This research was conducted using qualitative research methods. Document analysis was employed in this study. The research explored Urgup, design, design fields, and the concepts of information design and cultural heritage that form the basis of the research. Theses, books, reports, articles, and electronic resources were reviewed through a review of domestic and international literature. The article was also enriched with literature reviews and examples of information design in use in cultural heritage buildings around the world. A trip to the Mustafapasa district of Nevsehir's Urgup district was conducted, and the historical cultural heritage structures covered in the article were photographed to establish the conceptual framework of the research. The walls and other locations of the structures where the information designs were planned to be placed were examined, their suitability for passenger use was checked, and photographs were taken. The prepared information designs were analyzed in detail based on their size, geometric structure, location in the space, material, typographic elements, color, directional arrows, and design elements such as QR codes. Additionally, catalogs prepared in four different languages to support the information designs were examined based on their design elements. Informational designs in Ankara were examined in terms of their materials, dimensions, design elements, and location, and photographs were taken to serve as examples in the article. The study analyzed books, theses, articles, and electronic resources from both domestic and international literature.

The study focused on Mustafapasa, Urgup District of Nevsehir Province, and five other cultural heritage structures in the region. The research was limited to the informational designs developed for these structures. During the review, both visual and physical observation techniques were utilized, and the current state of the structures was documented and photographed. The designs were analyzed in detail in terms of design elements such as material type, size, color, typography, pictograms, QR codes, and catalog accessibility.

Informational designs in Ankara were examined on-site and comparatively evaluated. During this process, design placement, accessibility, user-friendliness, and aesthetic compatibility were considered. This effort was made to ensure that the proposals developed in the application area of the research comply with both local and international standards.

5. FINDINGS

As part of the research, observations and document analyses conducted on five different cultural heritage structures in Mustafapasa, Urgup, Nevsehir, yielded various findings. In line with the primary objective of the study, it was observed that there were no informational designs on the structures in Mustafapasa, and that accessible informational materials, particularly for international visitors and individuals with visual impairments, were lacking.

Analysis of the five selected structures revealed that the developed informational designs blended seamlessly with the space, aesthetically integrated with the surrounding environment, and adopted a user-centered approach. The designs were designed to support multilingual communication with users in Turkish, English, German, Russian, and Braille, and to provide rapid access to information on mobile devices via QR codes. The informational designs were prepared in accordance with standards and regulations set by official institutions for use by users with no visual impairments, as well as those with partial vision loss, low vision, or visual impairment.

Compared to the informational designs used in Ankara, the proposed designs were found to be more accessible and inclusive in terms of both content and design. In this context, it has been demonstrated that the examples developed for Mustafapasa cultural heritage structures will not only be informative but will also make significant contributions to strengthening social awareness and sense of belonging.

6. CONCLUSION

Today, limited access to information about historical cultural heritage structures such as mosques, churches, bridges, and mansions in tourist areas, and the frequent need for a guide, poses a significant challenge for both local and international visitors with disabilities. The information designs developed in Mustafapasa, Urgup, Nevsehir, within the scope of this study increase accessibility with explanations in Turkish, English, German, Russian, and Braille, and provide fast and understandable access to cultural assets 24/7 through QR code technology.

The proposed designs not only provide an informative function but also contribute to the international promotion of cultural heritage through digitalization and multilingual access. These designs will foster a sense of belonging and an awareness of preservation in the city.

In conclusion, the study highlights the importance of information design in historical buildings and offers a model that can guide similar projects that can be implemented in cultural heritage structures throughout Nevsehir in the future.

Future studies recommend incorporating audio narration systems into information designs and evaluating user experience through surveys and observations. Furthermore, the implementation of such designs not only in Mustafapasa but also in cultural heritage buildings throughout Nevsehir will contribute to further strengthening accessibility and international promotion.

Ethical Statement

This study does not require ethics committee approval because it does not involve human participants, animal subjects, personal data, or experimental procedures. All methods and processes were conducted in accordance with the principles of research ethics.

Conflict of Interest Statement

The author declares that there is no conflict of interest regarding the preparation or publication of this study.

REFERENCES

Baer, K. (2008). Information design workbook: Graphic approaches, solutions, and inspiration + 30 case studies. Rockport Publishers.

Becer, E. (2015). İletişim ve grafik tasarım (10. baskı). Dost Kitabevi Yayınları.

Gümüşçü, O. (2018). Kapadokya tarihi üzerine araştırmalar. Kapadokya Üniversitesi Yayınları.

Uebele, A. (2007). Signage systems + information graphics. Thames & Hudson.

Uslu, A., & Shakouri, N. (2014). Kentsel peyzajda engelli/yaşlı birey için bağımsız hareket olanağı ve evrensel tasarım kavramı. Kastamonu Üniversitesi Orman Fakültesi Dergisi, 14(1), 7–14.

Wyman, L. (2009). Yönlendirme sistemleri. Grafik Tasarım Dergisi, 28, 68–77. https://doi.org/10.20488/sanattasarim.970744

Woman, Museum and Education: Feminist Narratives, and Pedagogical Approaches in Museums

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Abstract
Women are a key social group that must be addressed within multiculturalism due to their association with diverse cultural elements. This study explores how museums—as public cultural spaces—are utilized by women and how they contribute to shaping women's societal status. Museums are permanent, non-profit institutions serving society by researching, collecting, preserving, interpreting, and exhibiting tangible and intangible heritage. As accessible and inclusive institutions, they promote diversity, sustainability, ethical practices, and community participation while offering educational and reflective experiences. The first focus of the study examines women's employment in museums, their role distribution, and gender-based visitor profiles. The second focus critically analyzes the representation of women in museums through inclusive museology and feminist perspectives. The study includes examples from the United States, the United Kingdom, and Australia, as well as institutions in Türkiye: Erimtan Archaeology and Art Museum (Ankara), Odunpazarı Modern Museum (Eskişehir), Arter, and Istanbul Modern (Istanbul). Employing a qualitative design, data were obtained through document analysis and semi-structured interviews. Information on female artists, employment, and museum education programs was collected from documents, while interviews with museum educators were thematically analyzed. Findings, supported by direct quotations and visual data, show that although female staff rates are relatively high, women artists are significantly underrepresented. Experience-based and inclusive educational activities for both children and adults are common. Museum educators demonstrate an awareness of inclusive museology principles, reflected in institutional education policies. However, reaching diverse social groups remains the greatest challenge. The study concludes that partnerships, particularly with educational institutions, must be strengthened to promote inclusivity.

Keywords
Museum, Women, Inclusion, Women's Museums, Feminist Approach, Feminist Pedagogy

1. INTRODUCTION

Women are one of the fundamental social categories that must be addressed together with different cultural elements within the context of multiculturalism. Gender equality must become visible not only in political and economic spheres but also in cultural and artistic environments. At this point, museums play a critical role in the social representation and participation of women. Museums are institutions that build a bridge between the past and the present, preserve and transmit cultural heritage, and remain in constant interaction with society. The presence and visibility of women in museums is reflected not only in employment rates or visitor profiles, but also in the exhibited works, the construction of narratives, and educational activities.

Museums, according to the internationally accepted definition, are permanent, non-profit institutions at the service of society that research, collect, preserve, interpret, and exhibit tangible and intangible heritage. They are expected to be public and accessible, to promote inclusivity, and to support social diversity. The 2022 definition of museums by the International Council of Museums (ICOM) emphasized that museums are democratic, participatory, and inclusive public spaces. This shows that museums should not only focus on objects, but also on people, communities, and their cultural values. Therefore, the representation of women in these spaces is not merely a matter of individual participation, but also an indicator of cultural rights and social equality.

In museum studies, a feminist perspective makes it possible to reconsider gender roles and the representation of women in museums. Feminist pedagogy highlights equality, participation, and critical thinking in learning processes and offers an important approach that can be reflected in museum education programs. Within this context, museums should be re-examined in terms of making women artists visible, involving women in cultural production processes, and responding to the needs of women visitors. Special initiatives such as women's museums are the most concrete examples of this approach, while general museums are also expected to strengthen women's representation through inclusive policies.

The responsibility of museums in the context of gender equality is directly related to the United Nations' 2030 Sustainable Development Goals. In particular, Goal 5 "Gender Equality" and Goal 10 "Reduced Inequalities" make the inclusive role of museums even more visible. Museums, with their capacity to foster social transformation through education, culture, and art, can contribute to these goals by ensuring the equal representation and participation of women.

1.1. Purpose of the study

The starting point of this study is to question how women are positioned in museums and to what extent museums can inclusively represent women. The dimensions of women's employment in museums, the visibility of women artists, and the profiles of female visitors constitute the main components of this inquiry. Furthermore, within a feminist framework, the study aims to provide a critical evaluation of the representation of women in exhibition, narrative, and educational practices in museums. In this way, the claim of museums to be inclusive public spaces will be reopened for discussion in terms of gender. This study aims to analyze the current situation of museums in terms of women's representation and participation, to examine inclusive museology from a feminist perspective, and to make evaluations through both national and international

examples. Examining the presence of women in museums not only through quantitative rates but also through cultural production and critical pedagogical approaches will provide a new contribution to the debates on inclusive museology.

2.METHOD AND MATERIALS

This study is a case study designed within the framework of a qualitative research approach. Qualitative research allows for an in-depth examination of the experiences, meanings, and contexts of individuals, institutions, or phenomena. In this study, the representation of women in museums, feminist narratives, and pedagogical approaches were examined with a holistic perspective, and the phenomenon was presented in a multifaceted and detailed way.

2.1. Research Model

The study was designed as a case study. The case study model provides a flexible research design that allows for an in-depth examination of a particular phenomenon or phenomena. Within this context, the study examined both international examples and selected cases from Türkiye. In these museums, the representation of women artists and inclusive museology practices were analyzed.

2.2. Participants

The sample of the study consists of both international museums and selected museums from Türkiye.

International Examples: United States: Museum of Modern Art (MoMA), Los Angeles County Museum of Art (LACMA); United Kingdom: Tate Modern; Australia: feminist art collectives and exhibitions focusing on women artists.
Türkiye Examples: Ankara: Erimtan Archaeology and Art Museum; Eskişehir: Odunpazarı Modern Museum (OMM); Istanbul: Arter, Istanbul Modern.

2.3. Data Collection Tools

A Document Review Form was used to collect data in this study. This form was prepared to systematically record information obtained from exhibition catalogues, activity brochures, annual reports, digital publications, and exhibition texts of the selected museums. It included codes related to the representation of women artists, museum policies, inclusive museology practices, and educational programs.

2.4. Data Collection Process/Application

Document analysis was used as the main technique. Within this framework, exhibition catalogues, activity brochures, printed and digital publications, annual reports, and exhibition texts of the selected museums were reviewed. Through these documents, the representation of women artists, museum policies, and educational activities were evaluated.

2.5. Data Analysis

The collected data were analyzed using thematic analysis and presented in a systematic way.

2.6. Limitations

This study has several limitations that should be acknowledged. First, the research is limited to a selected number of museums both internationally and in Turkey, which restricts the generalizability of the findings. Second, the data collection relied primarily on document analysis and semi-structured interviews, and therefore may not fully capture the diverse experiences of visitors or other stakeholders. Finally, the scope of the study focused on women's representation and inclusive museology practices; broader intersections such as ethnicity, disability, or socio-economic status were beyond the immediate focus and remain to be further explored.

3. FINDINGS

3.1. The Public Position of Women in Multicultural Societies

With the concept of multiculturalism, which became more widespread especially after World War II, the rights of indigenous peoples, minorities, immigrants, and women continue to be debated. On the other hand, multicultural structures contribute to cultural diversity. A similar diversity can be observed in nature itself. Just as the decrease in biodiversity threatens the future of all species, the decline of cultural diversity among humans also endangers the future of all cultures and traditions. In the same way that ecosystems thrive through variety, human societies benefit from being composed of diverse groups, which contributes to their sustainability. For this reason, multiculturalism is a permanent and complex feature of the societies we live in. Whether accepted or rejected, it is an issue too important to be ignored (Seglow, 2003).

According to Taylor (1996), societies that are becoming increasingly permeable in the context of multiculturalism must recognize that different cultures are as valuable as the dominant culture. At this point, feminism and feminist groups play a crucial role in defending the rights of women, who have often been categorized as a subordinate group. Habermas (1996) associates the relationship between feminism and multiculturalism with the struggle for recognition of women's identities, which emerge in response to gender inequality enforced by the dominant culture and the marginalization of women to the peripheries of society.

Positioning herself as a non-Western feminist, Narayan (2020) criticizes the oppressive aspects of culture on women while also resisting the assimilation of colonized cultures by the West. In this context, the non-Western feminist movement must critique both male-dominated social structures and the requirements of Western-oriented feminist epistemology. In doing so, it is essential to center women's perspectives and positions in defining cultural parameters. Whether it involves women within minority groups in Western societies, women in non-Western societies, or women within dominant Western cultures, it is possible to interpret both culture and gender roles from multiple perspectives. Okin (1998) emphasizes the intricate structure of the relationship between culture and gender. To better understand this intertwinement, it is crucial to hear the voices of women and feminists from within those cultures in order to comprehend the inequalities that differ from one geography and culture to another.

Parekh (2002) includes feminists among the subgroups that constitute cultural diversity—alongside environmentalists, homosexuals, those who reject social norms, immigrants, indigenous peoples, and individuals seeking to live according to their own belief systems—because they demand a critical reconfiguration of dominant culture.

For this reason, one of the most important contemporary debates on multiculturalism is centered on the rights and demands of feminists. Just as multiculturalism advocates for equal rights for ethnic groups, minorities, and indigenous peoples without being subjected to discrimination by the majority, feminists similarly argue for equal rights and opportunities for women, who have historically been oppressed by men (Miller, 2003).

While defending multiculturalism and minority rights, it is also necessary to pay attention to aspects within ethnic cultures that may negatively affect the equal representation of women. For example, granting men the right to polygamy or preventing girls from receiving education raises critical questions as to whether such communities should be granted the rights they demand without condition. This situation shows that women fight not only for equality within the dominant culture but also within minority groups, struggling to exist on equal terms with men. From Okin's (1998) perspective, it is possible to argue that ensuring the rights and freedoms of minorities may result in outcomes detrimental to women. Addressing this dilemma, Kymlicka (1999) suggests that while meeting the rights and demands of ethno-cultural groups, attention should be paid to the internal restrictions imposed on women by cultural gender roles. He emphasizes that the cultural freedoms of these groups should be secured in such a way that these internal restrictions do not impede women's rights.

According to the definition of museums adopted by the International Council of Museums (ICOM) in August 2022, museums are permanent, non-profit institutions in the service of society that research, collect, preserve, interpret, and exhibit tangible and intangible cultural heritage. Museums are open to the public, accessible, and inclusive, and they promote sustainability. They operate and communicate ethically and professionally with the participation of communities, offering diverse experiences for education, enjoyment, and knowledge sharing (ICOM, 2022). Unlike the museum definition of 2007, the 2022 definition emphasizes inclusivity, diversity, and sustainability. This updated definition highlights that one of the most critical elements for museums to pursue sustainable policies is the development of inclusive programs. In order to implement inclusive policies, museums must diversify their audiences and plan exhibitions and educational programs that enhance their communication with different groups within diverse societies.

According to Karadeniz (2017), museums should create spaces for social and cultural debate that promote human rights and gender equality. Museums today must go beyond protecting cultural heritage and drawing from society; they must be shaped by society itself and engage in dialogue with all segments of multicultural communities. Therefore, museums are expected to be institutions that ensure the visibility of women's culture, remain open to women's participation, and are accessible to women. In response to existing inequalities and discrimination within society, the efforts of museums to achieve gender equality constitute an important step toward addressing such disparities (Krasny & Perry, 2020).

Among the museum types that play an important role in the transmission of cultural diversity and heritage are migration museums, minority museums, museums for the disabled, and genocide museums. Women's museums also hold an important position in preserving and transmitting women's culture. By designing their exhibition themes around female heroes and role models, women's museums aim to make women visible. Women's museums can be categorized into different types, such as museums of women's

arts, virtual museums, women's museums that organize temporary exhibitions, and women's museums that reinterpret and redefine the historical position of women (Karadeniz, 2018). The International Association of Women's Museums (IAWM), established to foster collaboration and networking among women's museums, reported in its 2023 list that there are 80 physical women's museums, 26 virtual museums, and 44 women's museum initiatives (International Association of Women's Museums, 2023). According to this list, there are five women's museums in Türkiye; among them, the Izmir Women's Museum is a physical museum, while the others operate as virtual museums.

3.2. Representation of Women Artists and Inclusive Museology Practices

One of the most prominent issues in discussing the position of women in museums is the low rate of representation as artists (Baldwin & Ackerson, 2017). International studies reveal that although the proportion of female staff in major museums is relatively high, the visibility of women artists in collections and exhibitions remains limited. For example, in the United States, institutions such as the Museum of Modern Art (MoMA) and the Los Angeles County Museum of Art (LACMA) have developed projects focusing on women artists, yet gender equality in collections has not been achieved. Similarly, Tate Modern in the United Kingdom has adopted policies to increase the visibility of women artists, while in Australia, feminist art collectives have strengthened the visibility of women artists. However, these efforts have not entirely shifted the balance in favor of women, as representation rates remain dominated by male artists.

United States – Museum of Modern Art (MoMA) and Los Angeles County Museum of Art (LACMA): Since the early 20th century, women have participated in the founding and management of museums, yet their representation in collections has remained low for decades. From the 1970s onward, under the influence of the feminist movement, women's artist collectives (e.g., West East Bag, Artemisia) opened new exhibition spaces and sought to increase women's visibility. However, research indicates that even today, gender equality in collections has not been achieved and that there are significant gender disparities in the income generated from artworks.

United Kingdom – Tate Modern: In recent years, Tate has taken steps to increase the visibility of women artists in its collections and exhibition policies. Nevertheless, reports indicate that representation still favors male artists and that the visibility of women artists is often ensured through thematic exhibitions. Rodney (2015) argues that the visitor in museums is no longer a passive recipient but rather a subject of "personalizable experience," shaped by neoliberal consumption and marketing strategies. In this transformation, Tate Modern has begun to rethink its educational, narrative, and participation policies for women in particular.

Australia – Feminist Art Collectives: Since the 1970s, feminist art movements have contributed to women artists finding a place in museums and galleries. Women-focused exhibitions, workshops, and educational programs have been organized (Bartlett & Henderson, 2016). The examples from Australia demonstrate that feminist narratives are reinforced not only through the selection of works but also through the dialogue established with audiences and the educational activities implemented.

The examples from Türkiye reveal a similar picture. At the Erimtan Archaeology and Art Museum in Ankara, the proportion of female employees is high, but the representation of women artists in temporary exhibitions is quite limited. At the Odunpazarı Modern Museum (OMM) in Eskişehir, efforts are made to increase the visibility of women artists in contemporary art exhibitions, though male artists remain dominant. Arter in Istanbul, with its experimental and contemporary art focus, frequently includes inclusive activities, yet the representation of women artists remains relatively low. Istanbul Modern, one of Türkiye's most renowned modern art museums, features fewer women artists compared to men. However, within the framework of inclusive museology, it organizes educational programs targeting women and various social groups. According to interviews, museum educators show strong awareness of inclusive museology and reflect this approach in their educational policies.

Nevertheless, the most significant barrier to inclusive museology in both international and national contexts is the inability of museums to adequately reach different segments of society. Socio-economic inequalities, spatial limitations, and cultural barriers hinder women and disadvantaged groups from benefiting equally from museums. To overcome this issue, museums need to establish stronger collaborations with educational institutions, non-governmental organizations, and local authorities.

In conclusion, the insufficient representation of women artists reveals how critical the feminist perspective is in museum studies. By incorporating feminist pedagogy into museum education programs, not only is the visibility of women increased, but visitors also develop awareness of gender equality. In this way, museums have the opportunity to strengthen their claim to be inclusive public spaces through concrete practices.

Erimtan Archaeology and Art Museum (Ankara): While the proportion of female employees is high, the representation of women artists in temporary exhibitions is limited. Inclusive and experience-based activities are implemented in its educational programs (Erimtan Museum, 2025).

Odunpazarı Modern Museum – OMM (Eskişehir): In its contemporary art-focused collections and exhibitions, efforts are made to enhance the visibility of women artists. However, male artists remain dominant. Its educational programs are enriched with inclusive content targeting both children and adults (Odunpazarı Modern Museum, 2025).

Arter (Istanbul): With its emphasis on experimental and contemporary art, Arter frequently hosts inclusive activities. Although it has policies aimed at expanding the space given to women artists, their representation remains low (Arter Museum, 2025).

Istanbul Modern: One of the most prominent modern art museums in Türkiye. The representation of women artists is lower compared to men, but within the framework of inclusive museology, educational programs targeting women and diverse social groups are carried out. According to interviews, museum educators have strong awareness of the concept of the inclusive museum (Istanbul Modern, 2024).

4. CONCLUSION

This study evaluated women's employment in museums, the representation of women artists, and inclusive museology practices from a feminist perspective. The findings revealed that, as in international examples, the proportion of female employees in Türkiye is relatively high; however, the visibility of women artists in collections and exhibitions remains extremely limited. This situation demonstrates that women are not sufficiently represented in cultural production processes and that art institutions struggle to achieve an egalitarian approach.

The findings also indicate that there are significant initiatives in terms of inclusive museology. The examined museums organize experience-based and inclusive educational activities for children, adults, individuals with disabilities, and disadvantaged groups. Such programs demonstrate that museums are not only spaces where objects are displayed, but also learning environments that support social awareness and participation. However, the greatest barrier to inclusive museology is the inability of museums to adequately reach different segments of society. Socio-economic barriers, spatial distance, and cultural obstacles limit the equal participation of women and other disadvantaged groups in museums.

Feminist pedagogy not only enhances the visibility of women in museum education programs but also enables visitors to develop awareness of gender equality. In this respect, a feminist perspective is a crucial tool for strengthening inclusive museology. Women's museums, feminist exhibitions, and women-focused programs contribute to positioning women in museums not only as visitors or employees but also as producers, narrators, and decision-makers.

5. RECOMMENDATION AND FUTURE DIRECTIONS

Building upon the findings of this study, it is evident that museums need to adopt more comprehensive and systematic strategies to address the underrepresentation of women and to strengthen inclusive museology practices. While positive steps have been taken in terms of educational activities and awareness among museum professionals, structural challenges remain that limit the visibility and participation of women. The following recommendations aim to provide practical directions for museums to enhance gender equality, expand inclusivity, and fulfill their role as democratic and sustainable public institutions.

1. Representation of Women Artists: Policies should be developed to increase the visibility of women artists in collections and exhibitions. Women's works should be included in permanent collections and provided with greater opportunities to be featured in temporary exhibitions.

2. Educational Programs: The principles of feminist pedagogy should be systematically integrated into museum education programs; gender equality–themed workshops, seminars, and exhibitions should be expanded and made more accessible.

3. Collaborations: Museums should establish stronger partnerships with educational institutions, non-governmental organizations, and women-focused initiatives. Such collaborations are vital tools for reaching diverse segments of society.

4. Accessibility and Participation: Concrete measures should be taken to improve the participation of disadvantaged groups in museum experiences, including transportation support, economic accessibility, and spatial arrangements.

5. Policy and Strategy Development: Museum policies prioritizing the representation and inclusivity of women should be established at both national and international levels. The implementation of these policies should be regularly monitored and reported.

Strengthening museums' claim to be inclusive and democratic public spaces is possible only through the equal representation of women and diverse social groups. The increased visibility of women as artists, employees, visitors, and decision-makers in museum environments is of great importance not only for achieving gender equality but also for sustaining museums as contemporary, participatory, and sustainable institutions.

Future Research Directions

Future studies could expand this research by including a larger and more diverse sample of museums, such as local, community-based, and children's museums. Comparative studies across different cultural and geographical contexts could provide a deeper understanding of how women's representation in museums varies globally. In addition, future research may focus on visitors' perspectives, examining how women perceive their experiences in museums and whether inclusive practices effectively address their needs. Finally, with the increasing prominence of digital platforms, further research could investigate the representation of women artists in virtual exhibitions and online museum collections.

Practical Implications

The findings of this study have important practical implications for museum professionals and policymakers. For museum administrators, the study highlights the need to develop concrete strategies and policies that ensure the increased visibility of women artists in both permanent and temporary collections. For museum educators, integrating feminist pedagogy into educational programs can foster greater awareness of gender equality among visitors. For cultural policymakers, the results emphasize the importance of supporting museums as inclusive and democratic public spaces that align with the United Nations' Sustainable Development Goals, particularly Goal 5 (Gender Equality) and Goal 10 (Reduced Inequalities).

Conflict of Interest: The authors declare that there is no conflict of interest regarding the publication of this study.

Ethical Approval: This study was conducted in accordance with the ethical principles and approved by the Ankara University Ethics Committee (Decision No: 224, Date: 06/11/2023).

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REFERENCES

Arter Müzesi. (2025). Arter. Erişim: 02.08.2025, https://www.arter.org.tr/

Baldwin, J. H., & Ackerson, A. W. (2017). Women in the museum: Lessons from the workplace. Taylor & Francis.

Bartlett, A., & Henderson, M. (2016). Feminism and the museum in Australia: An introduction. Journal of Australian Studies, 40(2), 129–139. https://doi.org/10.1080/14443058.2016.1152484

Erimtan Müzesi. (2024). Erimtan Arkeoloji ve Sanat Müzesi. Erişim: 11.04.2025, https://erimtanmuseum.org/tr/muze

Habermas, J. (1996). Demokratik anayasal devlette tanınma savaşımı. In A. Gutman (Ed.), Çokkültürcülük: Tanınma politikası (ss. 113–145). İstanbul: Yapı Kredi Yayınları.

International Association of Women's Museums. (2023). Women museums list. Retrieved June 30, 2023, from https://iawm.international/about-us/womens-museums/museums-list/

International Council of Museums (ICOM). (2022). Museum definition. Retrieved August 1, 2025, from https://icom.museum/en/resources/standards-guidelines/museum-definition/

İstanbul Modern. (2024). İstanbul Modern. Erişim: 09.04.2024, https://www.istanbulmodern.org/

Karadeniz, C. (2017). Müze ve toplum: Müzeyle topluma ulaşmak. İnsan ve Toplum Bilimleri Araştırmaları Dergisi, 6(8), 19–37.

Karadeniz, C. (2018). Müze kültür toplum. Ankara: İmge Kitabevi Yayınları.

Krasny, E., & Perry, L. (2020). Unsettling gender, sexuality, and race: 'Crossing' the collecting, classifying, and spectacularising mechanisms of the museum. Museum International, 72(1–2), 130–139. https://doi.org/10.1080/13500775.2020.1806595

Kymlicka, W. (1999). Liberal complacencies. In J. Cohen, M. Howard, & M. C. Nussbaum (Eds.), Is multiculturalism bad for women? (pp. 31–34). Princeton University Press.

Miller, D. (2003). Feminism and multiculturalism. In Political philosophy (pp. 92–111). Oxford University Press.

Narayan, U. (2020). Feminist epistemoloji: Batılı olmayan bir feministten perspektifler. In E. Erdoğan & N. Gündoğdu (Eds.), Türkiye'de feminist yöntem (2. baskı, ss. 37–51). İstanbul: Metis Yayınları.

Odunpazarı Modern Müze. (2025). Odunpazarı Modern Müze (OMM). Erişim: 02.08.2025, https://omm.art/tr

Okin, S. M. (1998). Feminism and multiculturalism: Some tensions. Ethics, 108(4), 661–684. https://doi.org/10.1086/233846

Parekh, B. (2002). Çokkültürlülüğü yeniden düşünmek (B. Tanrıseven, Çev.). Ankara: Phoenix Yayınları.

Rodney, S. (2015). Museums, discourse, and visitors: The case of London's Tate Modern (Doktora tezi). Birkbeck, University of London.

Seglow, J. (2003). Multiculturalism. In R. Bellamy & A. Mason (Eds.), Political concepts (pp. 156–168). Manchester: Manchester University Press.

Taylor, C. (1996). Tanınma politikası. In A. Gutman (Ed.), Çokkültürcülük: Tanınma politikası (1. baskı, ss. 42–84). İstanbul: Yapı Kredi Yayınları.

The Art of Keeping: Exploring Narrative Pedagogy for Emotionally Durable Fashion Design

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Abstract
This paper introduces a pedagogical framework for understanding emotionally durable fashion objects through four critical qualities: rarity, patina, sentimentality, and functionality. Drawing on Jonathan Chapman's work on emotionally durable design and Christine Harold's concept of rhetorical agency of objects, it proposes that fashion education must extend beyond aesthetics to engage garments' material and rhetorical agency as active participants in shaping meaning, connection, and cultural narrative. Through assignment-based pedagogy, students explore how these four qualities collectively generate a sense of connection that functions as a value-assessment mechanism, enabling fashion objects to resist the disposability culture inherent in fast fashion systems. The paper presents a booklet assignment developed between 2018 and 2024 within a private university textiles and fashion design program, in which students trace the narrative biographies of long-kept garments, uncovering engagement and emotional connection processes. The paper argues that by engaging students in structured, narrative-based classroom assignments that guide them to explore modes of attachment and meaning-making in their design and consumption decisions, fashion design studio pedagogy can address a critical gap in recognising fashion design objects' relational, material, and rhetorical agency. This narrative-based investigative approach equips students, as future designers and consumers to critically navigate the interplay between an object's material and symbolic dimensions across its lifecycle, offering a creative intervention into the systemic problem of fashion and textile waste.

Keywords
Emotionally durable design, fashion design pedagogy, material agency, rhetorical agency, sustainable fashion, design education

1. INTRODUCTION

The fashion industry plays a pivotal role in the accelerating environmental crisis, with the fast fashion model driving a culture of disposability, excessive consumption, and systemic waste. While sustainable design practices have promoted material innovation, holistic design thinking, and circularity, the planetary burden of fashion in driving pollution and raising issues of fair trade remains alarming. Industrial and economic transformations following GATT and NAFTA enabled globalized supply chains, intensifying environmental impacts through fibre sourcing, textile and apparel manufacture, and the withdrawal of domestic production. These developments unfolded alongside cultural shifts in art and design, where impermanence and experimentation were embraced as creative values. Performance and conceptual art of the 1960s destabilized material permanence, re-framing creativity as expanded participation, resonant with Joseph Beuys's dictum that "everyone is an artist." Within this cultural climate, ephemeral paper dresses offered a positive connotation of disposability, presenting a historical precedent for understanding speed in fashion systems not only as a marker of in-sustainability but as an opportunity to align intended use with material properties (English & Munroe, 2022; Auerbach George et al., 2023). This perspective opens space for alternative approaches such as emotional durability, where longevity emerges through sustained attachment and meaning-making practices.

The fashion industry exerts significant pressures through fibre sourcing, manufacturing, and global supply chains, accounting for around 20% of global freshwater pollution and nearly 10% of carbon emissions worldwide (Van Woensel & Lipp, 2020; Niinimäki et al., 2020). Textile products now represent the third most significant land-use burden after food and housing (Duhoux et al., 2022). Yet these impacts are exacerbated less by production alone than by fast fashion's "governing story" (Fletcher, 2014), which thrives on short garment lifespans, trend cycles, and impulse consumption (Niinimäki et al., 2020), further amplified by social media culture (Thomas, 2019). Addressing sustainability therefore requires moving beyond technological fixes to engage with cultural and emotional dimensions. The Prometheans and Soterians, in the typology of Alice Payne(2017) adapted from ethicist Clive Hamilton's model on the ethical and philosophical implications of climate change, represent two positions that encapsulate deep political differences. Despite the fundamental political dissent between them, the actions associated with each stance are relevant to investigations within the sustainable fashion narrative as both positions coexist within a single system. Payne's (2017) Promethean and Soterian typology contrasts techno innovation-driven optimism with care-based restraint in experiencing the fashion culture, underscoring the need for reflexive pedagogies that hold these responses in tension. Alternative frameworks such as Chapman's (2005) emotional durability foreground sustained attachment to garments, challenging the throwaway ethos of contemporary fashion. The present study situates this challenge within fashion design education, inquiring into the qualities and forms of relationships that users develop with their clothes through narrative pedagogy.

Investigating fashion design and consumption's emotional and relational dimensions remains relatively unexplored in fashion education. While sustainability discourse emphasizes material durability, technological innovation, and circular economy models, these remain in tension with practices of growth and globalization. Users are thus caught in cycles of consumption and obsolescence, where maintaining identity through new goods becomes a necessity, and use value is eclipsed by sign value. To counter this, scholars argue for sustaining social, relational, and ecological life through practice

and meaning-making. Fletcher (2014), drawing on Gary Snyder, defines practice as a "deliberate, sustained and conscious effort" in relation to the world. Recent work on learning ecosystems in design highlights the interdependence of agents as elaborated in Liu's (2025) concentric circles model that situates students and teachers within overlapping spheres of interaction, aligning with this study's aim to foreground narrative pedagogy as a site where designers and learners co-construct attachment and meaning around garments. Relational fashion systems, as Thorpe (2007) suggests, resemble ecological networks built on cyclical flows and adaptive interconnections.

This relational agency is further mirrored in the theoretical stance of Bennett's Vibrant Matter (2010) introducing the concept of "thing-power" to emphasize the vitality and agency of materials, while Harold's Things Worth Keeping (2020) points to the mystery embedded in the design objects that obscure the complexity of object's lifecycle, through the lens of "aesthetic capitalism". The concealment of relations of production makes labour exploitation, waste and streams of chemicals possible by masking the network among them all within the framework of "aesthetic rhetorics of commercial persuasion industry" (Harolds, 2020) that distances users from the harms embedded in their material lives. Furthermore, Bennet's warning against the dismissal of relationality among objects not only alienates humans from the material world but also points to the risk of moral disengagement that normalizes waste and makes exploitation invisible. Harolds, as a rhetoric scholar, and Bennet, with her political ecology of objects, offer invaluable analytical tools to address objects as entangled participants in the networks of systems and ecologies with their affective, expressive power to shape how humans place value on them. Together, their notions of material and rhetorical agency frame garments as active participants in narratives of identity, memory, and care. Chapman's (2005) theory of emotional durability extends this perspective, focusing on the empathetic lifespan of objects, which endure not only through function but through memory, ritual, and personal narrative. In design education, Findeli (2001) critiques positivist paradigms that reduce design to linear problem-solving, calling for systemic and relational approaches where knowledge emerges through practice.

This study therefore draws on Chapman's concept of emotional durability, Harold's rhetorical agency, and practice-based narrative research to examine how narrative pedagogy can reveal the affective relations between users and their garments. By positioning garments as sites of meaning-making within lived stories, the methodology foregrounds attachment, memory, and care as integral to rethinking fashion design education.

The aim of the study:

The study aims to equip fashion design students with an inquisitive and reflexive lens through which they can critically examine their relationships with garments, fostering emotional awareness and mindfulness in their consumption, use and design decisions. The central research question of the study is: How can autobiographical, narrative based assignments within fashion design education support the cultivation and retention of affective connection and attention between users and fashion objects in the long run? This core question is also supplemented by the following one: What qualities of long kept fashion design garments-items enable the durability of affective connection-attachment?

2. METHODOLOGY

This study adopts a practice-based autobiographical narrative research, a combination of two qualitative research models (Candy, et. Al, and Squire et.al) to investigate the relational and rhetoric agency of long-kept objects through the emotional, symbolic, and material dimensions of user experiences. The reflexivity immersed in the narrative inquiry involves an internal dialouge between the user and audiance. Through reflexivity, user makes herself subject to the narrative and navigate in her story's landscape to cultivate a meaningful presence, a sense of relevance and belonging, identity and relations with others. (Squire et al., 2014)

Citing from Candy et al. (2021), Schön's theory of the reflective practitioner, developed in the mid-1980s, offers a foundational framework for positioning educators as researchers within their own practice. Expanding on John Dewey's original conception of reflective thinking, Schön emphasized the importance of practitioners reflecting in and on their actions, thereby framing professional practice as a form of inquiry. This approach foregrounds the idea that critical, situated reflection is central to what Schön describes as the "professional artistry of the reflective practitioner" in search of new knowledge with the qualities of being original, validated, contextualized, shareable, retainable (Candy et al., 2021).

2.1. Research Model

The study aims to explore a pilot framework for narrative based fashion design pedagogy toward emotionally durable design. The pedagogical framework centres around a studio-based classroom assignment, "The Long-Kept Fashion Item Booklet" conducted annually between 2019–2020 and 2024–2025 in a second-year undergraduate fashion design course. This assignment aims to uncover the experiential and emotional qualities that contribute to the longevity of fashion items valued in students' lives, beyond their use and exchange values. The exercise positions narrative inquisition and reflexivity as central tools in cultivating deeper insight into how and why particular objects endure in personal wardrobes, emphasizing the affective, symbolic, and relational qualities that resist disposability through long lasting connection. The study introduces a suggestive educational framework and analyses an instructor-created pilot assignment booklet as a model that reflects the aims, structure and the potential of insight and creative uncertainty in autobiographic reflection.

This approach positions the instructor-researcher as both designer and reflective practitioner (Schon, 1983), allowing insights into how pedagogical interventions can promote an understanding of connection with the material world around us. Donald Schön's concepts of reflection-in-action and reflection-on-action offer a nuanced framework for understanding the cognitive and affective dimensions of practitioner knowledge. Reflection-in-action refers to the real time simultaneous thinking and decision making that occur during the process of engaging in a task, where the practitioner constantly and actively negotiates meaning, adapts, and responds to unfolding situations through a dialogue between thought and action. As the act of doing and creating unfolds, learning and insight go hand in hand through the mode of reflection. On the other hand, reflection-on-action, happens retrospectively, after the completion of the task, when the practitioner looks back to assess what occurred, why it occurred, and how it could inform future practice. Through the double process of in and on action, tacit knowledge surface and becomes negotiable to give way to new understandings through creative and professional acts.

The methodological validity of such a model lies in its capacity to generate insight, challenge assumptions, and prototype new modes of understanding, on the longevity of user attachment to their material environment, especially within educational contexts where transformation is the primary goal.

2.2. Participants

Although the assignment was conducted with second year undergraduate fashion design students in four consecutive academic years, no student data has been used in this study to principally elaborate the analysis of the pilot model's structure and content by the instructor-researcher as reflective practitioner as a proxy artefact to represent the process and potential outputs of the pedagogical tool.

2.3. Data Collection Tools

The instruction was the delivery of an eight-page autobiographical booklet with written and visual components. Assignment requested the visual material as collages, photos, illustrations and narrative material on the same page accompanying each other. A pilot booklet created by the instructor served as a format model. This booklet, centred around a deeply personal object, the instructor's blouse that belonged to her mother, kept for over two decades intended to illustrate the process, to make tacit knowledge on user's relational stand to a long kept object visible, rather than impose any stylistic or thematic direction. Its role was limited to showing students how memory, connection, emotion,material and relational agency could be interwoven within a long cared object-artefact creatively through narrative and visual expression or illustration in a personal style. Students were given creative freedom to choose the sequence between creating the visual narration and writing act, supporting a personalised and intuitive process.

The assignment required the user to select a fashion garment or accessory s/he had kept for what s/he considered "a long time," with longevity self-defined from months to years. This openness encouraged subjective interpretation, while inclusivity was ensured by allowing any fashion-related item contributing to self-presentation or style, including accessories such as scarves, bags, or jewellery. The autobiographical booklet consisted of eight sections plus a cover, combining written and visual narratives. The user is asked to: (1) design a title page at the end to reflect the overall tone; (2) provide a physical description of the object's material and visual features; (3) trace its temporal origin (where and when first acquired); (4) describe its initial meaning at the time of encounter; (5) explore its relational connection with a person or social tie; (6) reflect on its current meaning to the user; (7) indicate its current location and care; and (8) conclude with a reflective, open-ended question that highlighted the theme of "connection."

2.4. Data Collection Process

The making of the project booklet titled as "Interlaced: The story of my mother's lace blouse" serves as a clear embodiment of reflection-in-action and on-action. During the process of designing and writing the booklet, the instructor-researcher engaged in reflection-in-action by intuitively selecting narrative moments that felt emotionally resonant, without fully questioning why they mattered. The creative decisions regarding the text and the illustrations were not predetermined; rather they evolved dynamically through the tacit dialouge between the actions of writing - illustrating and meaning, echoing Schön's idea that professional artistry arises from a practitioner's ability to reflect while doing.

2.5. Data Analysis

The primary unit of analysis is the instructor's pilot booklet. The study draws on Chapman's (2005) emotionally durable design, Harold's (2020) rhetorical approach to object value, and Schön's (1983) reflective practitioner model as conceptual scaffolding to interpret subjective meaning-making in the narrative. Meaning is examined as it emerges through lived experience, reflexive engagement, and the layered symbolism of material artefacts. Practice-based research legitimizes subjective experience as a site of knowledge production (Candy et al., 2021), positioning creative artefacts as carriers of emergent knowledge (Scrivener, 2022).

Analytically, the study employs narrative methodology, treating autobiographical stories as data that reveal how individuals construct meaning through temporal experience. The sequential narrative of Interlaced: The Story of My Mother's Blouse is summarized in Table 1, with the complete version provided in the Appendix Figure 1. The reflective analysis identifies four interrelated qualities that sustain attachment beyond use or exchange value. These qualities are elaborated in turn through the narrative analysis of the pilot booklet:

2.5.1. The Quality of Rarity:

Described in the first and third pages, the blouse's foreign origin, its unique floral lace, and the fact that it belonged to the narrator's mother in her youth imbue it with exceptional uniqueness. This is not solely material rarity but narrative rarity as it stands out within the narrator's wardrobe as an irreplaceable link to her mother's past and style. This connects the object to a sign value, as a signifier of identity and cultural memory. The blouse embodies narrator's mother's feminity and youth, preserved and re-signified through the act of storytelling and reflection.

2.5.2. The Quality of Patina:

Chapman emphasizes patina as a crucial factor in emotional durability. Patina, as a quality of emotional durable objects, refers not only to the material traces of time but to the visible impressions of affective life. The blouse's lignin stains and softening texture are not expressed as aesthetic flaws but evidences of beauty in ageing, time and transformation. The physical qualities of softened fabric, brown tinted stains, and lightness acquired over years articulate a history of care, concealment, and continuity. "The quiet weathering of motherhood" evokes a temporality released after a duration of stillness and transformation. Stains symbolize not neglect but presence, an enduring intimacy despite being closed and concealed in storage, borne from memory and return. The blouse was not forgotten but resting or accruing the residues of human experience in its fibres over time.

Its current meaning, as narrated by the author, fuses embodied roles and metaphor: "to have worn motherhood, protection, warmth,pride and a blessing" and simultaneously, "a uniform of mystery...Flower laces being my finish line ribbon." These metaphors signal how patina extends beyond physicality into narrative symbolism. The blouse becomes both a garment and an archive, where the residues of experience and time fuse with personal transformation. Its "see-through"status reveals the paradox of emotional armour as being delicate and translucent yet powerfully protective.

Through the account of rhetorical agency in Harolds (2020), the patina of the blouse speaks, not as an evidence of usage but as a testimony with its "weathered" surface evoking a quiet ethos of care and endurance. In an interpretive and emotional engagement, patina functions as a rhetorical value, resonating with Harold's category of ritual where repetition, memory and significance are activated through bodily and temporal practices. The object's surface becomes a language that narrates rather than shows and in doing so, it generates attachment not through perfection, but through persistence and expressive decay.

2.5.3. The quality of Sentimentality:

Throughout the narrative, sentimentality is evoked through associations with maternal protection, youth, blessing, and ritual use. The blouse is both symbolic and emotional, worn at family occasions where new memories accumulate on inherited ones. This layered development aligns with Chapman's claim that users become authors of evolving stories, with objects serving as sites of co-authored meaning. Chapman further emphasizes that emotionally durable objects are not merely used but contemplated and gradually revealed over time. In contrast to the "impoverished symbolic depth" of most mass-produced goods, enduring attachment arises from an object's capacity to unfold meaning through sustained interaction, what Chapman terms the "mutual evolution between the consumer and the consumed." (2005, p.20)

In the case of the blouse, this theoretical position finds resonance with its sentimental value not being static or fixed in a singular memory. The blouse represents an accretion of meanings over time and therefore is a dynamic entity. Originally inherited with the nostalgic aura of mother's youth, the blouse has gradually absorbed new layers of significance through the user's own experiences of motherhood, personal rituals, emotional self-recognition. The object's past and present intermingle as inherited memory becomes scaffold for contemporary identity work.

Drawing on Theodor Lipps' concept of Einfühlung or empathy, Chapman defines as the user's projection of self into the object in the layerings of meaning. The blouse serves as a medium for such empathetic engagement. Its evolving significance makes it not just a keepsake but a co-narrator in the user's life story. In this sense, sentimentality functions as an emotional interface, enabling a narrative and affective continuity that resists disposability. In the context of disposability as a side effect of "experience-impoverished direction of contemporary design" claimed by Caroline Hummels and cited in Chapman (2005, p.70) the emotional experience of a using a gramophone record player is illustrated as the bearer of ritual and reverence moments. Similarly the blouse offers a similar moment asking the wearer to not simply use it but relate to it. Such user-object encounters are precisely what Hummels warns as being lost in the face of anonymous and frictionless design practices.

Harold's rhetorical value framework supports this claim by situating sentimentality within the domain of project and sign value. The blouse projects the user's ongoing relational identity, as a daughter, mother and self, and signifies more than past affection: it becomes a vehicle for expressing ongoing attachments and aspirations. Through this recursive, evolving attachment, the blouse cultivates emotional resilience in the user-object relationship, enabling what Chapman calls a lifespan of empathy.

By centring sentimentality as a meaning-making and memory-preserving mode, the blouse defies commodification. Its continued relevance reveals how affective resonance and experiential depth that are the qualities often left out of sustainability discourses are indispensable to long term attachment. The sentimentality as the quality of this particular garment render it a living archive, not only of the past, but of the evolving self.

2.5.4. The Quality of Functionality – redefined:

Though no longer worn as a regular item of clothing, the blouse preserves a form of affective and mnemonic functionality with a symbolic role that structures the narrator's emotional, aesthetic, and mnemonic experience. As noted on the last page of the booklet, the blouse is stored not in isolation or preservation, but in close proximity to daily-worn garments, specifically in the same drawer as denim pants. This subtle gesture suggests an ongoing interaction of the blouse into the narrator's current sense of self, not through frequency of physical use , but through its sustained psychological presence within the personal wardrobe system.

The analysis of functionality aligns with Chapman's (2005) critique of utility-based design metrics. In Emotionally Durable Design, he argues that meaning does not arise from accumulating functions as with his example of the Swiss Army Knife but through cultivating empathetic lifespan, where resonance emerges over time via interaction and authorship. The blouse's ability to evoke memory, transmit identity, and sustain maternal and familial narratives exemplifies what Chapman calls an "anchor of continuity," embedding the object within the user's long-term narrative arc.

Sanem Odabaşı (2024, p. 148-154) addresses this affective functionality in the Mnemonic Energy workshop,through the participants' narratives on their clothes to claim that they carry mnemonic energies, retaining not only physical traces like stains or odour, but also imbuing emotional and experiential marks. The blouse with its softened fabric, lightened texture and visible stains performs as a material archive, echoing Chapman's idea that an object's capacity for sustained emotional attachment derives from the intricate interplay between its material characteristics and the narratives it enables.

Cited in Odabaşı (2004, p.84), just as Aby Warburg's Mnemosyne Atlas project intended to visualize affective connections between images across art history, the blouse becomes a personal map of experiences, stitched together with memories of motherhood, warmth, pride and protection. In wearing or preserving it, the user engages in its synaesthetic interface with a reflective act that transcends utility and enters the space of embodied memory and emotional authorship.

The blouse embodies Harold's rhetorical agency as it becomes a site of multiple values of sign, ritual, and stage. The sign value operates in a symbolic link to maternal strength and softness, whereas ritual value arises through its use in family events, and stage value operates while the user is performing a particular identity in public and private rituals. The rhetorical functions rather than its original use function justify its enduring presence in the user's life and wardrobe system. Its functionality is not exhausted through wearing but is animated and sustained through remembering, relating, and re-interpreting as it offers a complexity inviting the user to an enduring discovery process of unfolding insights over time.

3. DISCUSSION AND CONCLUSION:

This study can be evaluated through ten quality indicators of Molly Andrews (2020) for narrative research, which provide a framework for considering both rigour and academic contribution. Truthfulness in this case is not about factual accuracy but about dialogic meaning-making in Bakhtin's sense, where the endurance of the blouse gains significance through the relational interplay between narrator and narrative artifact. Andrews (2020), drawing on Riessman (2008, 2015), highlights that persuasiveness in narrative research arises from interpretations that are plausible and transparent. In this study, the analysis is grounded in established theoretical perspectives (Chapman, 2005; Harold, 2020; Schön, 1983) and demonstrates how attachment qualities of rarity, patina, sentimentality, and functionality, surface from the narrative.

Critical reflexivity is embedded in the study's autobiographical orientation: the researcher is both narrator and analyst, acknowledging the situated-ness of knowledge and avoiding any illusion of neutrality. At the same time, the balance between scholarship and accessibility is maintained by situating theoretical engagement of Harold and Chapman within an analysis that remains comprehensible and relevant to design researchers and educators. This inquiry embodies an ethical sensitivity, not through conventional protocols of anonymisation or data storage, but in the respectful treatment of intimate histories and the broader ethical concern with waste, care, and responsibility in fashion systems.

In this study, co-construction of meaning is evident in the way the blouse's significance is continually remade across narrative layers. Meaning does not reside solely in the material object but emerges through the narrator's reflective practice, where memory, interpretation, and scholarly framing interact. The blouse becomes more than a personal possession: it is narrated through the lenses of emotional durability (Chapman, 2005), rhetorical agency (Harold, 2020), and reflective practice (Schön, 1983). These frameworks act as interpretive partners, shaping the narrative alongside the artefact and the narrator. In this sense, the story is dialogic, as Andrews (2020) suggests, produced not in isolation but through the interplay between researcher, theory, and material traces. The dialogic dimension also extends to audience. The narrative is written both for students, who encounter it as part of their own process of learning to narrate fashion objects, and for the scholarly community, who engage with it as a methodological contribution to narrative research in design education. In each case, meaning is co-constructed differently: for students, the blouse story models how memory and attachment can be articulated; for scholars, it demonstrates how narrative inquiry can foreground affective relations with garments.

Thus, the narrative's significance is never self-contained but continually reinterpreted in relation to its audiences. The narration also exemplifies multilayered stories through the temporal and relational layers that sustain the blouse as a living object. The first encounter dates back to 2000, yet the garment remains present in 2025, sometimes through ritualized use in family celebrations, at other times in its quiet material proximity to daily garments. This temporal layering reflects what Henry Bergson distinguishes as durée, a qualitative, a-cyclical flow of lived time, rather than a linear chronology of duration. The blouse carries multiple temporal registers simultaneously: the memory of maternal inheritance, the continuity of ritual practice, and its enduring presence as an artefact woven into everyday life. In this sense, the story illustrates how personal narratives unfold within a cosmos of cyclical and overlapping timescales, where objects

persist not simply as static remnants but as active participants in lived temporalities, echoing what Andrews terms as awareness of temporal fluidity.

Attention to the untold is significant as absence and implication carry meaning alongside explicit narration. In the pilot booklet, the reflective question on the blouse's lace gestures toward its fragility, its potential to fray or unravel. Yet this vulnerability is not elaborated upon. Instead, it remains implied, tied to delicateness, fineness. The dark side of the lace, its possible undoing, is left unspoken, shaping meaning through silence rather than description. Such absences echo Andrews's (2020) notion of attending to what is missing, where unarticulated possibilities exert influence on interpretation.

Contextualisation of the story is central to its interpretation. The pilot booklet is not merely a private reflection but a narrative situated within fashion design education and sustainability discourse. It addresses two audiences: students, for whom it models autobiographical inquiry into garments as a method of exploring memory, attachment, and reflection; and scholars, for whom it contributes to debates on narrative pedagogy, emotional durability, and relational design. Its dual purpose is thus pedagogical, guiding students toward reflective practice, and scholarly in inquiring into the motivations for retaining clothing across time. In this way, the story functions as both a personal account and a situated intervention in ongoing conversations about sustainability and meaning-making in fashion education.

The inevitable unclarity and "messy" nature of lived stories should nevertheless be preserved, since flattening them into neat interpretations would risk undermining the very complexity that narrative research aims to reveal. In this way, the story functions as both a personal account and a situated intervention in ongoing conversations about meaning-making in fashion education.

Title Page

"Interlaced: The Story of My Mother's Lace Blouse"

Page1: Physical Description

"It is a 50+ year old, cream coloured, cotton blouse -that belonged to my mother, with ivory white laces on the sides of sleeves and with gold coloured metal buttons. It has lignin stains in light brown colour as small spots on two sides of front panels. The stains look noticeable but do not bother me at all as they did before. It feels softer and lighter after years of use."

Page 2: Where It Was Located

"Probably it was 20 to 25 years ago, when I first saw it in my root family's home among other unworn clothes my mother kept in old luggages."

Page 3: Who It Was Related To

"My mother told me that my grandmother had brought this blouse for her from abroad. She wore it when she was a young girl. After she got married and had children, she never wore it again because it no longer fit her. I must have found this blouse in my late twenties. From my mother's stories, I pictured her vividly in it. That's why this blouse carries a connection to my mother's youth."

Page 4: What It Meant Then

"It meant joyful, dynamic and young side of my mother. It meant laces in flowers, a romantic vintage spirit which at the same time is an unfamiliar style of delicacy for me at that age."

Page 5 & 6: What It Means Now

"Now it means to have worn motherhood, protection, warmth, pride and blessing, yet feels like being fully immersed in the delicacy and fragility of laces. Also My athletic insignia, a uniform of mystery, flower laces being my finish line ribbon… It means softness and lightness, a see-through shield. The brown stains, speak to the quiet weathering of motherhood, after years of being folded away in stillness."

Page 7: Where It Is Now

"It is in my top drawer with my denim pants."

Page 8: Final Question

"To the lace-maker: Is lace admired for its fineness, delicacy and invisible labour or unravelled through fragility?"

Table 1. Sequential Content of "Interlaced: The Story of My Mother's Blouse" Booklet

4.RECOMMENDATION AND FUTURE DIRECTIONS

Molly Andrews's (2020) guidance underscores that narrative research must preserve its complexity while remaining accountable to qualities such as truthfulness, reflexivity, and contextual sensitivity. In fashion design education, these indicators validate the use of autobiographical and practice-based inquiry as rigorous tools for exploring attachment to garments. The current study demonstrates how qualities of rarity, patina, sentimentality, and functionality can serve as analytic entry points for understanding the durability of connections between users and clothing, offering transferable tools for both research and pedagogy.

Philippa Parks's (2018) advocacy of story circles provides a complementary model for collective narrative inquiry. By fostering co-constructed stories, story circles generate dialogic meaning while supporting reflection, identity formation, and trustworthiness. Adapted to fashion education, they can extend analysis beyond individual reflection, enabling students to situate garments within relational and communal contexts. In parallel, Liu's (2025) concentric circles model highlights the potential of digital storytelling ecosystems, where overlapping spheres of interaction between teachers, students, and wider stakeholders like AI could deepen collaboration. Together, these approaches suggest future directions where narrative pedagogy integrates individual reflection, collective storytelling, and digital ecosystems to cultivate designers attuned to the affective and relational dimensions of clothing.

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REFERENCES

Andrews, M. (2020). Quality indicators in narrative research. Qualitative Research in Psychology, 18(3), 353–368. https://doi.org/10.1080/14780887.2020.1769241

Auerbach George, H., Tregenza, L., Stenton, M., Kapsali, V., Blackburn, R. S., & Houghton, J. A. (2023). Challenging perceptions of fast and slow in contemporary fashion: A review of the paper dresses trend in the United Kingdom and the United States during the 1960s. International Journal of Sustainable Fashion & Textiles, 2(1), 29-52. https://doi.org/10.1386/sft_00019_1

Bennett, J. (2020). Vibrant matter: A political ecology of things. Duke University Press.

Candy, L., Edmonds, E., & Vear, C. (2021). Practice-based research. In The Routledge international handbook of practice-based research (pp. 27-41). Routledge.

Candy, L., Edmonds, E., & Vear, C. (2021). Method. In The Routledge international handbook of practice-based research (pp. 305-322). Routledge.

Chapman, J. (2005). Emotionally Durable Design: Objects, Experiences and Empathy (1st ed.). Routledge. https://doi.org/10.4324/9781849771092

Duhoux, T. D., Blévennec, K. L. B., Manshoven, S. M., Grossi, F. G., Arnold, M., & Mortensen, L. F. (2022, February). ETC/CE report 2/2022: Textiles and the environment - the role of design in Europe's circular economy. Eionet Portal. https://www.eionet.europa.eu/etcs/etc-ce/products/etc-ce-products/etc-ce-report-2-2022-textiles-and-the-environment-the-role-of-design-in-europes-circular-economy

English, B., & Munroe, N. H. (2022). The Sustainability of Fashion. In A Cultural History of Western Fashion From Haute Couture to Virtual Couture (pp. 207–227). essay, Bloomsbury Visual Arts.

Findeli, A. (2001). Rethinking design education for the 21st century: Theoretical, methodological, and ethical discussion. Design issues, 17(1), 5-17. https://www.jstor.org/stable/1511905

Fletcher, K., & Tham, M. (Eds.). (2015). Routledge Handbook of Sustainability and Fashion. London: Routledge.

Fletcher, K. (2014). Other Fashion Systems. In Handbook of Sustainability and Fashion (1st ed., pp. 15–24). essay, Routledge.

Fletcher, K. (2016). Craft of use: Post-growth fashion. Routledge.

Fletcher, K., & Grose, L. (2012). Fashion & sustainability: Design for change. Hachette UK.

Harold, C. (2020). Things worth keeping: The value of attachment in a disposable world. U of Minnesota Press.

Liu, Y. (2025). Immersive digital storytelling to understand the new learning ecosystem: the revised concentric circles model from both teacher and students' perspective. Smart Learning Environments, 12(1), 39. https://doi.org/10.1186/s40561-025-00398-x

Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T., & Gwilt, A. (2020). The environmental price of Fast Fashion. Nature Reviews Earth & Environment, 1(4), 189–200. https://doi.org/10.1038/s43017-020-0039-9

Odabaşı, S. (2024). Fashion, Upcycling, and Memory: A Practice-Based Approach (1st ed.). Routledge. https://doi.org/10.4324/9781003362326

Parks, P. (2023). Story Circles: A New Method of Narrative Research. American Journal of Qualitative Research, 7(1), 58-72. https://www.ajqr.org/article/story-circles-a-new-method-of-narrative-research-12844

Payne, A. (2017). Fashion Futuring in the Anthropocene: Sustainable Fashion as "Taming" and "Rewilding." Fashion Theory, 23(1), 5–23. https://doi.org/10.1080/1362704X.2017.1374097

Scrivener, S. (2021). The art object does not embody a form of knowledge revisited. In The Routledge International Handbook of Practice-Based Research (pp. 277-291). Routledge.

Schön, D. A. (1983). The reflective practitioner: How professionals think in action. Basic Books.

Schön, D. A. (1987). Educating the reflective practitioner. Jossey-Bass Publishers.

Squire, C., Andrews, M., Davis, M., Esin, C., Harrison, B., Hydén, L. C., & Hydén, M. (2014). What is narrative research?. Bloomsbury Academic.

Thomas, D. (2019). Fashionopolis: the price of fast fashion and the future of clothes. Penguin Press.

Thorpe, A. (2007). The designer's atlas of sustainability. Island Press.

Van Woensel, L., & Lipp, S. S. (2020). What if fashion were good for the planet? - european parliament. https://www.europarl.europa.eu/RegData/etudes/ATAG/2020/656296/EPRS_ATA(2020)656296_EN.pdf

Vear, C., Candy, L., & Edmonds, E. A. (Eds.). (2022). The Routledge international handbook of practice-based research. London: Routledge.

From Execution to Curation: Rethinking the Designer's Role Through Generative Branding Systems

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Abstract
This study examines how generative branding systems transform the role of the graphic designer from an implementer of artefacts to an architect and steward of adaptive identity systems. The study used a hybrid research methodology using a systematic and case study approach, using peer-reviewed articles and case studies of Coca-Cola, L'Oréal, and Canva, with the help of PRISMA in a systematic review (2020-2025). The results demonstrate three paradigm shifts, in which creativity shifts towards rule-set design, data is identified as a central design material, and branding becomes coherent variability instead of fixed consistency. These systems offer the benefits of scalability, personalisation, and innovativeness. Still, they also present issues of homogenization, loss of authorship, and ethical hazards, and they demand new curatorial, technical, and moral skills.

Keywords
Generative AI, Paradigm Shift, Curator, Personalisation, Implementer.

1.INTRODUCTION

The modern digital media environment has become the most dynamic in history, with the demands of consumers of real-time, personalised engagement changing the paradigm of brand-relationship fundamentally. Modern consumers do not want a brand just to exist within their digital world; they want the brand to act, respond, and be a truly valuable member of their digital ecosystem (Emplifi, 2025; Hutchinson, 2025). The recent research shows that 35 per cent of consumers treat a brand response on social media as an hourly expectation, and 46 per cent will drop a brand with only two negative experiences, pointing to a condition in which the stagnant, monolithic brand identities are becoming less and less adequate (Emplifi, 2025). In these regards, traditional corporate identity systems, which usually lie in the tradition of inertial style manuals that guarantee the consistency of the system across print and broadcast media, find it difficult to remain relevant and semantically rich (Yang, 2020). These constraints of these classic systems, such as limited use capabilities, inconsistency in the face of rapidly changing media, and lack of customisation, present a disconnect between the design frameworks of the twentieth century and communicative needs in the twenty-first century (Abah and Nonyelum, 2024).

Generative design has become a paradigm entry point at the intersection of information, procedural processes, and visual expression in response to this paradigm shift. Although conventional branding is all about developing finite artefacts, generative design is all about developing systems and rules, which will generate a spectrum of adaptive outcomes on their own (Hughes, Zhu and Bednarz, 2021). The approach is a key development of the designer as an isolated writer to a system architect (Fleischmann, 2024). The scholarly discourse about this convergence is, however, still in its infancy. Classical literature on corporate identity attributes the criticality of consistency but fails to explain algorithmic variability (Dubberly, 2025). Likewise, as new conversations take a turn towards dynamic identities and adaptive marketing, characterised as a data-driven approach to changing strategies on the fly, the literature on the topic does not present a unified framework of integrating generative methodologies into the core branding strategy (Behare et al., 2024). Moreover, the systematic reviews of related topics, including health-related and personal branding, uphold the effectiveness of strategic identity systems but fall short of discussing the computational tasks that might fuel them (Gorbatov, Khapova and Lysova, 2018).

This exposes a major research gap: there is no theorised model which specifically focuses on the deep implications of the role of the graphic designer in such co-creative, human-machine systems. The shift between being the implementer of visual outputs and the architect and curator of a generative system is a crucial change in agency and responsibility that has been crucially understudied (Yang et al., 2025). With the advent of generative artificial intelligence that is primed to transform design education and practice, the necessity to conceptualise this new and curatorial supervisory role is urgently required.

This study examines how generative design principles are used in contemporary branding practices. The study suggests a reconceptualisation of the role of the graphic designer as a unique performer of visual artefacts to a system architect and curator of adaptable branding systems. It entails setting the conditions of this new position and creating a framework of how the designer will continue to exercise curatorial oversight in generative processes.

2.METHOD AND MATERIALS

The PRISMA (Preferred Reporting Items to Systematic Reviews and Meta-Analyses) were used to carry out this research and guarantee the transparent, reproducible, and rigorous process (Parums, 2021). The research methodology was structured to be sensitive and as many relevant studies as reasonable were retrieved.

Selection Criteria and Search Strategy

To reduce selection bias (Amir-Behghadami and Janati, 2020), the criteria of the study selection were selected a priori using the PICO (Population, Intervention, Comparator, Outcomes) framework, as described in Table 1:

Table 1 Inclusion and Exclusion Criteria

Category	Inclusion Criteria	Exclusion Criteria
Population	Corporate/brand identity in commercial or institutional contexts	Personal branding or artistic identities
Intervention	Generative/algorithmic design in visual identity	Static design tools without generative logic
Comparator	Traditional design vs. generative system output	No comparative element
Outcomes	Designer role, workflow, agency, practitioner	No discussion of process or adaptability, and personalisation
Study Designs	Case studies, empirical research, peer-reviewed articles	Opinion pieces, blogs, and purely technical papers
Time Frame	2014–2024	Before 2014
Language	English	Non-English

Table 2 details how the search strategy was created using pilot searches and term harvesting. The last approach involved restricting vocabulary (e.g., Thesaurus words) and free-text keywords with Boolean operators to maximise coverage (Gross, Taylor and Joudrey, 2015). The search was carried out in the following databases in September 2024.

Table 2 Search Strategy

Database	Search Query (Example)
Scopus	("generative design" OR "algorithmic design") AND (brand* OR "corporate/visual identity") AND ("designer role" OR curator OR "system architect")
Web of Science	("generative design" OR "procedural design") AND ("brand/dynamic identity") AND (co-creation OR "human-machine collaboration")
ACM DL	Title: "generative branding" OR Abstract: ("algorithmic" AND "brand system")
DAAI	(Generative OR parametric) AND (Branding OR Corporate Identity) AND (Graphic designer)

Data Management and Selection Process

The search results were gathered in Covidence, where duplicates were automatically eliminated and manually verified (McKeown and Mir, 2021). Two independent reviewers were involved in the study selection, which entailed two-stage screening: titles/abstracts, followed by full-text (Stoll et al., 2021). Any disagreements were to be settled by discussion or a third reviewer. A piloted extraction form was used to get the design, methods, findings and limitations. The quality of studies was assessed by means of tools such as CASP, which evaluates qualitative research (Long, French and Brooks, 2020).

3.RESULTS; Studies Summary

Study (Author, Year)	Core Technical & Conceptual Components	Shifting Agency & Designer Responsibilities	Key Benefits & Challenges
De Luca, M. (2024)	**Rules:** ML system for semantic alignment. **Inputs:** Biased, designer-curated datasets. **Outputs:** Technical/semantic feedback.	**Designer's Role:** Art director; curates datasets. **Machine's Role:** Augments decision-making; automates tasks.	**Benefits:** Augments creative phases. **Challenges:** Risk of homogenization; semantic gap.
Deregibus, C. (2025)	**Rules:** Text-to-image generation (e.g., Midjourney). **Outputs:** Generated images. **Inputs:** Natural language prompts.	**Designer's Role:** Prompt writer; holistic master. **Machine's Role:** Swift visual generator.	**Benefits:** Accelerates drafting; enhances branding. **Challenges:** Ambiguity of authorship; flattering trends.
Kutanova, D. (2025)	**Rules:** Neural network for design solutions. **Inputs:** Company info; designer parameters. **Outputs:** Logos, colour schemes, 3D models	**Designer's Role:** Author and curator of concepts. **Machine's Role:** Technical executor.	**Benefits:** Unprecedented speed and scalability. **Challenges:** Authorship ambiguity; lacks cultural depth.
Li, J. et al. (2024)	**Rules:** Automates repetitive tasks (e.g., wireframes). **Inputs:** Design briefs; human-created work. **Outputs:** Summaries, wireframes, UI inspirations.	**Designer's Role:** Final arbiter; validator of AI output. **Machine's Role:** Assistant for repetitive tasks.	**Benefits:** Significant productivity gains. **Challenges:** Skill degradation risk; output homogenization.
Manavis, A. et al. (2022)	**Rules:** Computational Brand Identity (CbVBI) methodology. **Inputs:** User-defined parameters (dimensions, colours). **Outputs:** Automated product variations.	**Designer's Role:** System architect; defines parameters. **Machine's Role:** Full automation of generation.	**Benefits:** Massive time savings; enables mass customisation. **Challenges:** Gap in integrating branding with technical rules.
Särmäkari, N. & Vanska, A. (2022)	**Rules:** Garment Information Modelling (GIM) graphs. **Inputs:** Algorithms, data, designer's tacit knowledge. **Outputs:** Generated garment designs; 3D simulations.	**Designer's Role:** Cyborg collaborator; modifies GIM graphs. **Machine's Role:** Calculates fit and lay plans automatically.	**Benefits:** Enables 'form-finding'; preserves company DNA. **Challenges:** Risks of oversimplification of design work.
Çelik, T. & Ergin, E. A. (2025)	**Rules:** Text-to-image and image-to-image generation. **Inputs:** Text prompts; brand logo images. **Outputs:** Architectural forms and renderings.	**Designer's Role:** Evaluator and curator of AI output. **Machine's Role:** Methodological tool; generates concepts.	**Benefits:** Accelerates creative process; inspires innovation. **Challenges:** Inconsistent AI capabilities; quality variability.
Coca-Cola "Create Real Magic" (2025)	**Rules:** Generative AI platform (ChatGPT, DALL·E 2). **Inputs:** Brand assets (bottle, colours); user prompts. **Outputs:** User-generated artwork for campaigns.	**Designer's Role:** Platform architect; campaign curator. **Machine's Role:** Co-creation enabler at scale.	**Benefits:** Global audience engagement; positions brand as tech-forward. **Challenges:** Managing brand consistency with crowd-sourced content.
L'Oréal (2025)	**Rules:** AI for product innovation & content creation. **Inputs:** Scientific research, consumer data, trends. **Outputs:** New formulas, multilingual marketing content.	**Designer's Role:** Strategic director; data interpreter. **Machine's Role:** Rapid ideation and localisation tool.	**Benefits**: 60% faster content development; hyper-personalisation. **Challenges:** Ensuring ethical and transparent AI use.
Stitch Fix (2025)	**Rules:** Natural Language Generation (NLG) models. **Inputs:** Stylist notes, user preferences, behaviour data. **Outputs:** Personalised style recommendation notes.	**Designer's Role:** Human curator; AI trainer. **Machine's Role:** Automates personalisation at scale.	**Benefits:** 50% reduction in stylist content time; maintains personal touch. **Challenges:** Balancing algorithmic suggestions with human empathy.
Canva's Magic Studio (2025)	**Rules:** Integrated AI suite (Magic Write, Magic Design). **Inputs:** User text prompts or uploaded assets. **Outputs:** Complete designs, text, and edited images.	**Designer's Role:** System and template designer. **Machine's Role:** Democratizes design for non-experts.	**Benefits:** Empowers non-designers; significantly increases task speed. **Challenges:** Redefining professional designer value in an automated space.
Autodesk Generative Design (2025)	**Rules:** Performance-driven generative algorithms. **Inputs:** Design goals, constraints, materials. **Outputs:** Thousands of optimised design alternatives.	**Designer's Role:** Constraint and goal setter. **Machine's Role:** Exploratory partner for optimal solutions.	**Benefits**: Creates efficient, sustainable, and innovative product forms. **Challenges:** Requires designers to think in parameters, not

Findings

The evaluation of the modern generative systems in graphic, architectural, and product design exposes three critical paradigm shifts in respect to the control of creativity, the input of design and the structure of output.

3.1. Finding 1: Design of the Rule-Set is the Primary Creative Act:

The fundamental creative task does not include the manual production of the final images, but delineates the requirements, the parameters, and the algorithms with which the system will work (Kutanova, 2025; Schnitzer, 2021). This transition emphasises the generation of rules (form-finding) as opposed to form-making (Peeters, 2016; Särmakari and Vanska, 2022). The designer becomes an author and director, indicating specific parameters and conditions of machine performance. Computational methodologies show empirically that designers are able to codify branding criteria into design rules (Manavis et al., 2022; Manavis and Kyratsis, 2021). As an example, Autodesk Generative Design asks designers to specify the desired goals and constraints, thus creating thousands of valid options (Autodesk, 2025). Similarly, the example of Canva and its Magic Studio exemplifies such a transition, where the designers create templates and frameworks that provide user-created designs (Canva, 2025).

3.2. Finding 2: External Data as a Fundamental Design Input:

The use of external, dynamic information to power identity variations is becoming increasingly common in generative systems and no longer relies on fixed assets (De Luco, 2024). Machine-learning programs customise content according to the tastes or interactions of the user. Stitch Fix uses the inputs of customer data and preferences to create individual style suggestions using its artificial intelligence (Stitch Fix, 2025). Moreover, L'Oréal uses consumer data and science to feed AI-based product ideas and customised marketing information (L'Oréal, 2025). These examples show how information becomes a fundamental offering in branding innovation.

3.3. Finding 3: Generation of Coherent Visual Families, Not Single Artefacts:

The creation of a variety of systematically related but novel outputs is one of the main roles of generative systems (Kutanova, 2025; Manavis, Kakoulis and Kyratsis, 2023). This functionality helps in efficiency, scalability, and mass customisation (De Luco, 2024; Manavis and Kyratsis, 2021). The Coca-Cola campaign Create Real Magic is an illustration of this tendency, as one AI platform produced an infinite amount of individual artworks that were in coherent harmony with the brand (Coca-Cola, 2025). The result, therefore, is alternative forms within a holistic brand identity and not independent images.

4.DISCUSSION

This paper presents radical changes in graphic design during generative branding. The results show that generative AI represents a shift in artefact execution to rule-based system architecture that increases efficiency and scalability but also leads to the loss of designer skills through excessive dependence on automation (Li et al., 2024). This transition can suppress practical skills, as AI will work with repetitive work, which, perhaps, homogenises the results without strong human supervision (Mirzaei, 2025).

Also, the research finds that AI reimagines data as a fundamental design input, which co-creates responsive identities but creates training dataset biases that can support inequities or cultural insensitivities (Al-Kfaire et al., 2024). Lastly, the research recommends logical variability rather than absolute consistency, which would allow customisation, but too many variants can weaken brand identity and confuse the consumer in the dynamic online worlds (Rapp et al., 2025).

These findings contrast with Olins's (1989) insistence on unchanging consistency, which poorly considers algorithmic formability in modern realities (Alotaibi, 2025). Conversely, the concept of coherent variability correlates well with the recent theories on AI-augmented design, where generative tools complement ideation initiatives requiring the development of new skills like fast engineering (Thoring et al., 2023). This development redefines the designer as a builder of architecture (system), data picker (data selection), and refiner of output (curator) and allows human-AI synergy. However, this position is likely to lose creative control in case AI biases or constraints are predominant, and ethical frameworks are needed to protect originality (Peláez et al., 2025). Future studies must empirically test the reactions of the audience to generative brands (Gual-Ortí et al., 2025) and explore the ethical aspects, such as intellectual property issues in AI-driven generation (Al-Busaidi et al., 2024).

5.CONCLUSION

This study shows that generative branding systems essentially reinvent the role of the graphic designer as more of a curator rather than an executor, as a system architect rather than a creator. Characterised by AI and data, this movement allows for the creation of identities in terms of scale and responsiveness, but it also brings issues, such as the homogenization of the output, the absence of authorship, and ethical bias. Designers can use AI to drive innovation without losing creative authority by assuming the role of architect, catalyst, and curator. Learning about immediate engineering and ethical management should be a priority of future practice to lessen the risks and eventually deliver more active brand-consumer relations in digital ecosystems.

6.RECOMMENDATION AND FUTURE DIRECTIONS

The current research proposes the idea that computational thinking, coding, data literacy, and ethical AI should be incorporated into design teaching and help students become creative and collaborative. Practically, studios have to prototype using generative tools, make the working process transparent, and experiment with models that are focused on curating systems. The studies are supposed to create metrics of effectiveness, solve bias, and conduct longitudinal research on the adoption of generative branding.

REFERENCES

Abah, R. T., & Nonyelum, O. F. (2024). Traditional and Modern Methods for Web and Media Analysis and Design: A Comparative Study. IUP Journal of Computer Sciences, 18(4), 69-87.

Al-Busaidi, A. S., et al. (2024). Redefining boundaries in innovation and knowledge domains: Investigating the impact of generative artificial intelligence on copyright and intellectual property rights. Journal of Innovation & Knowledge, 9(4), 100630.

Al-Kfairy, M., et al. (2024). Ethical Challenges and Solutions of Generative AI: An Interdisciplinary Perspective. Informatics, 11(3), 58.

Alotaibi, N. (2025). The Future of Graphic Design in the Age of Generative AI: Its Impact on Creativity and Industry. College of Education Journal, 3(4).

Amir-Behghadami, M., & Janati, A. (2020). The Population, Intervention, Comparison, Outcomes and Study (PICOS) design is a framework to formulate eligibility criteria in systematic reviews. Emergency Medicine Journal.

Autodesk. (2025). Generative Design in Product Engineering [Case study]. In 25 Generative AI Case Studies. DigitalDefynd.

Behare, N., Chaudhari, M., Sharma, S., Sane, A. C., Kharate, S., Waghulkar, S., ...& Pawar, P. (2024). Emerging trends in data-driven marketing. Data-Driven Marketing for Strategic Success, 323-358.

Canva. (2025). Magic Design and AI Content Suite [Case study]. In 25 Generative AI Case Studies. DigitalDefynd.

Coca-Cola. (2025). Create Real Magic Campaign [Case study]. In 25 Generative AI Case Studies. DigitalDefynd.

Dubberly, H. (2025). Protecting Corporate Identity. [online] Dubberly.com. Available at: https://www.dubberly.com/articles/protecting-corporate-identity.html [Accessed 24 Sep. 2025].

Emplifi. (2025). What Consumers Expect from Brands on Social Media [Infographic]. [online] Available at: https://emplifi.io/resources/blog/what-todays-consumers-expect-from-brands-on-social-media-in-2025-infographic/ [Accessed 24 Sep. 2025].

Fleischmann, K. (2024). Generative Artificial Intelligence in Graphic Design Education: A Student Perspective. Canadian Journal of Learning and Technology, [online] 50(1), pp.1–17. doi:https://doi.org/10.21432/cjlt28618.

Gorbatov, S., Khapova, S. N., & Lysova, E. I. (2018). Personal branding: Interdisciplinary systematic review and research agenda. Frontiers in psychology, 9, 2238.

Gross, T., Taylor, A. G., & Joudrey, D. N. (2015). Still a lot to lose: the role of controlled vocabulary in keyword searching. Cataloguing & classification quarterly, 53(1), 1-39.

Gual-Ortí, J., et al. (2025). The Future of Logo Design: Considering Generative AI-Assisted Designs. The International Journal of Visual Design, 19(1), 109–123.

Hughes, R. T., Zhu, L., & Bednarz, T. (2021). Generative adversarial networks–enabled human–artificial intelligence collaborative applications for creative and design industries: A systematic review of current approaches and trends. Frontiers in artificial intelligence, 4, 604234.

Hutchinson, A. (2025). Report Looks at Consumer Expectations of Brands on Social in 2025. [online] Social Media Today. Available at: https://www.socialmediatoday.com/news/emplifi-social-pulse-report-2025-social-media-marketing/744279/ [Accessed 24 Sep. 2025].

Li, H., et al. (2024). The application and impact of artificial intelligence technology in graphic design: A critical interpretive synthesis. Heliyon, 10(21), e40037.

Long, H. A., French, D. P., & Brooks, J. M. (2020). Optimising the value of the critical appraisal skills programme (CASP) tool for quality appraisal in qualitative evidence synthesis. Research Methods in Medicine & Health Sciences, 1(1), 31-42.

L'Oréal. (2025). Generative AI-Powered Product Innovation and Content Creation [Case study]. In 25 Generative AI Case Studies. DigitalDefynd.

McKeown, S., & Mir, Z. M. (2021). Considerations for conducting systematic reviews: evaluating the performance of different methods for de-duplicating references. Systematic reviews, 10(1), 38.

Mirzaei, V. (2025). The Impact of Artificial Intelligence on Creativity in Graphic Design. Available at SSRN: https://ssrn.com/abstract=5292032.

Parums, D. V. (2021). Review articles, systematic reviews, meta-analysis, and the updated preferred reporting items for systematic reviews and meta-analyses (PRISMA) 2020 guidelines. Medical science monitor: international medical journal of experimental and clinical research, 27, e934475-1.

Peláez, C. A., et al. (2025). Toolkit for Inclusion of User Experience Design Guidelines in the Development of Assistants Based on Generative Artificial Intelligence. Informatics, 12(1), 10.

Rapp, A., et al. (2025). How do people experience the images created by generative artificial intelligence? An exploration of people's perceptions, appraisals, and emotions related to a Gen-AI text-to-image model and its creations. International Journal of Human-Computer Studies, 193, 103375.

Stitch Fix. (2025). AI-Generated Style Recommendations [Case study]. In 25 Generative AI Case Studies. DigitalDefynd.

Stoll, C. R., Izadi, S., Fowler, S., Green, P., Suls, J., & Colditz, G. A. (2019). The value of a second reviewer for study selection in systematic reviews. Research synthesis methods, 10(4), 539-545.

Thoring, K., Huettemann, S., & Mueller, R. M. (2023). The Augmented Designer: A Research Agenda for Generative AI-Enabled Design. Proceedings of the Design Society, 3, 3345-3354.

Yang, W. (2020). A Cross-Cultural Study of Commercial Media Discourses: From the Perspective of Cognitive Semantics. Springer Nature.

Yang, Y., Ma, M., Huang, Y., Chai, H., Gong, C., Geng, H., ... & Wang, J. (2025). Agentic web: Weaving the next web with AI agents. arXiv preprint arXiv:2507.21206.

An Ankara Tale in the Capitalist Process

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Abstract
When it comes to architecture and the city, it is possible to talk about a continuous change and transformation in every society and geography throughout history. However, grasping, understanding and making sense of all these changes and transformations, the core of which is human, through the city and architecture also involves a difficult process. Especially when evaluating the physical environment in the context of cause and effect relationship, concrete references and real data are needed when explaining changes and transformations. Reading the transformations that occur in social, cultural and political areas through architectural indicators can create an opportunity to create an integrative context. Opening a discussion about the abstract superstructure through a concrete area such as the built physical environment has been ongoing since the first human societies. This study will try to discuss the effects of policies on the physical environment by going back from architecture, specifically in Ankara. The beginning of the capitalism process with its current meaning and application area covering the whole world is accepted as having originated in England, but its harms can be more clearly revealed in economically underdeveloped countries. Although it is accepted as a model related to production methods, being able to open a new discussion on this system that creates every field down to its finest details and in which we are increasingly immersed and on the physical environment it creates will support new areas in different areas from education to application. In this sense, "how capitalism creates its own geography", emphasized by David Harvey, will be opened to discussion through Ankara, a very special area.

Keywords
City of Ankara, Changes of city, Transformation of city, Rebuild, Society, Architecture, Physical environment

Capitalism is a multilayered concept with plenty of meanings, which in turn grants the right to use the concept in various ways. Today, it can be defined as the universal ideology of those who control capital. In its current sense, capitalism is generally understood to have gained strength through export-based economic practices that began in 16th-Century England and spread across Europe and were shaped through the contribution of numerous factors by the late 18th Century with the Industrial Revolution. The capitalist system, with its habit of mass production, appears to aim at eliminating differences in almost every field and create a kind of "uniform" structure. At the same time, it can be said that the concept of 'globalization', which is being promoted in all areas, is imposed on every culture as "the myth of a transcendent plane formed for the purpose of reproducing itself…". Urban problems have existed since the first day of collective life. The earliest complaints can be found in written form with Vitruvius, yet the city began to be studied as an object of research in the modern sense "in the 1920s by the Chicago School, which examined its spatial organization." After the 1970s, radical theorists analyzed the city through the process of capital accumulation, focusing on the transformation of capital into space and the social movements. Thus, the critical perspective developed toward the contemporary cities, which are now under the dominance of capitalist accumulation processes, offered a structural analysis of the urbanization of neoliberalism.

In his 2018 book, "Building and Dwelling: Ethics for the City", Richard Sennett explores the relationship between the architectural forms of cities and human interactions, tracing this connection from Ancient Greek civilization to the great metropoles of the 21st Century. His effort to reveal how large cities have developed is particularly significant. The most important aspect of the book is that, it discusses every practice of the city and architecture as an 'ethical' issue. Today, all actors involved in this process from the designer, practitioner, approver to the user must internalize and put into practice the idea that this large-scale undertaking, that extends from the smallest details to the urban scale, constitutes a comprehensive ethical problem.

In the architectural literature of our country, the first significant work on this subject was Benny Heumann's 1973 article, "Urban Problems in Capitalist Countries." While the term capitalist countries once referred to only a certain part of the world, today it can be said that the entire globe constitutes the capitalist system. Unfortunately, it seems impossible to avoid or remain outside this system, which now prevails everywhere. Therefore, the experiences of the places where it first emerged may inspire the new capitalist societies. Adopting those early critiques can provide valuable insight for both the present and the future. Following its publication in Mimarlık (Architecture) magazine, the study was reissued in 1975 by the Chamber of Architects' Publication Committee as a small booklet titled, "The Disasters Within the Capitalist City Are Inevitable", together with four other related studies. All five essays discussed the issue in general, focusing particularly on the urban planning, ecology, imperialism and housing problems of the time. Although it has been half a century since then, the same topics remain relevant or it can be said that the problems persist with the same intensity and strength. The study brought to light the problems of especially large cities which are "housing, traffic, noise, the destruction of the historical and natural environment, pollution, epidemics and impoverished districts." Perhaps the most memorable work that focused on the moral and political philosophy through the poor inhabitants of impoverished districts might be Victor Hugo's Les Misérables. Written in 1862, the novel's main setting is Paris during the fifteen years leading up to the June Rebellion of 1832. The urban

problems described in the book are much the same; only the order of priorities has changed as "impoverished districts, epidemics, pollution, destruction of the natural and historical environment, noise, traffic and housing." In nearly two centuries, although the definitions and interpretations of these concepts have evolved, the core meaning remains the same. Inspired by Hugo, a new movie adaptation of Les Misérables was released in 2019, again set in Paris but through a different scenario. The storyline diverges from the original, focusing instead on daily life in a Parisian suburb in 2005. Even though the terms, subjects and objects have changed, at their core, the issues remain the same as "housing, traffic, noise, destruction of the historical and natural environment, pollution, epidemics, and poverty."

The problems remain much the same; the development of capitalism has supported migration to big cities. The wave of migration has been so rapid and intense that, as in many other parts of the world, "slums" have surrounded all the big cities. Within the capitalist process, the cities have developed depending on the property relations of unplanned growth. While the capitalist system promotes uniformity, typology and mass and rapid production, it also directly or indirectly makes use of poverty and the capitalist mindset and poverty act hand in hand to construct the built physical environment.

Our country's economy, too, has not been able to remain outside this process within the global system. Accelerated by both internal dynamics and particularly by foreign aid, capitalism gained significant momentum with the Truman Doctrine in the 1940s, the Marshall Plan in the 1950s, and neoliberalism in the 1980s. These periods have been recognized as the main causes of migration and rapid population growth in cities. Along with the uncontrollable rise in population, the cancellation of plans, zoning amnesties, continuously increasing building heights and constantly changing local development plans have complicated the problem even more. As in almost all around the world, traffic, noise, pollution, in short, all kinds of urban problems dominate the agenda. At the beginning of the modern period, Peter M. Bede criticized the improvements in Germany as follows: "…dry clichés […] plots of housing serving a monoculture […] No marketplace, no school, no recreational areas […] residences lined up like soldiers […] no relationship between the residences, no genuine grouping, no variation in the types of residences and no consideration of interior space from an urbanistic perspective". Almost the same criticism can be addressed for today's residential areas as they are uniform, monotonous satellite cities multiplying rapidly around urban centers, deprived of green arease and public open spaces. The reaction to these massive housing blocks has grown so widespread that they have been called "deserts of habitation" or, due to their colorful façades, "cities of parrots." Unfortunately, mere quantitative increases in housing production or changing the façade colors are far from enough to recover these building deserts. Various academic studies have revealed that these small-roomed apartment complexes, which have replaced the slums, fail to meet the needs of their residents. Although the number of families with children who live in these areas is above average, it is obvious that facilities to meet the educational and social needs of children and youth under the age of eighteen, remain insufficient.

If concepts such as "public interest" and "benefit of society," which design education seeks to instill are replaced by everyday notions like "maximum profit" and "maximum gain," it will be inevitable that urban problems become unsolvable issues. Consequently, the failure that begins on the urban scale ends up, on the architectural scale, in a design mentality that is reduced to a monotonous and depressing formalist approach or

seeking originality. It seems inevitable to endure the power, taste and impositions of a certain class that has almost monopolized the field and detached from social concerns, convinced that they are the vanguard of economy and believe that driving force for economy lies in construction. This group, which plays a decisive role in shaping the society and acts as an almost determining force for all of us, has failed to preserve the existing building stock that is of great importance for the cities of our country. Instead of protecting, rehabilitating and renewing, the approach has unfortunately been interpreted as "demolish hastily, rebuild, demolish and rebuild again," and sustained up to the present day.

Unfortunately, in our country, conservation, renovation and rehabilitation projects are limited and most of these initiatives remain symbolic or showcase investments, since the expected profit and financial return do not yield significant value.

At one point, the concentration of commercial and administrative buildings in city centers, along with the spontaneous development of slums and industrial zones, eventually caused the entire city to seem like a slum. This homogenization even more complicated the problem and the hours lost in the commute between home and workplace increased. Most importantly, land prices across all urban areas began to rise uncontrollably, turning the process into a full-scale battle for profit.

Despite the growing number of measures taken against these negative conditions, the interventions put into practice have only deepened the existing problems rather than solving them. In almost every country, while the satellite towns were expected to ease the urban burden, they have, in fact, created even greater problems. These areas have increasingly evolved into areas that serve only the upper economic classes. As it is often said, modernism established its presence through housing projects and also prepared its own downfall through them. The privatization and commodification of everything that once belonged to the society stand in sharp contrast with the needs and desires of the majority. The proliferation of individual housing, private vehicles and personal parking spaces unfortunately brings with it an ever-increasing demand for more roads, overpasses and bridges every day. A review written about German cities states, "Just as we missed our first chance, we are about to miss the second and third… The planning sins of the 1950s and 60s ruined the German urban landscape […] in recent years, architects have once again repeated the same mistakes made in the first attempt." The same recurring mistakes can also be observed in cities outside Germany.

Modern architecture emerged with the intention of addressing the problems of the city. Yet across different geographies, it has become increasingly evident that it has served almost every purpose except solving those very problems. In response to the impoverishment and growing unlivability of cities, one of the most significant reactions was Ebenezer Howard's Garden City project. However, similar attempts in our country did not endure for long within the dynamics of capitalist development. The example of Bahçelievler in Ankara did not last long; over time, all the gardens disappeared and it remains only as a name of a neighborhood. First the gardens and then the houses which were important Turkish traditions, were removed. Identical apartment blocks without gardens and parking spaces have filled every parcel of land within the same narrow streets, expanding each year with new floor permits and dramatically increasing both population density and urban problems. What began as a pastoral dream has gradually turned into an illusion. During the pandemic, the renewed awareness of the

need for open spaces revived ecological, natural, bio and biophilic design approaches under different labels. The century we live in may well be called the age of mega-projects: floating cities, cities upon cities, funnel cities, walking cities, tower cities and many other utopian propositions could be interpreted as attempts to redefine the idea of publicness. However, in practice, the true beneficiary has always been the private capital. Unfortunately, private investment alone appears to play a dominant role in fueling the process of gentrification. In almost everywhere, housing areas once occupied by lower-income groups in city centers have been absorbed by the wealthy, while the original inhabitants suddenly find themselves relocated to another part of the city. Even in Central Europe, often regarded as the home of advanced societies, the proposed solutions have soon turned into new forms of deadlock. From the beginning of the modern era to the present day, most urban theories have failed to be implemented and have ultimately been replaced by economic programs and planning agendas.

The predominance of the economy corresponds to class interests, production relations and the persistence of social problems. Architecture, like other art disciplines, has emerged as a response to collective needs and benefits, shaped and transformed by social change, cultural diversity and systems of values within societies. In almost every country, when designing residential areas, children have been considered the primary factor, with walking distances to schools regarded as a key design criterion. Depending on the country, a walking distance ranging from 300 to 800 meters has been accepted as a standard design parameter. Especially for younger children, it was expected that they would reach their schools by walking through green pathways, crossing small streams and feeding geese and ducks along the way. Unfortunately, although the early practices in our country initially sought to meet these standards, the introduction of school shuttle services led to a transport-based education system. When designing a residential area, the aim should be to establish a traffic system, the central facilities that are not visually and physically connected to the traffic system and the pedestrian routes that lead to schools. The primary goal in the design of residential zones must be to ensure safety within the area, especially for children, without exposing them to traffic.

Today, even in the safest residential areas, almost every apartment block is surrounded by major roads on all four sides. One of the key parameters in housing design is the walking distance to local centers that meet daily needs. However, with the disappearance of neighborhood grocery stores and the growing appeal of shopping malls with parking lots, daily shopping has largely been replaced by long-term purchases and larger storage habits. The expansion of parking areas and highways, along with the increasing number of vehicles on the roads every day, has turned what was once a maximum half-hour commute between home and workplace into a process that now takes hours.

With the International Monetary Fund's extraordinary aid proposal to Türkiye in 1979 on condition that Türkiye adopts a liberal economic system, the years of independent development came to an end and this period was completely closed with the 1980 military coup. Particularly this shift coincided with the period "after 1980, with the restructuring of the capitalist system [and] […] a phase of neoliberal globalization that is characterized by the boundless fluidity of capital […] and the commodification of nearly 'everything' on a global scale, as societies were increasingly surrendered to the logic of capital".

As seen in the recent urban construction and transformations across almost all cities worldwide, the resulting picture is marked by income inequality and socio-spatial segregation as the main determinants. In our country, the neoliberal economic policies that have been on the agenda since the 1980s have, within the context of globalization, supported a formation that is extremely rapid, disproportionate and devoid of scale. This process managed to transform every local and global resource into an investment field by regarding the accelerated urbanization that emerged after the two world wars and the long-existing agricultural lands as highly profitable areas for service and housing sectors. Unfortunately, this trend has continued unabated to the present day. The situation has often been used as an indicator of cities' socio-economic growth, suggesting prosperity. However, this astonishing development should instead be critically discussed within the context of architecture and spatial aesthetics and utilized to address the problems of everyday life.

The connection of Ankara to İstanbul by railway in 1892 marked the beginning of significant social, economic and cultural transformations. Throughout history, the trade of agricultural and animal products, particularly mohair, contributed to the city's development to a certain extent. However, the lack of capital accumulation necessary for industrialization was regarded as a major drawback in the city's economy. During this period, the establishment of industrial facilities in Ankara through public investment can be considered an important turning point. These state-founded industrial complexes also led to the construction of new residential areas at the east of the Kızılırmak River.

Ankara's development has been shaped through the period that consisted of the Ottoman Empire's Westernization era, the establishment of the nation-state and later the dominance of liberal economic policies after the 1980s to the present. Each of these periods has produced its own distinct spatial outcomes.

Since its foundation, Ankara's development and physical growth have followed a highly fluctuating trajectory, closely tied to the shifts in economic and political policies. Throughout this process, the economy, society, culture and politics etc. have shaped Ankara, just as Ankara has, in turn, influenced them. Although its historical role as a major center of production and trade played a key part in shaping the city, the fact that it is the capital has been the most decisive factor. Setting a model for the nation as the capital has produced both positive and negative consequences. Yet today, it is possible to clearly trace how capitalist processes have reshaped the city. Unfortunately, many architectural and urban concepts have taken on multiple, even conflicting definitions that lead to semantic shifts and, over time, political implications. In the face of this inevitability, it is essential to define the situation beyond the political framework and seek solutions.

The excessive growth of Ankara has inevitably led to a polycentric urban structure. Each center is defined specifically and marked by its own "iconic" buildings. Just as other major cities, Ankara is undergoing a rapid phase of construction, driven by capitalist and neoliberal approaches that treat the city and its surroundings as new instruments of profit-making. Especially after the 1980s, the apartment blocks that replaced the slum buildings that surrounded Ankara began to define the city's new urban landscape. The neoliberal economic structure that emerged during this period, supported by numerous legal incentives, triggered an explosion in the construction activity led by large-scale construction companies. Although alternative housing typologies were occasionally

explored alongside the dominant parcel-based apartment block model, these remained as isolated examples. In the early phases of TOKİ's (Housing Development Administration of Türkiye) projects, such variations could still be observed; however, in later years, its heavily criticized practices led to the widespread adoption of a uniform national housing typology.

Especially in the case of Ankara, it is difficult to speak of private or public preservation, renewal or rehabilitation efforts. Even significant examples of preservation such as the Saraçoğlu or Hamamönü neighborhood, fail to make a truly positive contribution to the city. It is hardly possible to speak of any architectural or urban added value. Rather than all out urban interventions, it is crucial to discuss successful experiences and practices that are guided by a coherent idea and contribute to the collective body of knowledge. What truly matters for all urban residents is finding sustainable public spaces where urbanism, architecture and the arts are synthesized in harmony.

REFERENCES

Akcan, E. (2010) "Asilik Sonrası Mimarlık, Osmanlı Başkentinden Küreselleşen, İstanbul'a: Mimarlık ve Kent, 1910 – 2010" İstanbul: Osmanlı Bankası Arşiv Araştırma Merkezi, pp.135-147.

Heumann, B. "Kapitalist Ülkelerde Günümüzün Şehircilik Sorunları" Mimarlık; 73/10. s17-25.

Kaynar, İ. S. (2020). " Engürü'den Ankara'ya: Ankara'nın iktisadi tarihi (1892-1962)"; Efil Yayınevi, İstanbul.

Mimarlar Odası Yayın Komitesi (1975) "Kapitalist Şehir Bünyesindeki Felaketler Çaresizdir," Hazırlayan:H. Çakır, R.Avidor, Doyuran Matbaası, İstanbul

Özçelik, P. (2013). "Kapitalist Sermeye Birikimi ve Kapitalist Kent." Mülkiye Dergisi, 37(2), 97-124.

Öze, U. (2011) "Tüm Öteki'lerin Kenti" ISSN: İdeal Kent Sayı 3, ss. 130-141

Sennett R, (2025) "İnşa Etmek ve Yaşamak" Ayrıntı Yayınları, İstanbul

Turut, H. Özgür, E. M. (2018). "Klasik Kent Kuramlarından Eleştirel Kent Kuramlarına, Geçiş Bağlamında Kentleri Yeniden Okumak." Ege Coğrafya Dergisi, 27(1), 1-19.

Who Will Determine the Roadmap? Human or Humanoid? That is the Question

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Abstract
Who Will Determine the Roadmap: Humans or Humanoids? That Is the Question. This study focuses specifically on the artistic productions of humans and humanoids advancing on the terrain of artificiality. In the late twentieth century and the twenty-first century, the evolution of artificial intelligence systems has blurred the boundaries between art, science, and philosophy, giving rise to a new culture that questions humanity's conceptual meaning. Now, both robots, with the help of artificial intelligence technologies, and humans, with the contributions of the genome project and CRISPR technologies, are becoming humanoid. In this situation; what makes someone an artist, or something a work of art? What does it mean for a machine to be trained by humans to produce art? Can human-like artificial intelligence transform the culture of art? Does it affect or alter the viewer's perception? Who wins, who loses? And many more questions await answers. In his 1988 book The In-human, Jean-François Lyotard began to question whether thought could exist without the body and whether it could become the vehicle for a new post-human subjectivity. According to Lyotard, even if thought continues to exist without a body, it was unclear whether it could truly be called thought. For him, this was the "only problem" facing humanity. Because the answer to this question depended on how we understood the word "human." Just 37 years after Lyotard's questioning, bodiless subjects or humanoids are taking the place of humans. As emerging technologies blur almost every field, it is unclear how art will adapt to this new order. All artistic values, built on centuries of accumulated knowledge, are changing once again. This change may be more disruptive than previous ones, but it is certain that it will not be the end of art. As Danto said, the story may be over, but the characters are still alive. Artists continue on their path, trying to adapt to new technologies, researching, producing; human artists also continue their creations. Who will determine the roadmap of art, humans or humanoid? Only time will tell.

Keywords
Humanoid, Artificial Intelligence, Art, Culture, Posthumanism, Socity 5.0.

INTRODUCTION

The 2000s have been the years during which artificial intelligence, robots and humanoids, the electronic life forms, have rapidly ascended to take humanity's throne. In 2019, Japan's Prime Minister Shinzo Abe introduced Industry 5.0, also known as Society 5.0, stating that, "Technology should be perceived by societies not as a threat, but as an assistant." The goal was to integrate the cyber world with the physical (real) world and create a societal order called, Smart Society (Society 5.0). The intellectual foundation of this system, which aimed to transform societies into Super Smart Societies by influencing individuals' daily life practices, was built on the philosophy of Society 5.0, while its technological dimension has been driven by artificial intelligence technologies. Advancing in the shadow of Posthumanism, the project is an intersection of human and technology at the point of non-human. With intensified research during the 1990s, developments in robotics enabled the design of functional and realistic humanoid robots. From 2002[1] onward, android robots began to be developed and integrated into nearly every aspect of shared human life. However, it soon became apparent that artificial intelligence technologies do not always yield successful or expected results and many undesirable outcomes have been encountered revealing that achieving the desired goals will require much more time than anticipated. However, since art does not require accuracy or certainty, it quickly became a field toward which artificial intelligence technologies gravitated. Humanoid robots began to appear also in the art world and more advanced versions have been produced in a short time. Initially, humanoid robots imitated artworks from the history of art by creating similar pieces. Then, humanoid robot artists have been developed. The final products were powerful and met with admiration. The fascination they inspired among the public was important for the development of technology and for the 5.0 Smart Society. The absence of hesitation, rejection or failure in art might have eased the concerns of scientists, however, it is hardly the case for the field of art itself. The admiration the viewer shows for the creations of artificial intelligence technologies influences both the artist and the art. While it is clear that there is still a long way to go, harsh criticism continues to deepen across every art discipline, with new debates emerging every day.

Art today is still shaped by the possibilities of technology in its own language and its accumulated heritage does not vanish but builds upon itself. The foundation of contemporary art is the product of two centuries of accumulation. In art, this process began with photography, expanded through motion pictures and further developed with cinema. During this period, all the values were challenged by Marcel Duchamp's readymades, Malevich's objectless art and Thomas Wilfred's light art and new understandings quickly found place in art. With Ben Laposky, digital art infiltrated the field with different materials and possibilities and both life and art quickly began to digitalize. Today, there are digital spaces and simulacra[2] offered to the experiences of humanoid robots and disembodied subjects. The virtual star, Hatsune Miku, the hologram singer, Maya Kodes, the virtual Instagram influencer, Lil Miquela and many other virtual realities of the digital world (!) (Işıtman, 2019) have long been on the verge of being forgotten. The new-generation AI performers, such as Tilly Norwood or humanoid robot artists, such as Sophia and Ai-Da, have already replaced them.

DETACHMENT FROM REALITY

Technology has long since occupied our lives by becoming an inevitable part of daily routine. The technological developments, which accelerate every day, urge the society to transform every aspect of live. This transformation not only leaves a mark on the social structure but also creates a new definition of what it means to be human.

With the completion of the Human Genome Project (HGP)[3] in 2003, it became possible to create humans with desired characteristics. Science began to promise progress far beyond all medical interventions, that had previously contributed to human life, from the simplest to the most complex. Long-accepted applications that once served as evidence of humanity's integration with technology from glasses, contact lenses, hearing aids, artificial retinas, pacemakers, insulin pumps to even organ transplants had lost their significance. What was now promised was the creation of an entirely different kind of human being. Some scientists argue that, as a result of biomedical advancements, we are approaching a time when humans will change beyond recognition, while others claim that the fragile and vulnerable human body does not belong to the future. Some artists also share this view. Stelarc emerges as a figure among them. In his 1991 article, Prosthetics, Robotics and Remote Existence: Postevolutionary Strategies, Stelarc states that the body's lack of modular design and its overreactive immune system complicate the replacement of dysfunctional organs. According to him, considering the body as obsolete in terms of form and function may represent the peak of technological madness, however, it may also signify humanity's highest level of awareness. For the body can only determine its post-evolutionary strategies once it becomes aware of its own condition. Continuation of the human species through reproduction no longer matters; what matters is the enhancement of the individual through redesign. The human-machine interface is significant now, rather than the male-female relationship. The body has become obsolete. We have reached the limits of both philosophy and human physiology and arrivied at the evolutionary end where adaptation's next logical stage is the assimilation of mechanics by the organic. (Stelarc, 1991)

While The Human Genome Project (1984–2003), genetic science, cyborg engineering and artificial intelligence technologies were giving rise to a digital and algorithmic culture that began to manifest itself in the 1990s, Jean-François Lyotard published Inhuman (1988). The work centered on the question, Can thought exist without a body? (Inhuman, 22–3). According to Lyotard, even if thought were to continue without a body, it remains uncertain whether it could still be regarded as thought in the full sense of the word and this constitutes the "single" or perhaps the essential, question the humanity faces as the answer determines what we actually mean by the word "human". Paul-Michel Foucault, on the other hand, approaches the issue from a different perspective. As the archaeology of our thought has clearly shown, he argues that human is a recent invention and perhaps one that is now coming to an end like a disappearing face drawn in sand at a seashore. (Foucault 1994, cited in Artun, 2016)

In his 1954 lecture, "The Question Concerning Technology", while arguing that technology shapes the way we understand the world around us and therefore should not be considered separate from the human being, Martin Heidegger also unintentionally warned of the risk of becoming enslaved by technique (Heidegger, 1969). Technology was a significant power but should not lead to the deification of humankind. Today, however, according to Yuval Noah Harari, the individual has become godlike and is on the verge of not only attaining eternal youth but also mastering divine capacities

such as creation and destruction (Harari, 2016:407). Or, was at the verge and with the genome project, those divine powers have indeed been seized. Genetic scientist Prof. Dr. Sümer Aras notes that, from this point on, scientists no longer ask Can we? but rather Should we? In the shadow of such progress, posthumanism may not have dethroned humanity after all, it may simply have granted it more time to secure its position. The remaining question is; what the ultimate goal is. Is it to enable humans to live longer, healthier and stronger lives or to design them to meet the expectations? While humans experiment with the technologies that are capable of reshaping their own existence through humanoid robots, they will either humanize machines or mechanize themselves. For now, what humans can do seems limited to creating their avatars detached from reality and becoming virtual beings.

As humans experience the final stage of detachment from reality through their own avatars, they also elevate and immortalize themselves in a language. Although the ultimate goal of contemporary human, immortality or as Castells (2008) terms it, the denial of death has currently been overcome in digital environments, futurist Ufuk Tarhan highlights the scientific studies and their results. He suggests that the aging gene could be halted and even rejuvenation might be possible; the ultimate aim is immortality. According to Tarhan, it is a world governed by the future humans and humanoids. Although Lyotard's question is still unanswered, futurists claim that the 2045 Initiative is very close to transferring human consciousness into a holographic body. Dmitry Itskov, the founder of the internet media company New Media Stars, aims with his project, '2045 Initiative' to make immortality possible by developing a robot capable of storing human identity. The project team of neurologists, robotics engineers and researchers of human consciousness believes that a digital version of the human self can be uploaded into an android (humanoid robot) (Kılıç, 2020). As Harari reminds us, Mary Shelley, in her 1818 novel Frankenstein, foresaw that the rapid pace of technological development could soon replace homo sapiens with other or transformed beings, potentially bringing about the end of sapiens. These concerns are still alive. The technological developments may not bring about the end of humanity, however, they do not erase and may even magnify uncertainty about its future. Will the beings transformed by the HGP, CRISPR technology and numerous other advances be humans or humanoids? Moreover, as Mary Shelley reminds us, will these transformed beings belong to a world that is not only physically altered but also cognitively and emotionally unfamiliar to us?

EPILOGUE; ART

Art is a language unique to humankind. It will change and transform, but it will never die. At the beginning of the last century, Walter Benjamin expressed his concern that reproduction of art would deprive the artwork of its aura. At that time, he targeted film and photography. He argued that reproducibility through technology would devalue the original and as a consequence, erode the viewer's perception and capacity for critical thinking. But that didn't happen. Photography pushed artists to move away from reality towards abstraction. The avant-garde art of the twentieth century emerged, paving the way for today's contemporary art. Marcel Duchamp's ready-mades, Malevich's objectless art, Nam June Paik's Buddha TV and Andy Warhol's silkscreens became the symbols of transformation in art.

Every new philosophical and scientific concept brings about a transformation in human beings, their values, relationships with the environment and modes of thinking and

perception. Inevitably, art is also affected as it imitates life. With the new technologies, the process of artistic creation has given rise to new subjects that involve both human and non-human participants. While the human has become an active participant of a process, artificial intelligence has evolved into something far beyond being merely a machine, through its productions. Both artists and humanoid robot artists have focused on artistic themes by engaging with the possibilities offered by AI. Even though human artists may no longer be at the center, they have started to create performances in collaboration with machines. Artistic production is the result of either separate or joint performances. What counts as art is no longer determined solely by the art world today but increasingly, technology itself also participates in this decision. Robotic technologies, artificial intelligence, humanoid structures, cyborgs and many other innovations have opened new doors in the art world, while concepts such as the art market, artist, artwork, exhibition, viewer, material, museology and collecting as well as many other issues related to art are being discussed, questioned and redefined. Although AI-generated or digital artworks are often harshly criticized for their populist tendencies, clichés, market orientation or association with entertainment culture, their impact on the viewer continues to increase day by day.

The productions of humanoid robot artists, equipped with artificial intelligence systems, are aesthetically human-centered and emulate human creativity. These systems do not only learn from humans but their target market is also human. Although imitation is often said to keep the original alive, the value of AI-generated productions in society continues to increase. The productions are perceived as they belong to something far beyond a mere machine. Ai-Da, the world's first humanoid robot artist, is one of the examples of this perception. By its very design, even the existence of Ai-Da challenges the definition and production of art and to whom it belongs. The issue goes much deeper than whether an algorithm or a robot can be defined as a creative entity. The answer, as Lyotard asked, lies in what we mean by the word human. Ultimately, this is not just a transformation of the artist's identity, but a transformation of human identity and everything it creates.

Artificial intelligence, in its current form, is a system of machines that operate through data and algorithms and attempt to produce works that imitate human creation. Although AI is rapidly improving, artistic creation still maintains its position as a privileged domain of human effort. According to Marcus du Sautoy, including originality, everything related to art is about intention and what distinguishes human creativity from that of machines is this intention (Baxter, 2024). However, art or the artist is defined, neither can exist without the intention or the purpose, the desire or the thought they plan to present. Moreover, such intention carries the traces of thousands of decisions related to life and the past experiences. Yet, according to Alice Helliwell, the absence of intention should not prevent AI-generated works from being considered art. As she argues, "If we can regard radical and unconventional works such as Duchamp's urinal or Tracey Emin's bed as genuine works of art, how can we disregard something created by a generative algorithm?" (Baxter, 2024). It should not be overlooked, of course, but the motivation and methodology behind the production of art should not be eliminated either. Human beings are products of those who lived before them and what adds meaning to the world are the lives and the experiences that are intertwined with others. Art, too, is the result of this network of relationships and lots of choices or, as Danto emphasizes, it is embodied meaning. In this sense, we must remember that AI lacks real-world experience and its productions are an epic form of gossip which repeats what has

already been said and done. According to Harari, AI is currently distant from real-world experience. However, it may eventually take over culture and transform human history by creating stories, melodies, laws and even religions, which would not mark the end of history, but the end of human sovereignty. The earlier devices such as the printing press and radio helped spread the cultural ideas of humans, yet they never created cultural ideas of their own. AI, however, is different. It is capable of generate entirely new ideas and an entirely new culture (Harari, 2023).

By then, in a life intertwined with technology, art will continue to operate not by rejecting technology but by affirming it. As has been the case for centuries, technological revolutions such as artificial intelligence will not signify the end of art but, on the contrary, will stimulate new artistic approach and creativity. Art will change and it will also bring about change. Eventually, as Foucault suggests, humanity may vanish or, as Shelley envisions, evolve into transformed humanoids that belong to an entirely different world. Yet, in any case, even at the cost of their own sovereignty, humans will not give up on pushing beyond their dreams and opening the doors to another world through artificial intelligence systems.

FOOTNOTE

1. The human-like robots with advanced capabilities, which can make facial expressions are referred to as androids… Although they do not look exactly like humans, they are called gynoids (female) or androids (male). Altough, according to the Oxford Dictionary, the earliest use of the term Android dates back to the 1700s, it referred more to toys rather than to what the word represents today. For further information, see https://en.wikipedia.org/wiki/Android_(robot)

2. According to Jean Baudrillard's view in philosophy, it refers to a copy of something that has no original, real or prototype https://tr.wikipedia.org/wiki/Simulakrum, (accessed March 22, 2023, 16:10)

3. The Human Genome Project (HGP) is the most comprehensive biology project ever conducted through the collaboration of various countries and institutions. The idea was first proposed in 1984 and was accepted and planned by the U.S. government that same year. The main goal of the project was to identify all human genes, map them on DNA and make the results accessible to all researchers. Officially launched in 1990, the project was completed on April 14, 2003, successfully achieving access to all the genetic information necessary to recreate a human being. The HGP reached its goals thanks to Access to the latest technologies. (compiled by Ö.I.)

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REFERENCES

Artun, A. (2016) Sanat Tarihi'nin Düşüşü, skopbülten, Michel Foucault, The Order of Things – An Archeology of Human Sciences (New York: Vintage Books, 1994) s. 387. https://www.e-skop.com/skopbulten/sanat-tarihinin-dususu/3124 accessed: 07.05.2025

Baxter, Claudia. (2024) AI art: The end of creativity or the start of a new movement? 21 October 2024 https://www.bbc.com/future/article/20241018-ai-art-the-end-of-creativity-or-a-new-movement accessed: 11.07.2025

Benjamin, W.(2004) Tekniğin Olanaklarıyla Yeniden Üretilebildiği Çağda Sanat Yapıtı. (Das Kunstwerk im Zeitalter seiner techischen Reproduzierbeikeit) Pasajlar. Çev. Ahmet Cemal. İstanbul: YKY.

Castells, M. (2008). Enformasyon Toplumu: Ekonomi, Toplum ve Kültür: Ağ Toplumunun Yükselişi. (Çev. Ebru Kılıç). İstanbul: Bilgi Üniversitesi Yayınları.

Capel T. Ploderer B. Bircanin F Hanmer S. Yates J. Wang J. Khor K. Leong T. Wadley G. Newcomb M. (2024) Studying Self-Care with Generative AI Tools: Lessons for DesignProceedings of the 2024 ACM Designing Interactive Systems Conference 10.1145/3643834.3661614(1620-1637) Online publication date: 1-Jul-2024. accessed: 21.05.2025

Chiang, Ted. (2024) Why A.I. Isn't Going to Make Art; To create a novel or a painting, an artist makes choices that are fundamentally alien to artificial intelligence. The New Yorker, 31.08 2024, https://www.newyorker.com/culture/the-weekend-essay/why-ai-isnt-going-to-make-art, accessed: 02.07.2025

Eric Zhou, Dokyun Lee, Generative artificial intelligence, human creativity, and art, PNAS Nexus, Volume 3, Issue 3, March 2024, pgae052, https://doi.org/10.1093/pnasnexus/pgae052, 20.05.2025

Foucault M. (1966) The Order of Things - An Archeology of Human Sciences (New York: Vintage Books, 1994) s. 387, Aktaran Artun, A. https://www.e-skop.com/skopbulten/sanat-tarihinin-dususu/3124 accessed:19.08.2025.

Harari, Noah Yuval, (2023) Yapay zeka insan medeniyetinin işletim sistemini hackledi, (Çev. Mustafa Alkan,) The Economist, https://fikirturu.com/toplum/harari-yapay-zeka-insanligi-hackliyor/ accessed: 03.08.2025

Harari, Noah Yuval, (2026) Hayvanlardan Tanrılara Sapiens, İnsan Türünün Kısa Tarihi, (Çev. Ertuğrul Genç), Kolektif Kitap Bilişim ve Tasarım Limited AŞ, Istanbul, 2016, ss; 388-408.

Harry H. Jiang, Lauren Brown, Jessica Cheng, Mehtab Khan, Abhishek Gupta, Deja Workman, Alex Hanna, Johnathan Flowers, Timnit Gebru (2023) AI Art and its Impact on Artists, AIES `23: Proceedings of the 2023 AAAI/ACM Conference on AI, Ethics, and Society, August 2023, Pages 363 – 374, https://doi.org/10.1145/3600211.3604681, accessed:21.05.2025

Heidegger, M. (1966). Discourse on thinking (J. M. Anderson & E. H. Freund, Çev.). New York: Harper & Row Publishers. pp 53-54, https://www.holybooks.com/wp-content/uploads/Discourse-on-Thinking.pdf, accessed: 21.05.2025

Işıtman Ödül (2019) Yeni Mekân Düz Ekran, Mekân Sempozyumu, Mimarlar Odası Samsun Şubesi yayımlanmamış bildiri.

Kalpokas, Ignas. (2023) Work of art in the Age of Its AI Reproduction, Philosophy & Social Criticism, https://doi.org/10.1177/01914537231184490, SAGE Publications, ISSN 0191-4537, e-ISSN 1461-734X, accessed: 21.05.2025

Kılıç, A. (2020) Yapay Zekaya Beyin Transferiyle Sonsuza Kadar Yaşama Projesi '2045 Initiative' https://m5dergi.com/one-cikan/yapay-zekaya-beyin-transferiyle-sonsuza-kadar-yasama-projesi-2045-initiative/, accessed: 14.09.2025

Lyotard, Jean François (1988) The Inhuman, First published Fri Sep 21, 2018, Stanford Encyclopedia of Philosophy, https://plato.stanford.edu/entries/lyotard/ accessed: 28.05.2025

Rabinovich, M., Foley, C. (2024). The work of art in the age of AI reproducibility. AI & Soc, Curmudgeon Corner, Published: 09 July 2024, https://doi.org/10.1007/s00146-024-01991-3, accessed: 28.05.2025

Stelarc (1991), Prosthetics, Robotics and Remote Existence: Postevolutionary Strategies; Source: Leonardo, Vol. 24, No. 5 pp. 591-595 Published by: The MIT Press Stable URL: http://www.jstor.org/stable/1575667, accessed: 04. 09. 2025

Installatıon With Textıle Materials: an Arts-Based Educational Study on Conceptual, Aesthetic, and Cultural Approaches

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Abstract
Textiles, historically valued for their functional qualities in clothing, shelter, and daily life, have undergone a profound transformation within modern and contemporary art. Moving beyond utility, they now serve as critical, conceptual, and experimental media for exploring identity, gender, cultural memory, sustainability, and ecological awareness. This study investigates the conceptual, aesthetic, and cultural dimensions of textile-based installations, emphasizing their potential to transform spatial perception, evoke sensory and embodied experiences, and recontextualize ordinary materials within artistic frameworks.

The research employs a qualitative, arts-based approach, combining theoretical literature review with the analysis of student projects produced in the course Installation with Textile Materials. Through this approach, the study examines how material choices and artistic strategies reveal the conceptual functions, aesthetic potentials, and pedagogical values of textiles.

Findings indicate that textile installations constitute not merely decorative forms but transformative artistic practices that engage directly with social, cultural, and environmental contexts. Consequently, the study contributes to interdisciplinary dialogues among contemporary art, material culture, and art education.

Keywords
Textile Art; Installation; Contemporary Art; Art Education; Interdisciplinary Practice

1.INTRODUCTION

Textile, as one of the oldest modes of human production, has served not only as a functional material responding to the basic needs of clothing and protection but also as a bearer of cultural identity, social structure, and aesthetic expression. Throughout history, production processes such as weaving, knitting, and sewing have existed as integral components of both everyday life and social rituals. However, with the emergence of modern art, textile began to transcend the boundaries of traditional craftsmanship, evolving into a conceptual and aesthetic medium. Particularly from the second half of the twentieth century onward, artists have approached textile not merely as a surface or material, but as a carrier of intellectual, corporeal, and cultural representations (Adamson, 2007; Parker, 2010).

Approaches that question modernism's hierarchical distinction between "high art" and "craft" have transformed the position of textile within contemporary art. The feminist art movement played a decisive role in this transformation by reinterpreting textile as a symbol of women's labor, everyday life, and emotional work (Parker, 1984; Chadwick, 2007). Thus, textile has evolved beyond being merely an aesthetic object to become a medium for critical reflection on gender, identity, belonging, and cultural memory. Today, many artists employ the tactile, flexible, and permeable qualities of textile materials to create installations that invite viewers into a bodily experience. This approach emphasizes the idea that art is not solely a visual activity but also a spatial, sensory, and intellectual process (Bishop, 2005).

This transformation has progressed in parallel with the questioning of the art object itself, intersecting with contemporary approaches that emphasize the "relational," "participatory," and "experiential" dimensions of art. Within the framework of relational aesthetics as defined by Bourriaud (2002), art is no longer perceived merely as a mode of representation but as a field for interaction and shared experience. In this context, textile-based installations transform the viewer into an active subject of the artistic process through the material's physical and symbolic permeability. The tactile and corporeal associations of fabric guide the viewer not only to see but to understand through sensation (Bolt, 2004). This, in turn, opens up a new field of inquiry into the epistemological nature of art: knowing through making.

As a practice that transforms the relationship between the viewer and space, installation art has played a significant role in the development of these new forms of expression established through textile materials. Textile, with its capacity to soften space, envelop the body, and interact with movement, harmonizes naturally with the permeable nature of installation art. In this respect, textile installations do not merely produce objects but instead create experiential environments that transform both space and the viewer (Jones, 2012). In contemporary art practice, artists such as Magdalena Abakanowicz, Sheila Hicks, Ernesto Neto, Annette Messager, and Chiharu Shiota have produced large-scale installations that engage with both individual and collective memory while activating bodily sensations through textile (Bilir, 2015; Yılmaz, 2020).

Recent studies in art education (Hetland et al., 2013; Rolling, 2017) indicate that processes involving direct interaction with materials deepen both cognitive and emotional learning. Materials with high sensory intensity, such as textile, extend the learning

experience beyond the visual–auditory plane into a realm of embodied awareness. In this regard, textile installations in the context of art education function not merely as technical exercises but as pedagogical experiences that foster critical thinking, empathy, and sensory consciousness.

1.1.Purpose of the study

The primary aim of this study is to examine the conceptual, aesthetic, and cultural dimensions of installations created with textile materials. It investigates how textile is positioned in contemporary art production not merely as a formal material but also as an intellectual and pedagogical tool. The main focus of the research is to explore the conceptual functions that textile assumes within contemporary installation art, how its cultural and social meanings can be rearticulated in the context of art education, and how this material can transform students' critical and creative modes of thinking within art-based learning processes. In this respect, the study seeks to contribute to both current tendencies in contemporary art and the pedagogical dimensions of art education.

The artistic potential of textile materials today extends beyond explorations of form and surface, evolving in conjunction with multilayered concepts such as sustainability, ecological awareness, identity politics, and social critique. Accordingly, this research adopts a pedagogical lens to examine the transformation of textile in contemporary art, proposing an interdisciplinary perspective.

1.2. Conceptual Framework: Textile, Art, and Cultural Meanings

Throughout history, textile has played a significant role not only as a functional material but also as a carrier of social identities, cultural memory, and symbolic values. Production practices such as weaving, sewing, knitting, or fiber-based techniques have manifested across different regions as tangible indicators of women's labor, craft knowledge, and intergenerational transmission. In this regard, textile can be regarded both as an integral part of everyday life and as a material language that represents the continuity of culture (Parker, 1984).

Since the mid-twentieth century, textile has become a field of critique against hierarchical perceptions associated with "handicraft" and "women's work," concepts marginalized by modernist art discourse. In particular, the feminist art movement redefined textile materials as a means to make suppressed women's experiences visible. Judy Chicago's installation The Dinner Party (1979) represents an early example of this transformation, honoring women historically excluded from art history through the use of textile and ceramic materials (Nochlin, 1988).

In this context, textile functions not only as an aesthetic mode of expression but also as a site of social critique and resistance. Acts of sewing, weaving, or knitting have been reinterpreted by feminist artists as political gestures, with the notion of "domestic production" transforming into an artistic practice that questions cycles of production and reproduction (Auther, 2010). Consequently, textile establishes a plane of expression where the personal intersects with the political.

In contemporary art practice, artists such as Magdalena Abakanowicz, Sheila Hicks, Ernesto Neto, Annette Messager, and Chiharu Shiota have created large-scale installations that engage both individual and collective memory while activating bodily sensations

through textile. These artists have utilized the soft, permeable, organic, and tactile qualities of textile to transform space and create immersive sensory environments for the viewer (Bilir, 2015; Yılmaz, 2020). Abakanowicz's Abakans series explores the sculptural and corporeal potential of fiber materials, while Hicks's use of colorful threads establishes a rhythmic relationship with space, foregrounding the tactile memory of textile. Shiota, in turn, represents abstractly the experiences of remembrance, loss, and belonging through spatial webs constructed with threads.

Thus, within contemporary art, textile has evolved from being merely a representational medium to becoming a sensory, cultural, and conceptual interface. Woven surfaces, threads, and fabric layers establish a tactile connection between the viewer and the artwork while simultaneously expanding the conceptual space for engaging with notions such as gender, the body, labor, and memory. This multilayered nature of textile also holds the potential to create learning environments in art education that foster students' critical, sensory, and interdisciplinary modes of thinking.

2.METHOD: ART-BASED QUALITATIVE APPROACH

This study adopts an arts-based qualitative research approach, which positions artistic practice not only as an aesthetic outcome but also as a mode of inquiry and a form of knowledge production (Barone & Eisner, 2012). Within this framework, artistic processes, material engagement, and reflective practices are treated as integral components of research data.

The research was conducted within the graduate-level course "Installation with Textile Materials" at the Faculty of Fine Arts, Çukurova University. The study group consisted of nine graduate-level students enrolled in the course. Participants were selected based on their enrollment in the course and their voluntary agreement to participate in the research process. All participants had prior foundational training in fine arts, and the course was structured to support experimental, conceptual, and material-oriented practices in contemporary installation art.

The implementation process unfolded in three interrelated stages: (1) conceptual research and idea development, (2) material experimentation and production, and (3) installation production and spatial arrangement. Throughout these stages, students developed individual conceptual inquiries under the overarching theme "What Truly Exists," documenting their reflective processes through written journals, sketches, and visual records.

The research data consisted of students' reflective journals, sketchbooks, photographic documentation of material experiments and installations, and observational notes recorded during the course process. Data were analyzed using thematic analysis. Initially, all textual and visual materials were reviewed repeatedly to achieve familiarity with the data. Open coding was then conducted to identify recurring concepts related to material experience, spatial perception, embodiment, visibility/invisibility, and meaning-making. These codes were subsequently grouped into broader thematic categories through an iterative process, allowing patterns to emerge across individual projects. The themes were refined by comparing visual and textual data, ensuring coherence between material practices and conceptual narratives.

Ethical considerations were observed throughout the research process. Participation was voluntary, and all students were informed about the academic purpose and scope of the study. Written informed consent was obtained from all participants. Students were informed that their artworks and names might be presented in visual materials and captions within the publication, and consent was given for the use of their names in association with their artistic works. Participants consented to the use of their names in association with their artworks.

Conceptual Research and Idea Development:
Students developed a conceptual framework related to their chosen theme, conducted visual research, and materialized their ideas through sketches. Within the study group, students initially formulated their individual questions and conceptual orientations under the theme "What Truly Exists." At this initial stage, they developed personal and philosophical inquiries related to the theme, and these reflective processes were documented in writing through brief reports.

The course was structured to allow the stages of textile and material engagement, spatial composition, and conceptual inquiry to progress in a complementary manner. Students were encouraged to gain conceptual depth by experiencing the relationship between material and space, with each production process shaped under the guidance of conceptual questions. Classroom discussions provided a philosophical foundation for thinking about being and representation. Students deepened their conceptual orientations by exploring questions such as: "Can we approach the essential by observing what exists?", "Does the artwork represent the essential, or does it merely reproduce what exists?", and "How can the 'essence' that is hidden, concealed, or replicated be made visible through textile surfaces?" This inquiry process aimed to foster critical awareness of both the intellectual dimension of art and the role of material in meaning-making. Students then tested the conceptual questions emerging from these discussions against the sensory and formal possibilities of the materials, thereby transforming reflective research into a tangible production process.

In the subsequent stage, students created sketches to translate their conceptual ideas into a visual plane, conducting material explorations aligned with the proposed compositions in these sketches.

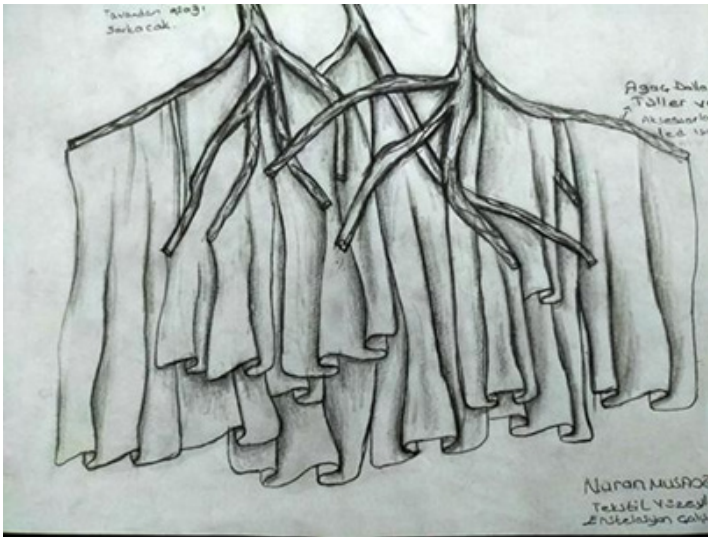

Figure 1. An example from student Nuran Musaoğlu's rapid sketch studies:

2.1. Material Experimentation and Production:
At this stage, students conducted experimental studies using various materials such as textile, thread, tulle, knitting, socks, and fabric, observing the physical, aesthetic, and symbolic potentials of the materials.

Each student responded to the theme "What Truly Exists" according to their own conceptual approach, developing a personal expressive language through the material's texture, permeability, resilience, or fragility. In this way, the material was regarded not merely as a means of expression but also as an "interface" that guides the formalization of thought.

This process of thinking through material became particularly evident in the work of Nuran Musaoğlu. Through her engagement with tulle and transparent textile layers, Musaoğlu explored the conceptual tension between visibility and invisibility, allowing the material's permeability to guide both formal and conceptual decisions. She described the production process as "a negotiation between being seen and remaining porous," emphasizing how bodily interaction with the material shaped the meaning of the installation rather than a pre-defined conceptual plan.

Some students explored the relationship between the visible and the invisible by using tulle and transparent fabrics, interpreting the reflections created by light on the surface as a metaphor for the "boundaries of the essence's visibility." The permeable nature of tulle became a medium representing the transitions between being and non-being.

Figure 2. Material explorations by student Nuran Musaoğlu:

Some students worked with knitting and thread structures to explore themes of continuity, connection, and memory. The repetitive nature of knitting evoked the layered structure of human memory, while formal actions such as knotting, tying, and unraveling were associated with personal history and a sense of belonging. These approaches echo the bodily rhythm and intuitive movement embedded in handmade textures by Sheila Hicks (Auther, 2010).

2.2.Installation Production and Spatial Arrangement

Students exhibited their final works in the selected spaces, taking into account elements such as light, gravity, permeability, and tactility.

The suitability of the material in relation to conceptual content, scale, and spatial interaction was discussed within the course; based on these discussions, each student completed a spatial arrangement specific to their chosen site. This staged process created an experimental learning environment that extended from conceptual inquiry to sensory and spatial production.

Figure 3. Images from student Nuran Musaoğlu's installation placement process:
Through the tulle layers, Nuran Musaoğlu visualized the interplay of visibility and concealment, emphasizing the material's permeability without restating its softness and tactility each time.

In the final stage of the course, students transformed their conceptual and formal proposals into a public installation within the Faculty of Pharmacy at Çukurova University. Initially designed for a museum setting, the projects were adapted and reinterpreted to fit the expansive, high-ceilinged faculty space. This transformation required both spatial and conceptual adaptation.

These data were analyzed using qualitative content analysis, with thematic coding applied to both textual and visual documents. The analysis focused particularly on the material's conceptual function, aesthetic formation, and pedagogical contribution (Leavy, 2015). "Nine installation works produced by the students were analyzed through thematic coding as part of a qualitative content analysis."

This methodological approach encompasses not only the development of technical skills but also the processes of thinking through material, critical inquiry, and the cultivation of sensory awareness. The arts-based qualitative approach treats the student's creative production as research data, thereby situating the experiential dimension of art education within an epistemological framework. In this respect, art education becomes both a creative and intellectual field of inquiry.

3. FINDINGS AND DISCUSSION: THE CONCEPTUAL FUNCTION OF MATERIAL IN TEXTILE INSTALLATIONS

The student projects examined in this study demonstrate that textile materials function not merely as formal tools but also as environments for conceptual thinking. Students transformed everyday materials such as fiber, woven and knitted structures, tulle, thread, and fabric in various ways to explore themes including identity, belonging, gender, memory, and ecology. In these productions, the material acted both as a bodily extension and as a cultural metaphor. The application phase of the arts-based qualitative research was conducted under the theme "What Truly Exists." This theme encompassed nine installation works developed by students, centering on individual inquiries into concepts of being, reality, and essence. Each student sought answers to the question of what is "truly essential" from their own experiential perspective, constructing a personal intellectual space through material, form, and spatial arrangement.

Figure 4. Nursima Dağabakan's Installation: Views from Different Angles.

Students shaped their installations by considering the architectural characteristics of the chosen spaces—such as light, volume, height, direction of movement, and viewer circulation (Figure 4). In this process, the space ceased to function merely as a surface for display and became an integral part of the conceptual and sensory experience of the work. In particular, the flexible, permeable, and soft qualities of textile materials created a perceptual contrast with the rigid architecture of the faculty, establishing a new sensory equilibrium.

Figure 5. Beyaz Atman's Installation Created During the Course: Distant and Close-Up Views.

Some works were suspended from the ceiling to engage with gravity, while others were placed on walls or within voids, creating spatial tension through contrasts such as weight–lightness and transparency–opacity (Figure 5). During this process, students observed the "behavior" of the material within the space, experiencing how the direction of fabric drape, the distribution of light, and the viewer's movement altered the layers of meaning in the work.

Figure 6. Dilek Karcı's Installation Created During the Course: Distant and Close-Up Views

The spatial placement process simultaneously transformed the ways in which students, as artistic subjects, engaged with the public space. The main hall of the Faculty of Pharmacy (Figure 6) became a laboratory for the artwork, allowing students to experience how art creates new interpretive possibilities when introduced into everyday life. In this context, the process was regarded not merely as an aesthetic exercise but also as a learning experience emerging within the triangle of space–viewer–artwork.

The public nature of the space played a significant role in the perception of the works. Students positioned their installations in the corridors, entrance hall, and ceiling voids of the Faculty of Pharmacy—an area primarily used for other educational purposes—creating unexpected encounters for viewers. In this context, the act of "placement" became not only a physical arrangement but also a strategic intervention that transformed the way viewers perceive the space (Figure 6).

Figure 7. Distant and close-up views of Ezgi Mengüç's installation created within the course.

The theme "What Truly Exists" provided a philosophical framework addressing the transience of being, the transformation of the material world, and the individual's position within this process. Students interpreted these themes through the permeability, softness, fluidity, and fragility of textile materials, each translating their internal experiences into a public aesthetic language (Figure 7). In this respect, the study established a bridge between personal introspection and public sharing.

4.THE PEDAGOGICAL AND TRANSFORMATIVE ROLE OF MATERIAL

Initially designed for a museum setting, these works were ultimately installed in the public spaces of the Faculty of Pharmacy at Çukurova University. The expansive, high-ceilinged structure with varying light conditions provided students with both physical and conceptual opportunities. The faculty space enhanced the public accessibility of the installations, allowing the artworks to engage with the everyday flow of academic life. This mode of placement highlighted the nature of art as not confined to galleries but capable of permeating spaces within daily life.

Throughout the course, students learned to think through material, exploring the sensory, symbolic, and critical dimensions of textile. The production process demonstrated that art education is not solely a domain for technical skill development; rather, it possesses the potential to cultivate critical thinking, empathy, and social awareness. This outcome underscores the transformative nature of arts-based learning (Leavy, 2020).

In conclusion, textile installations evolved into productions in which students, drawing from their personal experiences, explored universal themes, deepening their engagement on both bodily and conceptual levels. The sensory qualities of the material became an integral component of meaning-making.

5.CONCLUSION AND EVALUATION

This study demonstrates that installations created with textile materials constitute not only a formal artistic practice but also a field for intellectual, sensory, and pedagogical inquiry. The production process undertaken by students around the theme "What Truly Exists" revealed how art can engage with philosophical concepts such as being, essence, and representation. The tactile, permeable, and fragile nature of textile materials enabled students to transform their personal experiences into social and cultural reflections.

The research revealed that arts-based learning processes cultivate not only aesthetic skills in students but also critical awareness, empathy, and conceptual depth. In this context, textile materials functioned as more than a medium of expression, becoming a pedagogical tool for thinking, experimenting, and reshaping. Moreover, the selection of the Faculty of Pharmacy as a public site allowed art to extend beyond gallery confines into everyday life, creating unexpected encounters with viewers and reinforcing the social dimension of artistic production. This demonstrates that art education can generate transformative experiences not only within the studio but also in public spaces.

In conclusion, textile installations offer an interdisciplinary learning model both for art education practice and contemporary art production. This approach lays the groundwork for the development of experimental, process-oriented, and research-based pedagogical methods in the future of art education.

From the perspective of contemporary art theory, textile installations function not merely as aesthetic experiences but also as relational fields of production. Within the framework of "relational aesthetics" as defined by Bourriaud (2002), such works generate continuous interaction among the artist, the viewer, and the space. The permeable and tactile qualities of textile materialize this relational potential, transforming the material from an art object into an intellectual and emotional interface. In this regard, textile serves not only as a means of representation but also as a medium of participation and encounter.

Conversely, discussions in new materialism (Bennett, 2010; Barad, 2007) emphasize that material is not a passive instrument but an active agent. The "agency" of textile fibers, threads, and layers is evident in these productions. Students' engagement with the material generates not only formal outcomes but also ethical and ecological awareness. This perspective supports the transformation of art education: learning is redefined not merely as the "transmission of knowledge" but as a process of "thinking through making" (Ingold, 2013; Bolt, 2004).

This study also highlights the significance of sensory and embodied ways of knowing, which constitute one of the most critical directions in contemporary art education. Textile enables the student to become not merely an observer but a producer, perceiver, and transformative agent. This state of embodied knowing aligns with Dewey's (1934) conception of "art as experience," wherein learning becomes enduring when lived as an aesthetic encounter.

In conclusion, installations created with textile materials establish a unique space that merges the conceptual depth of contemporary art with the pedagogical objectives of art education. Both the physical properties and the conceptual energy of the material carry educational value. In this context, future art education practices should position students not only as art producers but also as agents of social and ecological awareness. Thus, art education can extend beyond aesthetic production to become a domain of sensitivity, relational thinking, and cultural transformation.

REFERENCES

Adamson, G. (2007). Thinking Through Craft. Berg.

Auther, E. (2010). String, felt, thread: The hierarchy of art and craft in American art. University of Minnesota Press.

Bennett, J. (2010). Vibrant matter: A political ecology of things. Duke University Press.

Barad, K. (2007). Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning. Duke University Press.

Barone, T., & Eisner, E. W. (2012). Arts-based research. Sage Publications.

Bilir, A. (2015). Magdalena Abakanowicz ve "Agora" adlı yerleştirmesi. Sanat ve Tasarım Dergisi, 5(2), 65–72. https://dergipark.org.tr/tr/pub/sanattasarim/article/220256

Bishop, C. (2005). Installation Art: A Critical History. Tate Publishing.

Bolt, B. (2004). Art Beyond Representation: The Performative Power of the Image. I.B. Tauris.

Bourriaud, N. (2002). Relational Aesthetics. Les Presses du Réel.

Chadwick, W. (2007). Women, Art, and Society (4th ed.). Thames & Hudson.

Dewey, J. (1934). Art as experience. Minton, Balch & Company.
Hetland, L., Winner, E., Veenema, S., & Sheridan, K. (2013). Studio Thinking 2: The Real Benefits of Visual Arts Education. Teachers College Press.
Hicks, S. (2021). Thread Trees River. Arnoldsche Art Publishers.
Jones, A. (2012). Seeing Differently: A History and Theory of Identification and the Visual Arts. Routledge.
Leavy, P. (2020). Method Meets Art: Arts-Based Research Practice (3rd ed.). Guilford Press.
Nochlin, L. (1988). Women, art, and power and other essays. Harper & Row.
Parker, R. (1984). The Subversive Stitch: Embroidery and the Making of the Feminine. Women's Press.
Parker, R. (2010). The Craft Reader. Berg.
Rolling, J. H. (2017). Arts-based Research Primer. Peter Lang.
Yılmaz, S. (2020). Seçili sanatçılar üzerinden lif sanatının gelişimi [Yüksek lisans tezi, Mimar Sinan Güzel Sanatlar Üniversitesi]. MSGSÜ Açık Erişim Sistemi.
https://acikerisim.msgsu.edu.tr/xmlui/handle/20.500.14124/10090

Ceramic Applications in Biomimetic Design and Sustainable Architectural Practice

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Abstract
While nature constitutes the source of life for humanity, from the perspective of artists, architects, and engineers, it is also an area that has contributed to the development and progress of our species, guiding and inspiring many design ideas that make life easier. Biomimicry, which means "to imitate life," offers functional and aesthetic design solutions that have been tried, tested, and refined through evolutionary processes in nature. Designers who reflect the potential of nature in their work through its dynamic cycles, systematic structures, aesthetics, function, form, color and pattern, and structural diversity, play a critical role in mitigating environmental and human-related problems. To prevent the climate crisis, whose impacts are increasingly being felt today, from deepening and reaching an uncontrollable level, it is essential to prioritize the inclusion of nature in sustainable strategic practices and solution methods across fields such as art, architecture, engineering, politics, and science. In this study, examples of ceramics—which are among the best sustainable materials—integrated into green building and façade systems as part of the ecological design concept have been investigated. Natural, healthy, economical, durable, recyclable, and capable of ensuring the continuity of local materials, ceramics also offer users a wide range of options in terms of color, shape, and modularity thanks to their high plasticity. Environmentally conscious artistic and industrial ceramic designs situated at the intersection of architecture and art, aimed at improving urban life, have been examined.

Keywords
Sustainable design, ecological ceramics, architecture and ceramics, biomimicry, modularity.

1.INTRODUCTION

Biomimicry is a hybrid term derived from the Greek words mimesis (imitation) and bios (life), and in its simplest sense, it refers to "imitating life" (Biomimetic, 2024). Through biomimicry, humanity has integrated into everyday practice the solutions it needs—solutions that have evolved and been refined over long periods—by drawing inspiration from nature. Remarkably, many of the innovations sought in fields such as engineering, architecture, and design already exist in nature at both ecosystem and organism levels. As Steadman notes, "Nature itself is an extraordinary inventor and has already produced every kind of device, structure, and material through natural selection" (2008, p. 260). Throughout evolutionary history, adaptation strategies that have been tested and optimized in nature have been applied across numerous disciplines, including art and architecture. This has led to the development of design concepts and solutions that mirror natural behavioral processes and functional approaches. Within the scope of this study, selected examples that fall within the intersection of biomimetic design and sustainable architecture are examined. The study first provides essential definitions of biomimicry and sustainable architecture, followed by an explanation of the topic through the findings.

The research initially presents bio-based examples. It then applies a deductive approach to focus on works in which ceramics constitute the primary material, emphasizing both the current and potential contributions of ceramics to design as an artistic, aesthetic, and industrial building material.

1.1 Purpose of the study

This study employed a qualitative research design. Within this methodological framework, biomimicry, sustainable architecture, and innovative ceramic-based material production were examined. A comprehensive review of the existing literature relevant to these domains was conducted. The research focused on examples illustrating how biologically based materials—materials that align with the concept of sustainable development, which has emerged over recent decades as a framework for addressing global environmental challenges—intersect with design, aesthetics, and technology. Ceramics, recognized as one of the oldest and most established biological-based materials, were analyzed with respect to their modern production techniques as well as their aesthetic and functional contributions to daily life.

Additionally, the study investigated the interactions between industrially produced ceramics and ecological systems, including water, plant life, and marine organisms. The aesthetic and functional roles of ceramics within their environmental contexts were analyzed through selected examples representing high-quality applications.

2.METHOD AND MATERIALS

This study employed a qualitative research design. Within this methodological framework, biomimicry, sustainable architecture, and innovative ceramic-based material production were examined. A comprehensive review of the existing literature relevant to these domains was conducted. The research focused on examples illustrating how biologically based materials—materials that align with the concept of sustainable development, which has emerged over recent decades as a framework for addressing global environmental challenges—intersect with design, aesthetics, and technology. Ceramics, recognized as one of the oldest and most established biological-based materials, were analyzed with

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3.RESULTS

Seven case studies relevant to biomimetic architecture and bio-based design were examined in this research. The first three case studies include: the Bone Chair, inspired by evolutionary processes that shaped and streamlined the human skeletal system; the Silk Pavilion, which integrates a non-human species into the fabrication process; and the Growing Pavilion (also referred to as the Mycelium Pavilion or Mushroom Pavilion), which utilizes mycelium as a living construction material within an experimental architectural framework. These examples collectively highlight the richness of natural resources and the substantial potential they hold for material innovation, design diversity, and production methodologies.

The remaining four examples include both conceptual and implemented works: TerraColl, the permeable brick YiBrick, Brick by Bit, ceramic polygon tiles designed for coral habitats, and three-dimensional terracotta reef systems. These examples illustrate how ceramics—an environmentally friendly and ecologically advantageous material—can inform and enhance architectural design from a user-centered perspective.

Overall, the findings suggest that collaborations with nature offer more durable, healthier, and more accessible solutions compared with commonly used materials and approaches that generate substantial ecological footprints. Such nature-based strategies present a promising pathway for advancing sustainable architectural and design practices.

3.1. Bone Chair

The design concept of the Bone Chair, introduced in 2006, can be traced back to a simulation software developed in 1998 by Adam Opel GmbH to increase the efficiency of its engine mount research. The objective of this software was to determine how certain structural components could be fixed while using the minimum amount of material possible and maintaining optimal levels of mechanical strength. To identify which elements were indispensable, stress forces were applied to specific points of a virtual model, enabling the algorithm to distinguish essential elements and eliminate those deemed unnecessary. This process allowed the model to reach its most minimal, refined, and functional iteration.

Having observed Adam Opel GmbH's engine mount development process, Joris Laarman drew a conceptual connection between this engineering method and the mechanisms of biological evolution. Reflecting specifically on the evolution of bone structures, Laarman identified adaptive processes such as the accretion or erosion of material in response to external environmental stresses and the continual optimization of internal bone architecture to achieve the best possible weight-to-strength ratio. These biological principles informed the foundation of the Bone Chair's design (Bone Chair, n.d.).

Achieving its ideal form through the strategic addition of material where strength was required and the reduction of material where it was unnecessary, the Bone Chair stands as a hybrid model situated between evolutionary logic and simulation-based structural optimization.

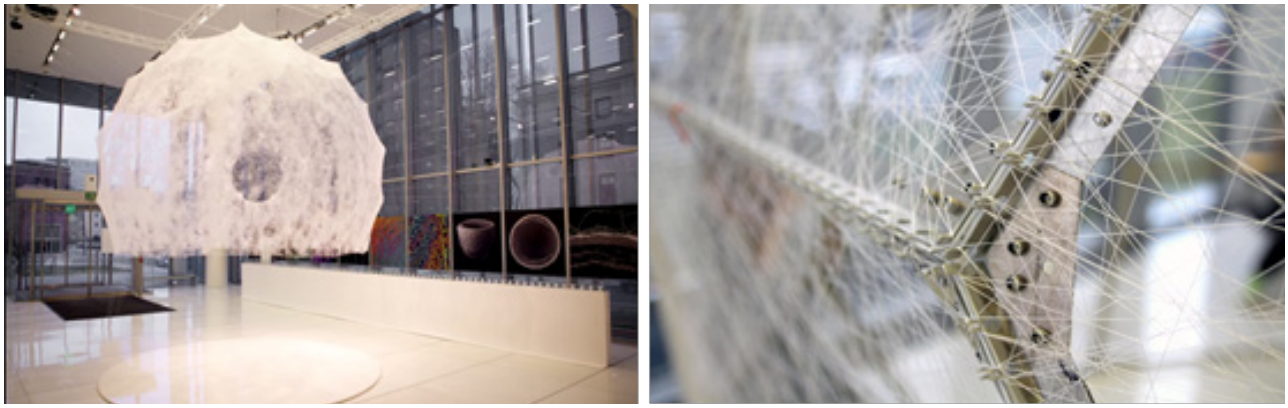
Figures 1-2: Side view and detailed frame of the Bone Chair.
Baker, L. T. (2022, June 7). Synthetic Biology: Joris Laarman's "Bone" Chair. Phillips. https://www.phillips.com/article/96602744/the-bone-chair

Given the biological foundations of the design, coherence among idea, form, and function was essential. This prompted an exploration of how the chair could be produced as a thin, lightweight, single-piece object. Aluminum was selected as the primary material, and a casting technique was employed to achieve monolithic fabrication. To realize the chair's highly organic geometry, Laarman collaborated with Phil Verdut, who constructed interlocking complex ceramic mold components that permitted the form to be cast in a single operation. Speaking about this work—which may be regarded as an application of biological principles to domestic furniture—Laarman stated: "Shaped into its striking form through biomechanical data, designed in collaboration with nature, brought forth through technology, and refined by human hands, the Bone Chair has become a precursor to the optimized objects of the future" (Baker, 2022, para. 7). Of the twelve Bone Chairs produced, six examples are permanently exhibited in major institutional collections, including the Rijksmuseum, the Museum of Modern Art, the Vitra Design Museum, the Centraal Museum, and the Museum für Kunst und Gewerbe (Baker, 2022).

3.2. Silk Pavilion-I

In recent years, designers have increasingly begun to develop new material products and fabrication processes by working with plants, microorganisms, and insects. Notable examples of this emerging approach include the Silk Pavilion–I (2013) and the Growing Structure (Mycelium Building, 2019). The Silk Pavilion–I was developed by the Mediated Matter research group at the MIT Media Lab in collaboration with Prof. Fiorenzo Omenetto of Tufts University and Dr. James Weaver of the Wyss Institute at Harvard University. Positioned at the intersection of digital and biological fabrication, the project investigates the relationship between these two modes of production at both product and architectural scales. The primary structure of the Silk Pavilion–I was composed of twenty-six polygonal panels. Inspired by the silkworm's ability to produce three-dimensional cocoons, the pavilion evokes a dome constructed through the aggregation

of polygonal geometries (Silk Pavilion-I, n.d.). Each panel was fabricated with continuous threads deposited by a CNC machine at varying patch densities. Once the digitally woven structural base was completed, 6,500 silkworms were introduced to form the secondary structure. Acting as biological printers, the silkworms filled the gaps between the pre-arranged silk fibers as they moved across the polygonal frames. Through the collective behavior of the swarm, the patches on the panels were reinforced, resulting in smooth and homogenous surfaces.



Figures 3-4: Biologically woven dome view of Silk Pavilion–I and the connection detail of the polygonal panels.Photographs by Neri Oxman and The Mediated Matter Group.Silk Pavilion–I (2013). Oxman Retrieved September 28, 2025, https://oxman.com/projects/silk-pavilion-i

Observations revealed that the silkworms—whose deposition patterns determine the density of the biological fiber layers—were influenced by environmental variables such as the angle and intensity of incoming light, as well as temperature. Their responsiveness to these fluctuating external performance criteria caused variations in patch density. By monitoring the silkworms' tendency to cluster in darker and more sheltered regions, researchers collected data used to determine the location and size of openings within the pavilion's dome. Heat and light distribution were further modulated using a solar path diagram, enabling precise adjustments to the thickness of the silk layers across the panels. The 6,500 silkworms involved in constructing a single pavilion possess the biological capacity to produce approximately 250 additional pavilions of the same dimensions, as well as up to 1.5 million eggs. As such, the Silk Pavilion–I stands as a compelling example of incorporating a non-human species into a design and fabrication process, directing its behavior, and utilizing its productive capacities. The project occupies a significant position within the intersection of biomimicry and ecological design at both product and architectural scales (Project Silk Pavilion, n.d.).

3.3. The Growing Pavilion (Mycelium Pavilion, 2019)

The Growing Pavilion, exemplifies an architectural response to contemporary environmental challenges. Disruptions in seasonal cycles caused by global warming, the increasing frequency of natural disasters such as flooding, erosion, and tornadoes, the continued reliance on fossil fuels due to the insufficient adoption of renewable energy, and the persistently high levels of carbon emissions collectively indicate that current societal choices no longer offer a sustainable future for the planet. These conditions underscore the urgent need for new construction approaches and highlight the growing importance of natural and circular materials as viable alternatives within design practice.

Developed by New Heroes and Krown Design and constructed for Dutch Design Week, the Growing Pavilion features a distinct visual and material identity shaped by the extensive use of biobased components. The project's design studio emphasized the inherent qualities and aesthetic potential of natural materials, employing them in their rawest possible forms. From this standpoint, the Growing Pavilion—also referred to as the Mycelium Pavilion—incorporates a wooden primary frame, while designated sections were infilled with mycelium, the root-like network of fungi. The fungal growth required four days to fill the molds, after which the mycelium was dried to halt further development once the desired density was achieved. A natural, water-resistant coating was then applied, resulting in a temporary architectural structure.

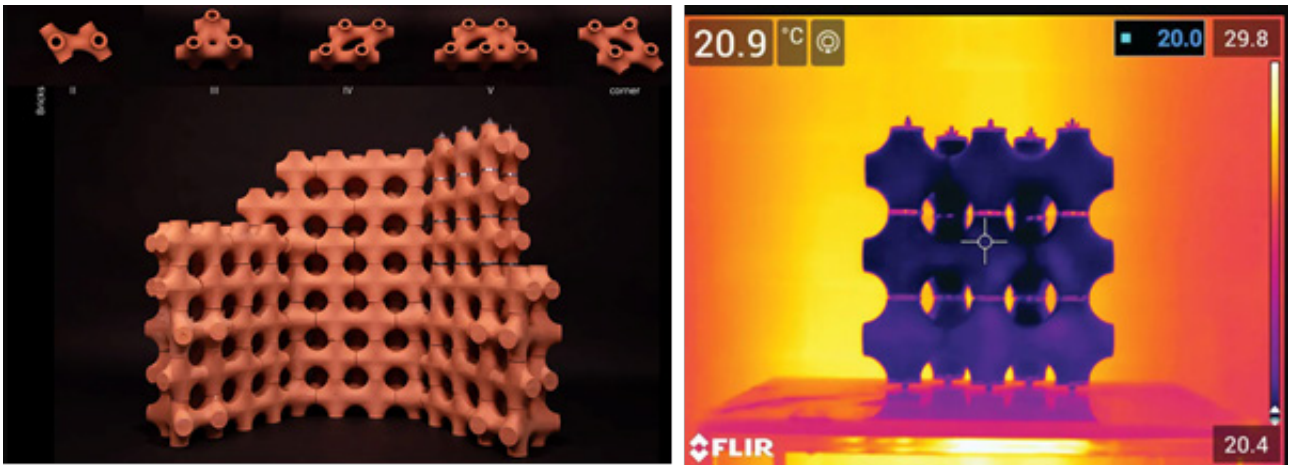

Figures 5-6: General view and close-up perspective of the Growing Pavilion (Mycelium Pavilion). Photographs by Eric Meander.Tucker, E. (2019, October 29). Organic architecture is taken to the extreme in Eindhoven with this mushroom pavilion. Spaces. https://thespaces.com/organic-architecture-is-taken to-the-extreme-in-eindhoven-with-this-mushroom-pavilion/

The final material displayed several notable properties: despite being lighter than traditional construction materials, it offered impact resistance and fire-retardant insulation (Tucker, 2019). The pavilion utilized reed for the flooring, timber for the structural framework and benches, and mycelium combined with hemp for the façade. As the fungus grew naturally within the wooden molds, it created an organic building envelope characterized by its distinct coloration and texture. Unlike cement—a major contributor to global carbon emissions—mycelium has the biological capacity to sequester carbon, storing up to twice its own weight as it grows. Its application on the façade thus represents both a demonstration of current possibilities and an indication of near-future developments in sustainable construction. As an example of biophilic architecture, the Growing Pavilion seeks to demonstrate the architectural potential of materials that are fully biodegradable and sourced directly from nature (The Growing Pavilion, n.d.).

3.4. Terra Cool

TerraCool, a collaborative project developed by architect Dilara Temel and industrial designer Lachlan Fahy, functions as a passive cooling system based on the principle of water evaporation. In the context of rising global temperatures driven by the climate crisis, insufficient green space within cities, and the thermal impact of highly concretized built environments, the urban heat island effect has become an increasingly urgent problem. TerraCool can therefore be understood as a design proposal addressing this critical environmental issue.

Passive cooling—an approach with a long historical lineage shaped by local climatic conditions—is reinterpreted in a contemporary framework through TerraCool. Ceramic was selected as the primary material due to the porous structure of fired clay and its capacity to support evaporative cooling. The system, inspired by heat exchangers and developed by Temel and Fahy, consists of parametrically adaptable modules in which water circulates. As the water seeps through the ceramic surfaces and subsequently evaporates, it lowers the temperature of the surrounding air.



Figures 7-8: TerraCool units. Design Wanted Editorial Team. (2023, October 29). An inventive architectural solution designed to address urban heat challenges. Design Wanted. https://designwanted com/terracool-ceramic-passive-cooling-evaporation/

The stackable fired-clay units are suitable for both horizontal and vertical configurations, and additional modules incorporating intermediate angles were designed to enable multidirectional expansion. The production methodology employed a rational and integrative approach, combining traditional craftsmanship with innovative fabrication strategies and benefiting from the strengths of both. Owing to the material's high plasticity, the intended forms were achieved through casting into plaster molds. The stepped configuration of the bricks facilitates the downward flow of water from top to bottom. Metal connectors—machined manually on a lathe—were assembled between the modules to ensure structural stability and watertightness.

By merging contemporary digital technologies with traditional material practices, the designers developed a versatile, sustainable, and adaptable cooling concept. Importantly, the proposal extends beyond its applicability to interior spaces. TerraCool's suitability for mass production and its capacity to be calibrated according to varying climatic and environmental conditions position it as a feasible solution for mitigating urban heat islands in public outdoor areas—particularly in dense city centers where heat accumulation is most pronounced. Furthermore, TerraCool constitutes an architectural intervention that may be integrated into building façades, rooftops, or non-load-bearing interior partitions, thereby enhancing thermal comfort for occupants. The project was presented at Dutch Design Week 2023 under the theme "Urban Oasis" (DesignWanted Editorial Team, 2023).

3.5.YiBrick

Figure 9: Demonstration of the relationship between the permeable surface and water.
Permeable Paving. (2025, September 4). Permeable paving. Wikipedia. Retrieved September 28, 2025, from https://en.wikipedia.org/wiki/Permeable_paving

YiBrick, a porous brick developed with the aim of contributing to a more sustainable and livable future, was designed by YiDesign through the collaboration of ceramic artist Caroline Cheng and Karl Yin. In China, approximately eighteen million tons of ceramic waste are generated annually; however, local authorities often fail to recognize the potential value of this waste stream. As a result, ceramic waste is not separated from household waste and is not processed or repurposed appropriately (Çamuşoğlu, 2024). Composed of 90% recycled ceramic material, YiBrick functions as a protective building component particularly well suited for regions that receive high levels of precipitation (Yi Design Group, n.d.).

Upon contact with water, YiBrick enables rapid percolation, allowing liquid to pass through to the lower layers within seconds. When compared to traditional impermeable materials such as concrete or cement-based products, YiBrick—by virtue of being produced from reclaimed waste—offers a more porous, lightweight, and durable green infrastructure alternative. Additionally, as a permeable surface system, which can also serve as an effective water management strategy, it contributes to water filtration and facilitates the evaporation of melted snow and rainwater.

3.6. Brick by Bit

Victoria Roznowski's master's thesis, titled Brick by Bit, investigates the development of modular ceramic brick components fabricated through three-dimensional (3D) printing technologies. The textured surfaces produced inherently by the 3D printing process, along with strategically designed cavity apertures, enable the formation of microhabitats capable of supporting various forms of flora and fauna, including plants, birds, insects, and bees. The design proposal comprises three distinct brick types: one intended to function as a vegetative pocket and two designed to channel and direct rainwater. These modular units are engineered to interlock and achieve structural stability without the use of mortar.

Figure 10: Partial view of Brick by Bit and the connection detail of the bricks.PA Editorial Team. (2024, July 30). Victoria Roznowski's "Brick By Bit" redefines clay bricks with 3D printing. Parametric Architecture. https://parametric-architecture.com/brick-by-bit-redefines-clay-bricks-with-3d-printing/

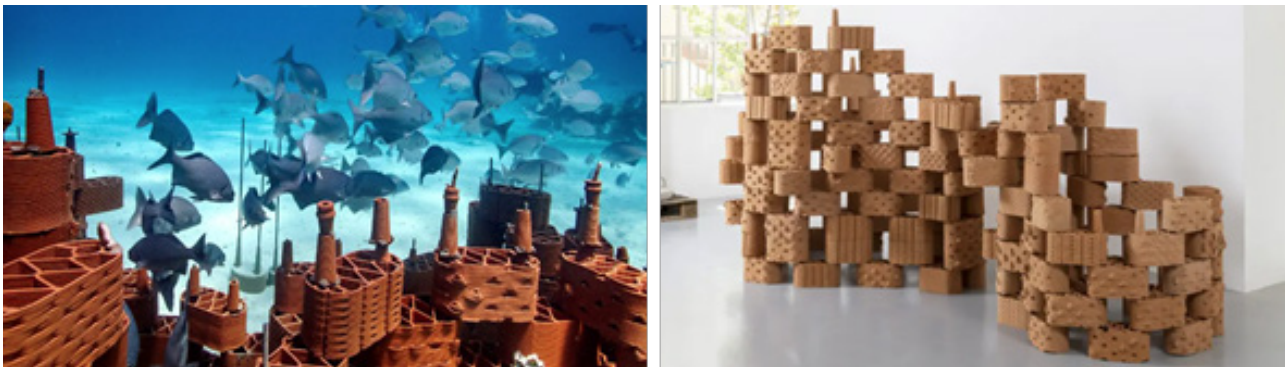
For the purposes of the thesis, a 1:2 scale prototype was constructed, consisting of fourteen exterior bricks and eight interior bricks. Although the project currently remains in its preliminary phase, planned future developments include glaze testing, diversifying the brick system into multiple sizes to enable implementation across larger architectural surfaces, fulfilling standardized testing requirements, and refining the interlocking mechanisms to improve structural performance (PA Editorial Team, 2024).

Figures 11-12: Ceramic polygonal tiles produced with three-dimensional printing. Souza, E. (2020, September 19). Ecological restoration of reefs using 3D-printed clay. ArchDaily. https://www.archdaily.cl/cl/947525/restauracion-ecologica-de-arrecifes-mediante-la-impression-de-arcilla-en-3d

3.7. Polygonal Tiles for Corals and Terracotta Reefs

A collaborative research initiative conducted by the Swire Institute of Marine Science at the University of Hong Kong and the Robotic Fabrication Laboratory within the Faculty of Architecture has produced ceramic tiles intended to function as artificial reefs. Completed in July 2020, this project represents a significant contribution to marine ecosystem restoration. The three-dimensionally printed tiles incorporate a system of recesses and protrusions designed with deliberate attention to the solid–void relationship, thereby creating protected microenvironments suitable for the attachment and growth of coral fragments. In addition, the surfaces of the tiles are enriched with biomimetic patterns that mimic natural reef textures, further facilitating biological settlement.

A total of 128 polygonal tiles, each with a diameter of 60 centimeters, were fabricated using advanced 3D printing techniques and subsequently fired at 1125°C. These units were deployed across approximately 430 square meters within three designated zones of Hoi Ha Wan Marine Park in Hong Kong (Souza, 2020).



Figures 14-15: Underwater view and partial display of the reefs created with three-dimensional printing. Science, Art and Education. (n.d.). Rrreefs: Rethinking, rebuilding, regenerating. Retrieved September 28, 2025, from https://www.rrreefs.com/our-approach/

A related undertaking by the International Coral Reef Initiative employs terracotta bricks featuring a modular architecture reminiscent of Lego components, enabling flexible assemblage in varying quantities and spatial configurations. These bricks can be customized to accommodate the specific geomorphological and ecological conditions of the local benthic landscape. Their surface topographies—including textural variations and strategically placed voids—were engineered to enhance the adhesion, habitation, and protection of marine organisms. The hollow internal volumes admit sufficient light to support organismal growth while simultaneously providing sheltered spaces. As a form of eco-engineering, this project aims to enhance habitat diversity and contribute to reinforcing coastal zones against flood events and erosional processes (Science, Art and Education, n.d.).

4. DISCUSSION AND CONCLUSION

The integration of biomimicry into contemporary design practice demands an interpretive framework that extends beyond the superficial replication of natural forms on building envelopes or isolated formal expressions. A merely aesthetic or morphological transfer is insufficient. Instead, biomimicry must be situated within a holistic epistemological and methodological paradigm that encompasses behavioral logics, ecological processes, and systemic interactions. Such an expanded approach not only strengthens the triangulated relationship among context, form, and function but also enhances the ontological and operational depth of the resulting design artefacts. When assessed at the scale of lived environments and planetary ecological systems—not solely through the lens of individual user experience—this broadened perspective reveals its capacity to generate meaningful, long-term, and regenerative outcomes.

Securing a habitable future necessitates a profound recalibration of humanity’s extractive relationship with nature. Anthropogenic environmental degradation must be reduced to the minimum threshold possible, and the negative carbon footprint imposed on the Earth must be mitigated urgently, preferably before irreversible ecological tipping points are surpassed. To achieve this, the relationship between human-made environments and

the natural world must be reoriented toward an ecocentric and nature-advantageous paradigm. Insights derived from biological systems must therefore transcend the domain of formal analogy and be translated into adaptive processes, performative behaviors, cyclical material strategies, and integrated systems thinking.

Realizing such a transformation requires structuring the entire design continuum—from the earliest stages of conceptualization to fabrication, implementation, and post-occupancy evaluation—within a robust, multidisciplinary framework. This necessitates genuine collaboration among artists, architects, engineers, material scientists, ecologists, and other specialists whose combined expertise can address the complexity of contemporary environmental challenges. Within this expanded collaborative ecosystem, the role of design evolves from the creation of discrete objects to the orchestration of ecological relationships and regenerative processes.

Parallel to these methodological shifts, the increased use of sustainable, recyclable, and materially responsible components—such as ceramics—assumes critical significance in shaping the environmental footprint of the built environment. The incorporation of such materials supports resource efficiency, reduces embodied energy, and aligns construction practices with principles of circularity and ecological stewardship. Consequently, material selection emerges not merely as a technical or aesthetic decision but as a strategic ecological intervention with implications for both present and future generations.

5. RECOMMENDATIONS AND FUTURE DIRECTIONS

The outcomes of this study—which engages with emergent modes of expression and contemporary conceptual approaches—demonstrate that current bio-based production methods and their associated applications remain insufficient to meet the demands of present and future environmental conditions. To facilitate the broader dissemination and operational viability of such approaches, it is imperative that natural materials—particularly ceramics—be given greater prominence within material selection and implementation strategies.

In parallel, the cultivation of environmental consciousness must begin at the earliest stages of formal education. Individuals who develop a strong, formative relationship with nature are more likely to integrate ecological values into their daily practices and decision-making processes; consequently, their worldviews evolve in alignment with environmental ethics and long-term ecological stewardship.

At the urban scale, there is a pronounced need to encourage the development and integration of building systems capable of self-regulation and functioning as active components within larger ecological networks. The widespread adoption of green building systems and ecologically informed architectural solutions should be supported through robust legal frameworks, regulatory mechanisms, and targeted incentives. Such measures are essential for advancing environmentally responsive design and for aligning the built environment with the principles required to sustain a resilient and livable future.

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REFERENCES

Baker, L. T. (2022, June 7). Synthetic biology: Joris Laarman's "Bone" chair. Phillips. https://www.phillips.com/article/96602744/the-bone-chair

Biomimetics. (2024, December 21). Biomimetics. Wikipedia. https://tr.wikipedia.org/wiki/Biyomimetik

Bone Chair. (n.d.). Bone chair. Joris Laarman Lab. Retrieved September 28, 2025, from https://www.jorislaarman.com/work/bone-chair/

Çamuşoğlu, N. (2024, January 19). Ceramic waste transformed into water-permeable bricks. Ekoyapı. https://www.ekoyapidergisi.org/seramik-atiklari-su-gecirgen-tuglalara-donusturuldu

Design Wanted Editorial Team. (2023, October 29). An inventive architectural solution designed to address urban heat challenges. Design Wanted. https://designwanted.com/terracool-ceramic-passive-cooling-evaporation/

PA Editorial Team. (2024, July 30). Victoria Roznowski's "Brick by Bit" redefines clay bricks with 3D printing. Parametric Architecture. https://parametric-architecture.com/brick-by-bit-redefines-clay-bricks-with-3d-printing/

Permeable paving. (n.d.). Permeable paving. Wikipedia. Retrieved September 28, 2025, from https://en.wikipedia.org/wiki/Permeable_paving

Project Silk Pavilion. (n.d.). Silk Pavilion. MIT Media Lab. Retrieved September 28, 2025, from https://www.media.mit.edu/projects/silk-pavilion/overview/

Science, Art and Education. (n.d.). Rrreefs: Rethinking, rebuilding, regenerating. Retrieved September 28, 2025, from https://www.rrreefs.com/our-approach/

Silk Pavilion I. (n.d.). Silk Pavilion I. Oxman. Retrieved September 28, 2025, from https://oxman.com/projects/silk-pavilion-i

Souza, E. (2020, September 19). Ecological restoration of reefs using 3D-printed clay. ArchDaily. https://www.archdaily.cl/cl/947525/restauracion-ecologica-de-arrecifes-mediante-la-impression-de-arcilla-en-3d

Steadman, P. (2008). The evolution of designs: Biological analogy in architecture and the applied arts. Routledge.

The Growing Pavilion. (n.d.). The Growing Pavilion. Biobased Creations. Retrieved September 28, 2025, from https://biobasedcreations.com/project/the-growing-pavilion/

Tucker, E. (2019, October 29). Organic architecture is taken to the extreme in Eindhoven with this mushroom pavilion. The Spaces. https://thespaces.com/organic-architecture-is-taken-to-the-extreme-in-eindhoven-with-this-mushroom-pavilion/

YiBrick Permeable. (n.d.). YiBrick permeable. Yi Design Group. Retrieved September 28, 2025, from https://www.yidesigngroup.com/product/yibrick-porous

Reflections of Sustainability on Contemporary Ceramic Art in the Context of Environmental Problems

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Abstract
Throughout history, nature has been a primary source of inspiration for artists. The relationship between nature and art, shaped by the effort to understand life and the environment, has increasingly evolved into practices that raise ecological awareness. In works directly connected to nature, the diversity of artistic expression, enriched by technological advances, stands out. Today, artists approach nature not only as an aesthetic reference but also as a field of ecological responsibility. Environmental problems and global ecological crises have become important themes in contemporary art and have also found a place in ceramic art. Many artists reflect sustainability not only in material selection but also in production processes and conceptual frameworks. Within the scope of this study, artist readings are conducted on Jason deCaires Taylor and Doug Aitken, focusing on ceramic works that contain environmental messages in the context of art's power to create awareness in individuals. Their practices illustrate the power of art to foster awareness at the individual level and highlight the social potential of ceramics in engaging with ecological issues. The study also reconsiders the concepts of art, artist, and responsibility through works contributing to sustainability and suggests new approaches for future projects.

Keywords
Nature, Environmental Problems, Sustainability, Ceramics, Art.

1. INTRODUCTION

Throughout the history of art, nature has persisted as both a source of inspiration and a field of expression for artists. From ancient times to the present day, the relationship with nature has gone beyond a mere aesthetic reflection, shaping cultural, social, and religious values. However, in the modern era, the rapid increase in environmental problems has transformed the relationship between nature and art, bringing the role of art in the face of ecological crises into question once again. In this process, art has come to the forefront not only as a medium that depicts the beauty of nature, but also as a means of raising ecological awareness and fostering social sensitivity.

Today, global warming, climate change, pollution, habitat loss, and the decline of biodiversity have become focal points not only of environmental policies but also of artistic practices. Especially in contemporary art, the theme of sustainability manifests itself in a wide range of areas, from material selection to production processes, from conceptual approaches to exhibition practices. In this context, ceramic art has become a significant means of expression in addressing environmental issues, due to both its strong connection with nature and the transformative quality of the material.

1.1. Purpose of the study

The purpose of this study is to reveal how environmental issues and the theme of sustainability are addressed in contemporary ceramic art through the works of selected artists. Specifically, the research aims to evaluate the power of art to create awareness in individuals by examining the productions of Jason deCaires Taylor and Doug Aitken, and to reconsider the relationship between art, artist, and responsibility from an ecological perspective.

2. THE THEME OF SUSTAINABILITY IN THE CONTEXT OF ENVIRONMENTAL PROBLEMS

The interaction between nature and human beings has been one of the most significant sources of inspiration for art throughout history. In the prehistoric period, depictions of nature on cave walls are considered the earliest examples of artistic expression; these images are interpreted by art historians and archaeologists as instinctive behaviors arising from humanity's struggle for survival in its natural environment (Aker Ensari, 2022: 912). Over time, such instinctive tendencies evolved into artistic practices, laying the groundwork for art to gain new directions by adapting to social and cultural transformations in different periods.

Since the 1960s, contemporary art has adapted to rapidly changing social, cultural, and technological conditions, gaining a new conceptual perspective. During this period, art moved beyond being a purely aesthetic object to become a medium where meaning was questioned and thought took precedence. The question "What is art?" became central, with Joseph Kosuth's view that "art is an idea about art" (Kosuth, 1969) and Sol LeWitt's definitions (LeWitt, 1967) shaping the intellectual framework. Numerous new forms of expression were examined under conceptual art (Lippard, 1973), and the primacy of concept over aesthetics encouraged alternative approaches (Uz & Uz, 2018: 657). Performances, happenings, installations, and environmentally focused projects, inviting the audience to intellectual as well as aesthetic engagement, were significant within this context (Antmen, 2017: 193). These developments laid the foundation for an approach that continually questions the meaning and boundaries of art.

Within the framework of conceptual art, it became clear that art could not be confined to predetermined forms, and the notion of art was enriched through new interpretations. Emerging as a reaction to modernism, contemporary art removed aesthetic concerns and taboos, ending the restriction of exhibiting works solely in "White Cube" galleries. Artists moved beyond studio production and traditional formats such as sculpture or painting, expanding into unexplored and experimental fields (Artun & Örge, 2017: 27-28). This transformation fundamentally altered the understanding of space and presentation in art, opening a ground for discussions on new relationships with nature.

Since the 1960s, under the influence of environmental movements, artistic approaches to nature have been associated with various concepts. Land Art refers to works created directly in nature, while Earthworks focus mainly on monumental forms. Environmental Art emerged as a response to the environmental movement of the 1960s, characterized by its activist orientation. Its main aims are to restore damaged areas, raise public awareness of environmental issues, and contribute to ecological health. Similarly, Ecological Art goes beyond traditional practices by focusing on living ecosystems and is shaped through collaborations between artists, scientists, and local communities (Kayahan & Çevik, 2020: 35-36). This interdisciplinary approach positions ecological art not only as an aesthetic practice but also as a means of fostering social awareness. As the environmental problems caused by the Industrial Revolution began to be felt globally, artists sensitive to the destruction of nature by human activity directed their practices toward raising social awareness and contributing to solutions for future generations. These new forms of expression went beyond traditional frameworks, developing an interdisciplinary and universally comprehensible approach. With new artistic movements, production–consumption relations, social structures, and environmental issues became central concerns of art; thus, art ceased to be static and evolved into a dynamic structure interacting with society. The artist, in turn, became not only a producer but also an observer and interpreter of their own work (Demirci, 2019: 7). This changing role directly influenced the artist's relationship with nature and their understanding of artistic practice.

Nature-focused artists shape their creative processes around ecological sensitivity, emphasizing environmental awareness. Their aim is to awaken an increasingly indifferent society, raise awareness, and encourage people to reconnect with nature (Varlık Şentürk, 2003: 158–159). Centered on nature and often involving participatory processes, Ecological Art has developed as a contemporary movement that conveys solution-oriented messages, highlights environmental issues, and prioritizes sustainable approaches (Çınar, 2019: 205). Its principles guide artists in exploring new modes of expression through alternative materials and methods.

Artists have developed alternative modes of expression by using materials inspired by nature to reflect different ways of thinking. In contemporary art, metaphorical narratives enable the creation of multilayered meanings and their communication to audiences (Bingöl, 2019: 88). In the 21st century, artists have made ecosystems damaged by human activity visible through the wide expressive possibilities of contemporary art (Aker Ensari, 2022: 912–913). This approach not only represents environmental damage in artistic production but also necessitates its discussion in relation to economic and technological processes.

Economic developments and technological innovations have negatively affected the environment, bringing forth various search efforts for solutions. The concept of "sustainability" was first defined in 1987, entering the literature with a history of less than fifty years (Poyraz, 2015: 118). Although humans are part of nature, they possess the capacity to transform and often to damage the environment. Awareness of this destructive impact and the need for precaution began to develop particularly in the mid-20th century. Factors such as industrialization, population growth, urbanization, and rapid consumption made the development of environmental consciousness essential (Kayahan & Çevik, 2021: 3).

According to Duran (2011: 302), the concept of sustainable development emerged in the 1980s when the United Nations addressed global issues such as poverty, population growth, hunger, drought, deforestation, and climate change. Today, sustainability is regarded as a conservation strategy aimed at preventing the depletion of natural resources and is applied across diverse fields, including economy, architecture, gastronomy, agriculture, fashion, and engineering.

In this context, sustainability should be addressed not only in its economic and social dimensions but also through the expressive forms of contemporary art, providing a basis for new debates particularly in ceramic art.

3. ARTIST READINGS ON ENVIRONMENTAL PROBLEMS AND SUSTAINABILITY IN CONTEMPORARY CERAMIC ART

Urbanization and industrialization have degraded nature, disrupting the ecological balance to the detriment of all living beings. This has necessitated a re-examination of the human–nature relationship in both science and art. The overexploitation of natural resources has created serious ecological problems, while rapid population growth and uncontrolled resource use have led to large-scale waste, the destruction of habitats, and the endangerment or extinction of many species. These global environmental issues directly affect humanity, prompting societies to take measures for nature's protection. Artists, influenced by these crises, have produced works that question the relationship between humans and nature (Kaya, 2023: 61).

Artists have redefined the relationship between nature and art by reimagining their interaction and questioning the boundaries between art and life. The human-centered interpretation of scientific and technological developments and the elitist positioning of galleries have driven artists toward alternative approaches. In this context, ecological artists aim not only to reveal environmental damage but also to restore and reconnect with nature. Thus, ecological art both exposes ecological destruction and symbolizes an effort to give back to nature, striving for balance (Akkol, 2018: 421–427).

Since the Neolithic period, ceramics have held functional and cultural significance, and today they serve as a medium of artistic expression. Moving beyond utilitarian use, ceramics have become a material for conveying emotions and ideas. By sharing themes with disciplines such as painting and sculpture and incorporating their formal elements, ceramics have gained a versatile structure. Continuously evolving throughout history, the material has also played an active role in abstract art through its possibilities for figurative expression (Kaytan, 2009: 1–7).

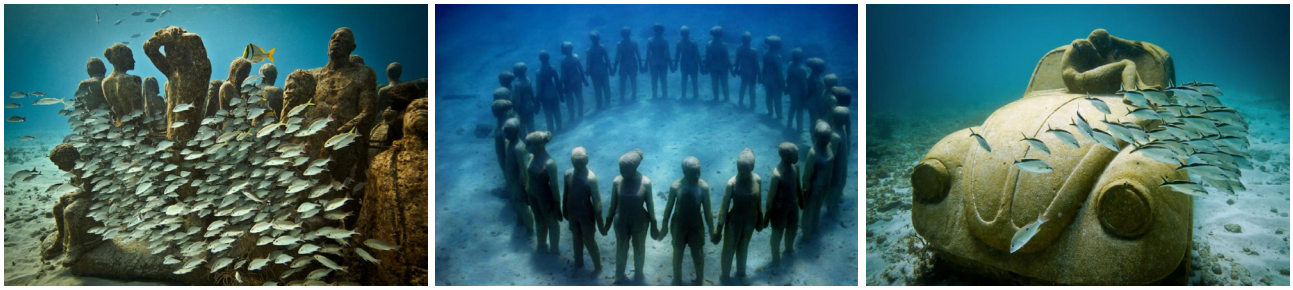

Figure 1. Jason deCaires Taylor, Silent Evolution, Mexico.
Source: https://underwatersculpture.com/works/underwater/
Figure 2. Jason deCaires Taylor, Vicissitudes, Grenada.
Source: https://underwatersculpture.com/works/underwater/
Figure 3. Jason deCaires Taylor, Anthropocene, Mexico.
Source: https://underwatersculpture.com/works/underwater/

British sculptor, diver, and photographer Jason de Caires Taylor permanently installs ceramic sculptures underwater, contributing both to art and marine tourism while creating new ecological habitats. Over time, corals grow on their surfaces, marine species settle, and the works become part of the ecosystem. Through this transformation, the sculptures evolve into living organisms, establishing a reciprocal relationship between art and nature and gaining both aesthetic and ecological functions (Sağlamtimur, 2014: 233). Taylor created figurative sculptures using pH-neutral cement, sand, microsilica, fiberglass, and live corals, all harmless to the marine environment. Molded from local residents, the works were installed at depths of 4–8 meters over an area of about 420 m² and exhibited in the Manchones and Nizuc galleries. They immediately integrated with nature, serving as shelters for marine life and becoming a new tourist attraction. The project gained international visibility when activists dove to Silent Evolution during the 2010 UN Climate Summit. The eco-friendly materials provided a suitable base for coral settlement; thus, the project both contributed to ecosystem preservation and added a new dimension to 20th-century sculptural display practices (Yazıcı, 2017: 1273-1275). In this way, sculpture transcended its role as a mere aesthetic object, offering a novel exhibition experience.

Underwater installations move sculptures beyond traditional display spaces, giving them a new dimension and atmosphere. At a time when the contextual authenticity of artworks is being debated, the underwater setting offers a unique experience for viewers. Bringing art directly to the core of the issue and making the audience an active participant is one of the most effective ways to draw attention to the underwater world (Çevik & Kayahan, 2021: 1099). Taylor's underwater installations have given his sculptures a new dimension and atmosphere. Considering the current debates on the contextual authenticity of artworks, the underwater setting offers viewers a unique experience. Bringing art directly to the core of the issue and making the audience an active part of the process is regarded as one of the most effective ways to draw attention to the underwater world (Çevik & Kayahan, 2021: 1099).

Taylor's sculptures transform under the influence of time and nature, gaining new functions and enhancing the value of his work. The special cement used provides durability and a texture that supports coral larvae growth, while indentations on the surfaces serve as natural shelters for fish and shellfish. In this way, marine life finds a new ecosystem in which it can sustain its cycle through art (Karaseyfioğlu Paçalı, 2021: 3812).

Water today serves as a powerful means of addressing issues such as marine pollution, species extinction, and global warming. With its chemical, physical, and psychological qualities, it adds layers of meaning to artistic production. Internationally acclaimed artist Doug Aitken is notable for reflecting these multifaceted aspects of water in his works. His Underwater Pavilion consists of three large geodesic structures, designed with mirrored surfaces and artificial stone and installed underwater with the support of diving parks. While the mirrors create a kaleidoscope-like, multi-layered experience, the textured surfaces evoke natural rock formations.

The project transforms continually through currents, changing light, weather, and time, making the sculptures active components of the ecosystem rather than static objects. Aitken thereby highlights the threats facing marine life. Interdisciplinary in nature, the project bridges art and scientific research, while allowing viewers to swim through the structures, turning the experience into both a bodily and spatial engagement. The multiple reflections enable audiences to generate new abstractions and meanings (as cited in Çevik & Kayahan, 2021: 1100–1101).

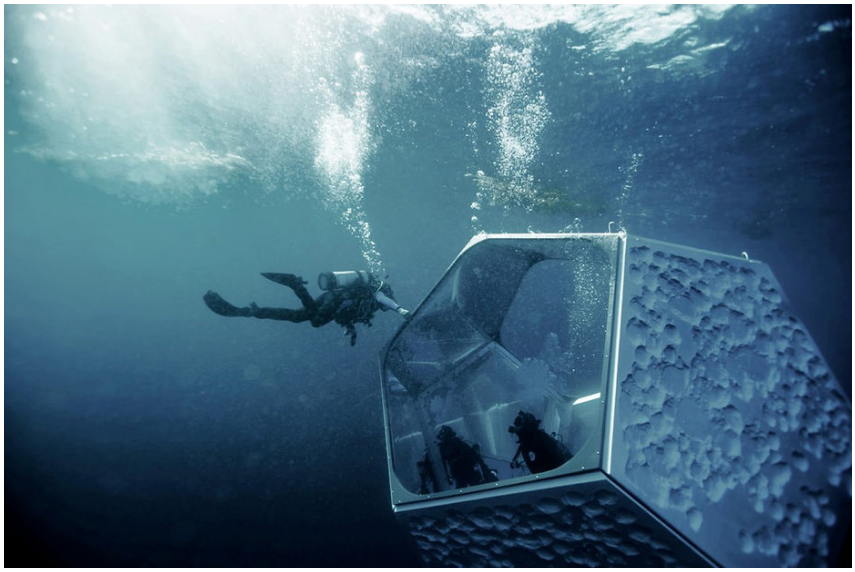

Figure 4. Doug Aitken, Underwater Pavilions, 2016.
Source: https://www.artbasel.com/catalog/artwork/55603/Doug-Aitken-Underwater-Pavilions
Figure 5. Doug Aitken, Underwater Pavilions, 2016, installation view, Avalon, CA.
Courtesy of the Artist, Parley for the Oceans and The Museum of Contemporary Art, Los Angeles
Source: https://www.303gallery.com/public-exhibitions/doug-aitken11?view=slider#4

In the project shown in Figures 7–8, terracotta tiles were produced for the first time worldwide using 3D printing technology. Designed to restore coral reefs damaged by typhoons, these tiles were placed on the seabed to support coral attachment and growth. Their porous, sediment-resistant surfaces facilitate larval development and create micro-habitats, while layered forms promote both horizontal and vertical growth, strengthening competitiveness with other species. Conducted by the Faculty of Architecture at the University of Hong Kong, this initiative offers a striking example of integrating advanced technologies into ecosystem restoration and contributes to the sustainability of marine ecosystems.


Figures 6–7. Doug Aitken, Reforming Coral Habitats project,
Faculty of Architecture, University of Hong Kong, 2018.
Source: https://www.studiomercado.com/post/hong-kong-mercan-3d-baski-teknolojisi

Three-dimensional printing technology enables the fabrication of digitally modeled objects using various materials, including ceramics, plastics, and metals (Coşkun & Nükte Dinçer, 2023: 395). 3D printing technology is now applied across a wide range of fields, from architecture and medicine to space exploration and ecological practices. Highlighted for its potential in addressing environmental challenges, it has been employed in the Reformative Coral Habitats Project led by RFL, the first robotic fabrication lab at the University of Hong Kong. Aimed at restoring coral ecosystems severely damaged by Typhoon Mangkhut, the project produced terracotta tiles for the first time worldwide. Adapted to Hong Kong's subtropical waters, these tiles support coral growth with porous, sediment-resistant surfaces and create biomimetic microhabitats through layered structures. The project exemplifies the integration of advanced technologies into ecosystem restoration and shows that 3D printing can play a role not only in building space habitats but also in solving environmental crises on Earth. This indicates that its potential for environmental sustainability is still at an early stage (Studiomercado, 2020).

The projects of Jason de Caires Taylor and Doug Aitken clearly demonstrate the power of contemporary art in fostering ecological awareness. While Taylor's underwater sculptures gradually transform into living organisms and become part of the ecosystem, Aitken's Underwater Pavilion engages viewers in both visual and bodily experiences, creating a multidimensional interaction between art and nature. By harnessing the transformative power of water, both artists move art beyond its aesthetic function and turn it into a dynamic platform for addressing environmental issues.

CONCLUSION

Throughout the history of art, nature has served as a fundamental source of inspiration for artists. Today, this relationship has moved beyond a mere aesthetic reflection and has become a means of expressing ecological sensitivity. In ceramic art in particular, productions inspired by the underwater environment highlight environmental issues and emphasize the power of art to raise awareness. The artists examined in this study have transformed their direct experiences of nature into a unique artistic language, reflecting their inner connections with nature through perceptual and emotional differences.

Contemporary art is not only an aesthetic process of creation but also one that encompasses imagination, inquiry, learning, and discovery on intellectual and emotional levels. Within this process, material emerges as one of the most important elements that strengthens the artist's conceptual expression. Ceramics, with its historical roots and transformative qualities, stands out as a powerful medium for making ecological concerns visible.

Today, the human–nature relationship is being re-examined in the context of ecological crises. Issues such as the growing problem of waste, habitat loss, climate change, and environmental pollution—driven by the pace of unlimited production—are debated on a global scale. In this context, the concept of sustainability occupies a central place not only in environmental policies but also in artistic practices. Artists make the anxieties and concerns generated by these crises visible through their artistic attitudes and play an active role in the construction of social awareness.

Contemporary art develops new forms of expression by drawing attention to environmental issues. Jason deCaires Taylor's underwater sculptures and Doug Aitken's multimedia installations, though employing different techniques and approaches, make the human–nature relationship visible through ecological concerns. Both artists, through their works, demonstrate the potential of art to generate social awareness in the context of environmental sustainability. In general, the common point of these artists is their emphasis on the power of art to foster social awareness in the context of environmental sustainability. In this respect, the study highlights the role of contemporary ceramic art in the face of ecological crises and contributes to the literature on the relationship between art and ecology.

REFERENCES

Aker Ensari, Senem. (2022). 21. Yüzyıl Seramik Sanatında Sualtı Doğasından İzlenimler, İdil, 95 s. 991-925.

Akkol, Nuray. (2018). Değişen Doğa Algısı ve Armağan Etme Bağlamında Ekolojik Sanat, İdil Dergisi, 44 (7), s. 421-427.

Antmen, Ahu. (2017). Sanatçılardan Yazılar ve Açıklamalarla 20.Yüzyıl Batı Sanatında Akımlar, Sel Yayıncılık, İstanbul.

Artun, Ali ve Örge, Nursu. (2017). Çağdaş Sanat Nedir? Modernlik Sonrasında Sanat, Editörler: Ali Artun ve Nursu Örge, 3.Baskı, İletişim Yayınları, İstanbul.

Bingöl, Mehtap. (2019). "Temel Tasarımda Bir Farkındalık Süreci Olarak Metafor/Form İlişkisi", Uygarlık Tarihinde Sanat ve Tasarım. Sistem Ofset Yayıncılık. ISBN: 978-605-7980-40-3. Editör: Adnan Tepecik. s. 81-98. Ankara.

Coşkun, E. ve Nükte Dinçer, M. (2023). Seramik Sanatında Kullanılan Üç Boyutlu Seramik Yazıcılarda Processing Kod Yazılımıyla Yapay Zekanın Uyumu, Sanat ve Tasarım Dergisi 13 (2), 387-402.

Çevik, Naile ve Kayahan, Zeliha. (2021). Çağdaş Sanatta "Su" Teması Üzerine Deneyimlenen Sergileme Pratikleri, Journal Of Social, Humanities and Administrative Sciences, 7(40), s.1095-1106.

Çınar, S. (2019). "Ekolojik Sanat Projelerinde Okyanus Atıklarının Sanatsal Nesnelere Dönüşümü", International Journal of Interdisciplinary and Intercultural Art, 4 (9), s.203-215.

Demirci, A. (2019). Plastik sanatlarda mekân algısı, (Yayımlanmış Yüksek Lisans Tezi), Hacettepe Üniversitesi Güzel Sanatlar Enstitüsü, Ankara.

Duran, E. (2011). Turizm, Kültür ve Kimlik İlişkisi; Turizmde Toplumsal ve Kültürel Kimliğin Sürdürülebilirliği. Istanbul Ticaret Üniversitesi Sosyal Bilimler Dergisi. 10 (19), s.291-313.

Karaseyfioğlu Paçalı, Sevda. (2021). "Heykel ve Sanatın Ötesinde "Sürdürülebilir" Jason Decaires Taylor Heykelleri Üzerine Bir Çalışma" International Social Sciences Studies Journal, (e-ISSN:2587-1587) Vol:7, Issue:87; pp:3810-3816.

Kaya, Furkan Mert. (2023). Doğa-İnsan İş Birliği Bağlamında Oluşturulan Sanatsal Dil ve "Olasılıklar" Temalı Bir Sergi Önerisi, Ankara Hacı Bayram Veli Üniversitesi Lisansüstü Eğitim Enstitüsü, Yüksek Lisans Tezi, Ankara

Kayahan, Zeliha ve Çevik, Naile. (2020). Çağdaş Sanatlarda "Doğa" Ekseninde Mekâna Özgü Müdahaleler, Bartın Üniversitesi Bartın ve Yöresi Tarih-Kültür Araştırmaları Uygulama ve Araştırma Merkezi Çeşm-i Cihan Tarih, Kültür ve Sanat Araştırmaları Dergisi, Issn: 2149–586, Cilt: 7, Sayı: 1, s. 32-46.

Kayahan, Zeliha ve Çevik, Naile. (2021). Çevre Bilinci Bağlamında Sürdürülebilir Sanatsal Dil, Akademik Sanat, Sayı: 14, s. 1-11.

Kaytan, E. (2009). Modern sanatta figüratif seramik heykeller. (Yüksek Lisans Tezi). Dokuz Eylül Üniversitesi Güzel Sanatlar Enstitüsü, İzmir.

Kosuth, J. (1969). Art after philosophy. Studio International, 178(915), 134–137.

LeWitt, S. (1967). Paragraphs on conceptual art. Artforum, 5(10), 79–83.

Lippard, L. (1973). Six years: The dematerialization of the art object from 1966 to 1972. Praeger.

Poyraz, M. (2015). Sürdürülebilir Tasarım ve Seramik Kaplama Sektöründe Sürdürülebilirlik. Sanatta Yeterlik Tezi. Mimar Sinan Güzel Sanatlar Üniversitesi Sosyal Bilimler Enstitüsü. İstanbul. Sağlamtimur, Baybars. (2014). Sualtının Sanat Objesi Olarak Kullanımı ve Sualtı Fotoğrafı Üzerine Yaklaşımlar, Kocaeli Üniversitesi Sosyal Bilimler Enstitüsü, Sanatta Yeterlilik Tezi, Kocaeli.

Uz, Ayfer ve Uz, Nurbiye. (2018). Akla Hitap Eden Düşüncenin Sanatı: Kavramsal Sanata Genel Bir Bakış, Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi, 5 (12), s. 655-662.

Yazıcı, F. (2017). "Günümüz Heykelinin Sergilenmesinde Alternatif Alan Olarak Sualtı Müzeleri", İdil Dergisi, 6 (32), s.1269-1281.

Varlık Şentürk, Leyla. (2003). Çevrenin Sanata Getirdiği Yeni Bir Bakış Açısı Olarak Land Art, 7. Ulusal Sanat Sempozyumu; Sanat ve Çevre, Hacettepe Üniversitesi Yayınları, Ankara.

(Studiomercado, 2020). https://www.studiomercado.com/post/hong-kong-mercan-3d-baski-teknolojisi

"Meşk" and Turkish Music Note Systems in Traditional Turkish Art Music Education

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Abstract
Art; in its most general definition, is the expression of emotion, creativity, desing and imagination. Music, an art founded on sounds, has continued to exist at every stage of human life since the process of human existence. From the moment he first noticed the human voice and scream, he has tried to convey music through various ways and symbols through sounds. When the desire to transfer and record music arose, the signs and symbols needed changed until they reached the note system that is used today in music education. The "meşk" system and music writings have been used in the education, training and transmission of Turkish music.

The oldest accessible Turkish music writings were created by Kindî in the 9 th century known as an Ebced note inscription. Until the 19th century, the Ebced notation continued to be used, developed in different ways by musicologists and theorists such as Safiyüddîn Urmevî, Abdülkâdir Merâgî, Abdülbâki Nâsır Dede, Nâyî Osman Dede, and Kantemiroğlu. The oldest known western music notation in the Turkish music notation system was used by Ali Ufkî Bey in the 17th century. In the 20 th century, studies on Turkish music notation by musicologists and theorists such as Rauf Yektâ, Hüseyin Sadeddin Arel, Mehmet Suphi Ezgi, Salih Uzdilek, Abdulkadir Töre and Ekrem Karadeniz constitute the basis of today's notation system. In this study, it is aimed to examine the "mesk" method used throughout history in Turkish music education and transmission and the process of changing Turkish music note systems from past to present. Turkish music note systems and the "meşk" method were analyzed by conducting a literature search. It is thought that the analysis of the "meşk" method and the note writing system in Turkish music education and transmission is important for the performance and learning of works.

Keywords
Music, Art, Meşk, Note System, Turkish Music Education

1. INTRODUCTION

Music, which has a history as long as human history, is an aesthetic phenomenon that has passed through the centuries, filtered through time and life, and is evaluated by humans. Music, which holds an indispensable place in human life, also plays a significant role in conveying cultural identity, emotions, and individual expressions. In this context, music is transmitted through methods that help preserve traditional characteristics during the education process. Throughout history, the methods and symbols used to convey music have evolved into different forms of expression.

In traditional Turkish music education, the transfer of performance and theory knowledge has been carried out through the system called "meşk" based on master-apprentice training since the times when notation was not yet written down. Although the exact time when Turks first used musical notation is not definitively known, many forms of notation have been used throughout the history of Turkish music. When examining the historical process of notation in Turkish music, it is evident that various types of notation, including letter-based and note-based systems, have been employed.

1.1. Purpose of the study

In this study, it is aimed to examine the process of change from past to present in the "meşk" method, which is called the master-apprentice relationship used throughout history in Turkish music education and transmission, and the Turkish music notation systems developed by musicologists and theorists. In Turkish music education and transmission, the meşk method, which is based on the principle of teaching a musical piece to a student by gradually performing and vocalizing it by a master, and the analysis of notation systems used throughout history are thought to be important for the correct performance of the pieces, effective learning, and the transmission of the traditional repertoire to the next generations.

2. THE "MEŞK" METHOD in TRADITIONAL TURKISH MUSIC

Music transmission is a fundamental factor in the formation of a society's musical tradition. Each musical culture is conveyed through structures that enable it to preserve its unique identity (Güray, 2017:10). The tradition of Turkish music has been passed down through oral transmission since the time when musical notation was not written down. This transmission was achieved through a system known as "meşk," which is based on a master-apprentice relationship. The term meşk, which is of Arabic origin, means learning or teaching by imitating a model (Öztuna, 1974:27).

Cem Behar states that in the Ottoman musical world, the term meşk was borrowed from the art of calligraphy and originally meant "writing example," "writing exercise," or "scribble." He also notes that the word meşk was used in an abstract sense to refer to a lesson or general concept of learning. This form of instruction was also expressed through phrases such as "meşk almak" (to take a lesson) and "meşk etmek" (to practice or study) (Behar, 2012: 19). The meşk education and training method, which involves "repeating" musical pieces, has not only preserved the musical understanding of that period but also the Turkish musical tradition (Say, 2002:343).

In the meşk method, there are indispensable elements that form the foundation of education and ensure the success and continuity of the approach. Although the meşk tradition in music had many functions, it can be said that one of its primary purposes

was to instill the works and repertoire of the period into the performer's memory (Balcı, 2018: 5). Since learning pieces from written notation was not an option, memorization and long-term retention of the repertoire constituted the basis of learning. In this context, memory played a crucial role (Özcan, 2004:374). Primarily, the lyrics (güfte) of the piece to be performed would be dictated to the student or obtained from a published collection of lyrics (güfte mecmuası) to ensure correct pronunciation and comprehension of the lyrics' meaning (Behar, 2012:19).

Another important element that strengthens the memory is the usûl beats (rhythmic patterns). The usûl is a pattern of strong and weak beats that is repeated from the beginning to the end of the work, constituting the rhythmic infrastructure of the piece. It also takes on an important guiding role in the memorization process. Before the work is performed, the usûl would be continuously beaten by the master and repeated by the student; in this way, the rhythm of the piece would be firmly established (Behar, 2012:19). Teaching the pieces through usûl patterns has been not only a method for learning usûl itself but also a technique that facilitates and reinforces the meşk process (Özcan, 2004:374). Many sources indicate that instruments such as the kudüm, davul, or bendir are used when performing the usûl. While these instruments are not mandatory, it is known that the usûl is performed by striking the knees (Balcı, 2018: 5).

After the rhythm of the work, that is the usûl, was established, the master would first perform the piece in sections such as the zemin, meyan, nakarat, and terennüm (if present); then, as a whole, he would perform it until it was flawlessly lodged in the student's memory, and would have the student repeat the piece until the student's mistakes and hesitations were eliminated (Behar, 2012: 19). In this context, the concept of imitation, defined as learning by replicating a model and considered one of the fundamental elements of meşk, is not only aimed at learning the performance of the piece but also involves the student adopting the musical attitude of the master. After the first meşk of the piece, the student was instructed not to practice it again until the next lesson in order to prevent altering the original composition. At the following lesson, the meşk would be completed by having the student repeat the piece until any mistakes or hesitations were corrected (Özcan, 2004:374).

Memorizing hundreds or even more pieces and learning nearly a hundred usûls (rhythmic patterns) is only possible through patience. At this point, it can be said that not only the student's patience but also the teacher's patience and care play the greatest role in the student's ability to learn. At the same time, loyalty to the pieces and tradition is one of the fundamental ethical values of the meşk system. These elements of the Meşk method are not only a training model; they are also the construction of a musical identity. These elements have enabled traditional Turkish music to survive to the present day without deviating from its essence for centuries (Balcı, 2018: 7).

While sources lack definitive information regarding the inception of the meşk system, it is known that musical education was embraced during the Ottoman period and was practiced primarily in the palace, as well as in the homes of masters, mansions, mosques, dervish lodges, Mevlevi lodges, Enderun schools, Mehter lodges, and private meşkhanes. Musicians, musicologists, and theorists of that period trained by learning from one or more teachers.The meşk method became an indispensable part of the

teaching and learning process, particularly in the Ottoman musical tradition; it enabled the transmission of both artistic techniques and cultural values from generation to generation in a complete and vibrant manner through direct communication and one-on-one practice between the master and the student (Balcı, 2018: 5).

3. NOTE WRITINGS in TRADITIONAL TURKISH MUSIC

The note, also expressed as music writing, emerged throughout history from the need to remember and transmit all musical creations to future generations. The need to write down musical works required a form of recording that went far beyond human memory, leading to the development of various note systems in different periods and cultures. (Sünbül, 2024:183)

Although it is not exactly known when the Turks first used notation, no example of notation written in the Göktürk alphabet has yet been found. It can be said that the Uighurs, who came under the rule of the Great Turkish Khaganate after the Göktürks, used the Mani notation system, which was developed in Sassanian Iran from the 3rd century onwards (Öztuna, 1974: 96). Additionally, although there is information that the first notation system used by the Turks was called 'Ayalgu,' we have no other information about this system except for a record mentioning its name and stating that it was quite common in musical circles about nine centuries ago (Ekmekçioğlu, 1992: 7).

When examining notation studies in Turkish music in general, it can be argued that the musical notations created and developed emerged as a result of various cultural interactions. Looking at the period before the adoption of European notation, the Arabic alphabet, which the Turks encountered with their conversion to Islam, formed the basis of musical notation until the 17th and 18th centuries (Agayeva, 2007: 208).In short, these script writings, commonly referred to as Ottoman Turkish, share a common feature: the musical pitches are represented by Arabic letters arranged from right to left, while the durations of the pitches are indicated by Arabic numerals added below these letters (Ekmekçioğlu, 1992: 13). During this period, the Turks began to use the Ebced notation, in which sounds are represented by Arabic letters. In the Ebced system, each letter or group of letters corresponds to a sound. The duration of the sounds was indicated by numbers placed below the letters. In this musical notation, called "Ebced writing," the pitches were shown by utilizing the numerical values of the Arabic script letters (Agayeva, 2007: 208-209).

There is not just one, but multiple Ebced notations. The Islamic philosopher Kindī, who lived in the 9th century and is considered the first master of this school as well as the inventor of the Ebced notation, used his own Ebced notation (Öztuna, 1974: 96). The musical system created by Kindi was based on 12 sounds with intermediate sounds and she called this system "Cem'ullezî bi'l-küll" (Turabi, 1996: 76). The Turkish philosopher al-Fārābī, who lived in the first half of the 10th century, used al-Kindī's Ebced notation. According to the definition in al-Mûsîkâ'l-Kebīr (The Great Book of Music), one of al-Fārābī's works on music, the Arabic letter 'elif' corresponds to the sound 'do,' the letter 'ba' to the sound 're,' and the letter 'cîm' to the sound 'mi' (Öztuna, 1974: 96).

In the 13th century, Safiyüddîn el-Urmevî, who initiated a new era in the field of music theory, further developed the same Ebced system and elaborated on it in detail in his works "Kitâbü'l-Edvâr" and "Şereffiye". His works were studied by later theorists and shed light

on the musical structure of the period in which they were written (Karabaşoğlu, 2010: 7) Among the works written using the Ebced notation by El-Urmevî, only a composition in the remel usûl and nevruz makam with Arabic lyrics has survived to the present day. Urmevî divided an octave interval in music into seventeen tones, identifying each one with separate letters or combinations of letters; he demonstrated many subjects related to the art of music, such as the arrangement of modes, rhythms, and sequences, as well as the characteristics of vocal pieces, in detail and with examples using various visual notation methods (Agayeva, 2007: 209). This system was adopted in later periods and served as the basis for theoretical music studies from the 14th century to the mid-16th century (Uygun, 2008: 479).

In the 15th century, Abdülkadir-i Merâgî, considered one of the important theorists and performers in our music history, developed Urmevî's theory and, in the field of musical notation, used various Ebced writings as well as other writing methods. In the 15th century, Abdülkadir-i Merâgî, considered one of the important theorists and performers in our music history, developed Urmevî's theory and, in the field of musical notation, used various Ebced writings as well as other writing methods. Merâgî's work titled "Kenzü'l-Elhân," known to be written using the Ebced system and containing the notation of his own compositions, was not found until recently (Ekmekçioğlu, 1992: 6). One of the most important features that distinguish Abdülkādir Merāgī from other writers of his period is that, contrary to tradition, he wrote exclusively works related to music. Nevertheless, it is seen that he composed many pieces especially in the field of performance, and in this respect, he influenced composers who came after him (Karabaşoğlu, 2010: 25).

Osman Dede, the sheikh of the Galata Mevlevi Lodge, known by the title Kutb-i Nâyî meaning "Pole of the Ney Players," also developed a type of Ebced notation. Osman Dede's notation system, which used thirty-three letters for the pitches in the basic sound system of Turkish music, is believed to resemble the notation system created by Kantemiroğlu during the same period (Popescu-Judetz, 2007: 39). Nâyî Osman Dede recorded the notations of sixty-five peşrevs and several semais written with his own invented notation system in his work titled Nota-i Türki, which consists of 100 pages (Erguner, 2007: 462).

Kantemiroğlu, who lived during the same period as Nâyî Osman Dede, developed his own musical notation called the "Kantemiroğlu musical notation" at the end of the 17th century. Using his musical notation, Kantemiroğlu transcribed the works of the period in the second part of the book titled Kitâb-ı İlmü'l-Mûsikî Alâ Vechi'l-Hurûfat (The Book of the Science of Music According to the Letters), written in Ottoman Turkish and known as Kantemiroğlu Edvârı. The first part of this work contains theoretical information about traditional Turkish Art Music and explanations regarding the use of this musical notation (Ekmekçioğlu, 1992: 48).

The period of Selim III holds an important place in the history of Turkish music notation. At the request of Selim III, Abdülbâki Nâsır Dede, the grandson of Osman Dede, brought the Ebced notation back to the agenda. Abdülbâki Nâsır Dede prevented the loss of these works by compiling the new notation system he developed based on Osman Dede's writing system in his work titled Tahririyye Tahrir-i Fi'l-Mûsikî (Agayeva, 2007: 210). It is observed that the theorists of this period developed and elaborated the existing notation system, conveying important information both about the pieces they used it in and the musical structure of their time.

Hamparsum, who lived in the same period as Abdülbâki Nâsır Dede, invented the Hamparsum notation system, named after him, also at the request of Selim III. Since the pitch signs in the Hamparsum notation largely resemble the Khaz Notation used by the Armenian Church starting from approximately the 8th-9th centuries, it can be said that it may have been created by being inspired by Armenian letters (Behar, 2022: 24). This notation system uses seven basic pitch signs. Hamparsum indicated the notes within an octave by using various shapes and additional lines to represent the subtlety, thickness, and octaves of their frequency levels. Hamparsum utilized only the formal characteristics of these signs, not their meanings (Ekmekçioğlu, 1992: 69). The Hamparsum notation system, written from left to right and not requiring the drawing of a staff, was widely adopted due to its ease of learning and application. It became widespread from this century onwards until Western notation was established, enabling the transmission of thousands of Turkish music works to the present day (Agayeva, 2007: 210). Until this period, while the pitches were shown with Arabic letters in notation, Abdülbaki Nasır Dede remained loyal to the tradition in the two writing systems that coincided with the same period, while Hamparsum chose to differentiate in the letter system she used in notation.

The 17th century can be considered an important stage in Turkish music in terms of musical notation. Ali Ufki Bey, of Polish origin, is believed to have been brought to the Ottoman Empire after being captured by the Crimean Tatars. After entering the Palace, he joined the musicians. Influenced by the Western music notation system he is thought to have learned during his years in Poland, he attempted to transcribe the compositions he learned in the Ottoman Palace into writing (Kalkan, 2017: 4). The period in which Ali Ufkî lived coincides with the transition to musical notation in Europe. It is observed that the notation styles used during this time also appear in Ali Ufkî Bey's writings. The most distinctive difference between Ali Ufkî Bey's notation and the European notation system of the period is that the notes were written from right to left on a five-line staff, using Ottoman letters. In his work Mecmûa-i Sâz ü Söz, Ali Ufkî employed this unique notation system he developed by drawing upon European musical notation (Ekmekçioğlu, 1992: 39). This notation work is considered the first example of Western notation used in Turkish music (Agayeva, 2007: 209).

The evolution observed in the method used by Ali Ufkî can be considered an example of the interaction between the Western system and the concept of notation based on letters unique to the Islamic world (Popescu-Judetz, 2007: 29). It is seen that Ali Ufkî Bey both maintained the traditional notation culture and endeavored to reflect the influences of the Western notation system.

Although the earliest examples of Turkish Music works being written and published using the staff notation system began to appear with Ali Ufkî Bey, the first published works within the context of the staff notation system used today date back to the last quarter of the 19th century. By the 20th century, it is observed that studies on the notation system were ongoing (Popescu-Judetz, 2007: 53). Among these studies, it is known that Rauf Yektâ utilized ebced letters to indicate pitches in the notation system presented in his work Türk Notasında Kıraat-ı Mûsikîye Dersleri. In addition to Western notation, Rauf Yektâ also used the Hamparsum notation, and it can be said that he developed his own notation system inspired by the Hamparsum notation (Ekmekçioğlu, 1992: 39).

Rauf Yektâ Bey was the first to theoretically explain the system consisting of 25 pitches within an octave, made up of 24 unequal intervals, which forms the basis of the notation used in Turkish music today. Unlike the equally tempered 12-tone system used in Western music, the system he developed is based on koma in Turkish music (Özcan, 2007: 469). Alongside one of the prominent musicologists of the period, Rauf Yektâ Bey, Dr. Suphi Ezgi, Sadettin Arel, and Salih Murat Uzdilek conducted studies on the notation system in Turkish music. The "Arel–Ezgi–Uzdilek System," developed with Arel's encouragement and widely used in Turkish music today, emerged as a result of these efforts. It is known that Rauf Yektâ Bey, Sadettin Arel, Suphi Ezgi, and Salih Murat Uzdilek contributed articulation marks to the Turkish music notation system (Ekmekçioğlu, 1992: 8).

Abdülkadir Töre, who contributed to the rapid spread of notation and the establishment of common rules for notation, and his student Ekrem Karadeniz, transcribed and published many works from sources written in letter notation and Hamparsum manuscripts (Popescu-Judetz, 2007: 54). During his long musical career, Abdülkadir Töre's notation notebooks, prepared in his own handwriting, were passed on to his student Ekrem Karadeniz. All of these notebooks are kept at the Süleymaniye Library and are known in the music literature as the Ekrem Karadeniz collection.

CONCLUSION

The "meşk system," which has been adopted in Turkish Music education for centuries, is not only a means of preserving the traditional Turkish music heritage to the present day but also an educational model based on one-on-one transmission from teacher to student. This system emphasizes internalizing not only the technical aspects of the works but also their spirit, expression, and style. The musicians, musicologists, and theorists of the period were trained by practicing meşk with one or more teachers and continued the tradition of esteemed musicians known as the "tavır" artistic movement. Today, repertoire courses offered in conservatories can be seen as a continuation of the meşk system in terms of imparting style and musical expression. Since methods such as writing or notation are not used in meşk teaching, it should not be overlooked that the musical repertoire is transmitted orally in this system, which may lead to some changes in the pieces and, as a result, the emergence of multiple versions of the same work.

With the desire to record musical works, musical theorists and theorists have made an unceasing effort to try and apply methods of notating Turkish musical works. When looking at Turkish music notation studies in general, it is observed that the resulting notation systems were shaped through cultural interactions. Examining the period up to the 17th and 18th centuries, as a result of cultural exchanges with Central Asian and Arab civilizations, the acceptance of Islam, and the familiarity with the Arabic alphabet, the letter notation system known as Ebced was widely used in Turkish music. The theorists of this period developed and elaborated on the existing notation systems created before them, using them in their works and making significant contributions through explanations related to the notation systems they developed.

In the 18th century and onward, as social relations began to shift towards Europe, approaches to notation systems also diversified; studies were conducted on letter-shape, neumatic, and staffed notation systems. These studies on notation intensified particularly with the transition to the staffed notation system, which became widely used in the 19th century. Notation studies and the search for systems continued into the

20th century. Esteemed musicians and musicologists of the period played a critical role in the modernization of traditional music; they continued their work on a new notation system for Turkish music, laying the foundation for the notation system used today.

Notation, alongside the meşk education system, has been effective not only in recording musical works but also as a technical tool that strengthens music education, aids in the preservation of works, and contributes to their inclusion in libraries. In this context, accurately identifying the makam (modes) unique to traditional Turkish music, methodically addressing the ear-based meşk education model, learning meşk practice techniques, and analyzing the musical notations used from the past to the present are considered helpful in understanding musical expression and in correctly transmitting the Turkish music repertoire to future generations.

Although the meşk method and note education are considered as two separate approaches in music education today, it is seen that these two methods are used together, that is, blended, in terms of gaining style and attitude in performance.

REFERENCES

Agayeva, Süreyya. (2007) "Nota" Türkiye Diyanet Vakfı İslam Ansiklopedisi, cilt 33, s.205-210, İstanbul.

Balcı, Tuğçe. (2018). Meşk Yöntemi Üzerine Karşılaştırmalı Bir Çalışma, Cumhuriyet Üniversitesi Eğitim Bilimleri Enstitüsü, Yüksek Lisans Tezi, Sivas.

Behar, Cem. (2012). Aşk Olmayınca Meşk Olmaz Geleneksel Osmanlı/ Türk Müziğinde Öğretim ve İntikal, Yapı KrediYayınları, İstanbul.

Behar, Cem. (2022). Osmanlı/Türk Mûsikîsinin Kısa Tarihi, Yapı KrediYayınları, İstanbul

Ekmekçioğlu, Sare Ebru. (1992). Türk Müziğinde Geçmişten Günümüze Nota Yazıları, İstanbul Teknik Üniversitesi Sosyal Bilimler Enstitüsü, Yüksek Lisans Tezi, İst.

Erguner, Süleyman. (2007). "OSMAN DEDE, Nây'î" Türkiye Diyanet Vakfı İslam Ansiklopedisi, cilt 33, s.461-462, İstanbul.

Güray, Cenk. (2017) Bin Yılın Mirası Makamı Var eden Döngü;Edvar Geleneği, Pan Yayıncılık, İstanbul

Kalkan, Oğuz. (2017) Ali Ufki ve Kantemiroğlu Mûsikî Yazmalarında Bulunan Ortak Eserlerin Karşılaştırmalı Çeviri Yazım ve İncelenmesi, Gazi Üniversitesi Güzel Sanatlar Enstitüsü, Yüksek Lisans Tezi, Ankara.

Karabaşoğlu, Cemal. (2010). Abdülkâdir-i Merâgî'nin Makâsidu'l- Elhân adlı eseri, Marmara Üniversitesi Sosyal Bilimler Enstitüsü, Doktora Tezi, İstanbul.

Özcan, Nuri. (2004). "Meşk", Türkiye Diyanet Vakfı İslam Ansiklopedisi, cilt 29, s.374-375. Ank.

Özcan, Nuri. (2007). "Rauf Yektâ Bey", Türkiye Diyanet Vakfı İslam Ansiklopedisi, cilt 34, s.468-470. İstanbul.

Öztuna, Yılmaz. (1974). Türk Mûsikîsi Ansiklopedisi II, Milli Eğitim Basımevi, İstanbul.

Popescu-Judetz, Eugenia. (2007). Türk Mûsikîsi Kültürününü Anlamları, Pan Yayınclık, İst.

Say, Ahmet. (2002). Müzik Sözlüğü,Müzik Ansiklopedisi Yayınları, Ankara.

Sünbül, Nazan. (2024). Eski Mezopotamya'da Müzik Sümer, Akad, Babil ve Asur, Otorite Yayınları, İstanbul.

Turabi, Ahmet Hakkı. (1996). Türk Müziğinde Geçmişten Günümüze Nota Yazıları, İstanbul Teknik Üniversitesi Sosyal Bilimler Enstitüsü, Yüksek Lisans Tezi, İst.

Uygun, Mehmet Nuri. (2008). "SAFİYUDDİN el-URMEVÎ" Türkiye Diyanet Vakfı İslam Ansiklopedisi, cilt 35, s.479-480. İstanbul.

Opinions of Prospective Teachers on Educational Activities Held in the Museum

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Abstract
This study includes the views of prospective teachers' on museum activities. With the inclusion of museum education courses in the undergraduate programs of teacher training faculties at higher education institutions, a process has begun in which various disciplines are creating new meanings for museums. This study comprises opinions and suggestions regarding both the feasibility and content of the activities held at the museum. Twenty-one undergraduate students volunteered to participate in the practical activities, and a five-item evaluation form was administered to the participants. The data collected from the prospective teachers aims to highlight the importance of the activities as a vehicle for connecting the educational mission of the museum with the prospective teachers' experience.

Participants stated that museum education can be applied to all age groups, that the methods used in the activities left a lasting impact on learning, that they experienced an enjoyable learning environment, and that it also fostered their awareness of practicing in museums. The research concluded that museums are spaces where a variety of methods and techniques can be used, and that teaching in museums can yield effective results.

Keywords
Education in the Museum, Methods and Techniques, Educational Activities, Teacher Candidates

1.INTRODUCTION

Museums are developing innovative solutions to provide their visitors with an entertaining and educational experience while exhibiting the heritage they protect. The International Council of Museums (ICOM)'s definition of museums, adopted in 2022, states that they are places that "offer a variety of experiences for education, entertainment and knowledge sharing." According to Güler (2019), museums are seen as environments where visitors feel safe, express themselves and have fun. In addition, it can offer different experiences to its visitors by reaching them directly or indirectly (Aykaç, Güneröz and Aykaç, 2021:8). According to Silverstone (1988), museums provide an environment in which objects and artifacts are displayed that are designed to educate, inform and entertain.

Museums also collaborate with various external organisations due to their functions. John Dewey (2022) emphasized that museums should be used among educational resources. His view that museums should be part of any school's active learning network is supported by other references to museums in his writings (Hein, 2004:418-419). Unlike traditional museum visits, individuals can interact with museum collections and experience different disciplines and alternative learning methods and techniques (Ulu and Adıgüzel, 2019:265). The application of drama methods and the use of educational activities in these places is a method that is used extensively in developed western countries such as the USA and Germany (Gögebakan, 2018:20). Teachers' awareness of the advantages of these innovative informal learning environments helps them develop inquiry and problem-solving strategies in students (El Bedewy, Lavicza and Lyublinskaya, 2024). The most important factor in museum education is that the educator has the knowledge to use the museum environment and museum objects as educational materials and to develop methods for this purpose. Museum Education courses are among the most effective out-of-school learning environments offered by teacher training institutions. These courses equip prospective teachers with the skills to evaluate museum collections as educational materials, plan activities, and provide students with experiential learning opportunities. This is a key issue related to this new paradigm there have been significant increases in museum education and visitor activities ((Schweibenz, 1998).

1.1. Purpose of the study

The study consists of the opinions and suggestions of prospective teachers regarding the applicability and content of activities carried out in the museum. In this context, answers were sought to the following research questions: The purpose of the research was to gather teacher candidates' opinions and suggestions regarding the feasibility and content of museum activities.

The following research questions were addressed:

- What are their opinions about which student level the activity held in the museum is appropriate for?
- What are their opinions on the contribution of the activity in the museum to lasting learning?
- What are their opinions on the methods and techniques used in these activities?

2.METHOD AND MATERIALS

2.1.Research Model

This research is a qualitative study that examines the opinions of prospective teachers on the contribution of museum-based educational activities to learning. A case study design, one of the qualitative research approaches, was used. Merriam (2018) stated that qualitative research is concerned with understanding the meanings people construct, the ways they perceive the world, and the experiences they live through.

2.2. Participants

The study group consists of prospective teachers enrolled in the "Museum Education" course in the Department of Art Teaching (Painting–Work) at the Faculty of Education of a public university. Since participation in the study group was based on voluntary participation, a total of 21 prospective teachers, 4 male and 17 female, took part in the research.

2.3. Data Collection Tools

Following the activity carried out in the museum within the scope of the Museum Education course, event evaluation form consisting of five items was prepared for the prospective teachers.

The event evaluation form items, prepared by the researchers to obtain data in line with the sub-purposes of the study, were reviewed by three field experts and one language expression specialist expert to ensure clarity of expression. In line with the experts' views, the final version of the form was administered to the prospective teachers after the activity.

2.4. Data Collection Process/Application

The teacher candidates were asked to fill out the evaluation form within the 40-minute time limit given to them.

2.5. Data Analysis

In the analysis of the data obtained from the research, the content analysis technique was used. The participants' views were directly quoted and interpreted under the tables.

Activities Carried Out in the Museum within the Scope of the Museum Education Course

When designing the museum activities, publications related to activities implemented in out-of-school learning environments were examined. The understandability of the templates used in these publications, in which sample activities were presented (Kahriman Pamuk, Elmas and Pamuk, 2020; Aykaç et al., 2021), contributed to their use in the activities carried out in this study. In order to implement the activity in line with its aims, the course instructor collaborated with a graduate student who was working as a visual arts teacher. Prior to the activity, the museum was visited, the objects were examined, and artistic, cultural and historical examples from the museum collections were selected to be used as learning materials for the prospective teachers (El Bedewy et al., 2024). Three activity examples prepared to be carried out in the museum are presented in Table 1. These activities represent a convergence of methods and techniques used in visual arts education with play and drama within the museum setting.

Table 1
Activities Carried Out in the Museum

Activity Name	Museum Object	Materials Used
Tablet Reading Improvisation	Assyrian Period Mannu-ki-Libbali clay tablet	Visuals of two different clay tablets from the Assyrian period
Relief Animal Print	Assyrian Period Lamassu relief; "Lion Hunt" scene of King Ashurbanipal	Eva foam, wooden skewers, acrylic paint, brush, photographs of relief examples
Museum Circle (Assyrian Circle)	Concepts: Assur, Nineveh, Shalmaneser, Stele, Stylus	Words related to the Assyrians

Type of Activity: Drama and Art Activity
Activity Group: 3rd-year undergraduate students
Materials: Photographs of two different clay tablets from the Assyrian period; eva foam; wooden skewers; acrylic paint; brush; photograph of the Assyrian Period Lamassu relief; photograph of the "Hunt" scene of King Ashurbanipal
Concepts: Past–Present–Future, Clay Tablet, Assyrians
Words: Assyrians, Clay Tablet, Mannu-ki-Libbali, Lamassu Relief, Relief, Future History
After obtaining the necessary permission from museum officials to use the education workshop and the hall where the activity materials were located, the activity leader informed the prospective teachers about the meeting place and time in the museum.

Activity 1
Tablet Reading Improvisation
First, in order to provide readiness and form an idea about the activity, the hall in the museum where the artifacts from the Assyrian Period are located is visited with the students. Detailed information is given in front of the relevant museum object to be used in the activity. Then, color and black-and-white photocopies of the Mannu-ki-Libbali Tablet, which is the related museum object, and of the clay tablet found in Ziyaret Tepe are distributed to the students. They are asked to respond—through methods such as oral explanation and drama—to the following questions:

- Which materials do you think the Assyrians used while writing on clay tablets? What could we use today?
- Do the characters on this tablet resemble the alphabet used today?
- Which character on the tablet do you like the most?
- What do you think is written on these tablets?
- If you wanted to write something to leave to the future, what would you write?
- On what other materials could writing have been inscribed?
- How would it feel to know a language that no one today can read?
- Just as we have libraries made of books today, could there have been a library made of clay tablets in that period? Let us talk about this…

Activity 2
Relief Animal Print
The students gather in the museum workshop and are given information about the Assyrian period; relevant questions are also posed. The students' ideas are elicited with questions such as: "Which kinds of materials do you think were used in relief works?" and "What is depicted in the compositions chosen for the reliefs?". Then, the activity leader explains the stages of the work to be carried out and how the materials will be used. Photographs of the Assyrian "Armed Forces Army" relief, the Assyrian Period Lamassu relief, and the relief depicting the Lion Hunt scene of King Ashurbanipal are distributed. Paper, eva foam, paint, wooden skewers and similar materials prepared by the activity leader are placed in the museum's education workshop, and the students are asked to create print works using these materials and the sample photographs. The completed prints are exhibited in the museum's activity workshop.

Activity 3
Museum Circle (Assyrian Circle)
The prospective teachers gather in the museum garden. A circle is formed with the activity participants for the Museum Circle game. In the game called "Assyrian Circle", the concepts related to the Assyrian period—Assur, Nineveh, Shalmaneser, Stele, Stylus—are distributed to the participants as names. One person stands in the middle as "it". Whenever a participant's given name is called, those participants change places among themselves. During the change of places, the person in the middle tries to take someone's spot. The person left without a place becomes "it" and, in order to find a spot, calls out one of the names formed from the concepts in the Assyrian Circle. When the all-encompassing word "Assyrian Circle" is called, all participants move to change places. After the activities are carried out, evaluation questions are distributed to the participants to be answered.

3.RESULTS

3.1.Findings on the Age Group for Which the Activity Can Be Implemented

The opinions of prospective teachers regarding the age group to which the activity carried out in the museum can be applied are shown in Table 2.

Table 2
Opinions on the Level at Which the Activity Can Be Implemented

Activity Level	Participants	f
Primary school	Ö7, Ö8, Ö9, Ö14, Ö18, Ö19,Ö20	7
Lower secondary	Ö10, Ö11, Ö15, Ö16, Ö17	5
Upper secondary	Ö6, Ö12, Ö21	3
University	Ö2, Ö3, Ö13	3
All age groups	Ö1, Ö4, Ö5	3

Prospective teachers suggested that starting museum education at an early age would be more effective for primary and lower secondary school students, especially in order to foster a love of museums, enable them to accumulate happy memories, and make lessons enjoyable. In line with this suggestion, the participants' views are as follows:

> *"History is the past of a society. A person who does not know the past cannot know the future. Therefore, people should visit museums from an early age in order to learn about their past." (Ö7, F)*

> *"I would apply it to 1st–4th grades of primary school. Because such artistic activities, when carried out at an early age, support the permanence of learning and help us discover our interests early, thus making it easier to set our future paths accordingly. Therefore, I find it appropriate to implement it with primary school students." (Ö9, F)*

> *"Primary school. I think they are more conscious and open to learning. They can follow and implement the rules and warnings. Since children at that age tend to be more introverted, these activities can help them get closer as a group." (Ö14, F)*
> *"Because these age groups are younger, it becomes more fun and memorable for them." (Ö20, M)*

> *"Lower secondary school students. Because children in this age range progress rapidly in terms of motor skills, imagination, and socio-emotional development; activities such as role-play, improvisation, and printing support their creative thinking, expression of emotions, and active participation in artistic processes. These methods also make learning fun and permanent." (Ö17)*

> *"Lower and upper secondary. Because making prints may require more advanced fine motor skills than primary school students have. However, for lower and upper secondary students, the print, the tablet, and the civilization game are all quite enjoyable and productive." (Ö12, F)*

In addition, some participants indicated that the activities are suitable for upper secondary and university levels as well, especially in order to promote different explorations in education:

> *"Upper secondary. As they are in search of different experiences in education and this activity is different and engaging, I found it suitable for this group." (Ö21, F)*
> *"University students can better understand and analyze the historical content and artistic dimension of this activity." (Ö13, F)*

There are also prospective teachers who think that the activity can be suitable for every age group. The explanations of these participants are given below:

> *"In my opinion, it appeals to every age group. After all, each age group has a different imagination." (Ö1, F)*

"I believe that, in order to instill historical awareness, all age groups should visit and be informed about museums appropriate to their level." (Ö2, F)

"All of them, because it is more permanent, informative and fun, so I found it appropriate." (Ö5, M)

3.2. Findings on the Effectiveness of the Activities in Terms of Education and Teaching

All participants stated that this activity was effective in terms of education and teaching. This shows that museums, which are among out-of-school learning environments, and the activity carried out in the museum have an important effect on permanent learning.

3.3. Findings on the Adequacy of the Preliminary Information Given Before the Museum Visit

Prospective teachers were asked in the activity evaluation form whether the information given before the museum visit was sufficient. Participant responses regarding this item are presented in Table 3.

Table 3
Opinions on the Adequacy of the Information Given Before the Museum Visit

Level of Adequacy of Information	Participants	f
Sufficient	Ö1,Ö2,Ö3,Ö4,Ö5,Ö6,Ö7,Ö8,Ö9,Ö10,Ö12, Ö13, Ö14, Ö15, Ö16, Ö17,Ö18, Ö19, Ö20	19
Partly sufficient	Ö11, Ö21	2

Nineteen participants thought that the information given before the museum visit was sufficient, while two participants stated that it was partly sufficient. Since no participant chose "insufficient", this option was not included in the table. Participants made suggestions such as providing a booklet before the museum education, showing an introductory video, preparing a clue sheet, and increasing the duration of the activity. Their views are as follows:

"It was quite sufficient and carefully prepared." (Ö18, F)

"The organization was carried out excellently; the activity was so enjoyable that time flew by." (Ö16, M)

"We could have been given a sheet in an 'search-and-find' format listing the characteristics of an object, and then tried to find that object ourselves in the museum. Everything was nice. It was clear that good preparations had been made beforehand." (Ö19, F)

"Since it was an educational practice for us as university students, it was sufficient. However, when it is applied to younger age groups, a more explanatory guide describing the plan of the day could be given beforehand so that they can examine it together with their families." (Ö12, F)

"The number of students in the activity can be reduced. If the class size is large, the activity could be carried out in two groups on different days." (Ö11, F)

"We could have been given a topic to research beforehand." (Ö15, F)

One participant also referred to the various duties and responsibilities of museums along with the activity leader in such practices:

"Making all museums free of charge and having expert educators provide information for promotion would make the concept of museums, public awareness, and learning about history more effective." (Ö2, F)

3.4. Findings on the Lasting Impact of the Activities Conducted in the Museum

Participants' answers regarding which of the activities conducted in the museum left a lasting impact on them are presented in Table 4.

Table 4
Opinions on the Lasting Impact of the Activities

Activity Level	**Participants**	***f***
Tablet Reading	Ö1,Ö3,Ö5,Ö15	4
Relief Animal Print	Ö6,Ö10,Ö14,Ö21	4
Assyrian Circle	Ö18,Ö19	2
All of Them	Ö1,Ö2,Ö3,Ö4,Ö7,Ö8,Ö9,Ö11,Ö12, Ö13,Ö15,Ö16,Ö17,Ö19,Ö20	15

Most participants marked that "all" of the activities were lasting. In addition to stating that all of the activities had a lasting effect on them, prospective teachers also specified the Relief Animal Print, Tablet Reading/Improvisation, and the Museum Circle activity named "Assyrian Circle". Together with their responses, the explanations they gave are presented below:

"Most of all, the tablet reading, because although I had visited several times before, no work had remained in my mind this much." (Ö5, M)

"All of them were beautiful and effective, but improvisation—transporting ourselves to that period in an unplanned way—affected me much more and made me feel good." (Ö15, F)

"Relief Animal Print. Since role-play and improvisation ensure the individual's emotional and physical active participation in learning, they increase permanence; because active participation helps information create stronger and longer-lasting traces in the mind." (Ö6, F)

"Relief Animal Print. Because I learned by doing." (Ö10, F)

"Relief Animal Print. I like activities where we will use color, paint, and at the end obtain a product." (Ö14, F)

"Relief Animal Print. Because we used our sense of touch more and freely transferred our own designs onto paper." (Ö21, F)

"Assyrian Circle. It enabled us to learn by both having fun and practicing." (Ö18, F)

"Most of all, the Museum Circle. We were extremely active and everyone participated. Since everybody changed places, our full attention was on the activity. Learning and remembering the civilizations was more permanent with this activity. It was definitely the most talked-about activity." (Ö19, F)

"All of them. Since these activities were not only learning-oriented but also focused on learning through fun, all of them were permanent." (Ö8, F)

"All of them, because when I look back now, I feel glad that all of these were done; if there had been more, I would have gladly continued without getting bored. I both enjoyed myself and became more conscious." (Ö9, F)

"All of them. One triggered my imagination, another taught me a technique I had never known, and the other enabled me both to learn and to have fun." (Ö11, F)

"All of them, because they appealed to different ways of learning and thus increased permanence." (Ö13, F)

"All of them. Since they provided a more vivid and realistic experience, all of them are preferable." (Ö16, M)

"All of them ensured permanence, because the permanence rate of activities carried out through learning by doing and experiencing is higher." (Ö12, F)

3.5.Findings on the Methods Used in the Activities in the Museum

Participants' opinions on the methods used in the museum activities are shown in Table 5.

Table 5
Opinions on the Methods Used in the Museum Activities

Method Used	Liked	Moderate	*f*
Creative Drama	Ö1,Ö2,Ö3,Ö4,Ö6,Ö7,Ö8,Ö9,Ö10,Ö11,Ö12, Ö13,Ö15Ö16,Ö17,Ö18,Ö19,Ö20,Ö21	Ö5,Ö14	19 / 2
Improvisation	Ö1,Ö3,Ö4,Ö5,Ö6,Ö7,Ö8,Ö9,Ö10,Ö11,Ö12, Ö13,Ö14Ö15,Ö16,Ö18,Ö19,Ö20	Ö17,Ö21	18 / 2
Brainstorm	Ö1,Ö3,Ö4,Ö5,Ö6,Ö7,Ö8,Ö9,Ö10,Ö11,Ö12, Ö13,Ö15Ö16,Ö17,Ö18,Ö19,Ö20	Ö2,Ö14,Ö21	18 / 3
Game	Ö1,Ö2,Ö3,Ö4,Ö5,Ö6,Ö7,Ö8,Ö9,Ö10,Ö11, Ö12,Ö13, Ö14,Ö15,Ö16,Ö17, Ö19,Ö20,Ö21		21

Participants marked the methods and techniques used in the activity in the museum as liked, moderately liked, or disliked. Since there were no participants who selected the "Dislike" option, it is not included in the table above. In particular, creative drama, improvisation, and brainstorming were chosen by the majority. As shown in Table 4, 'game' was the most popular option among all participants.

4.DISCUSSION

The findings from the study reveal the multidimensional effects of incorporating museums into educational processes as learning environments. The views of prospective teachers show that museum activities are not limited to the transfer of knowledge only; they also provide a dynamic educational environment that supports creativity, permanent learning and emotional participation. This result also reveals that planning museum-based learning for groups at different levels can increase the quality and effectiveness of learning experiences.

Prospective teachers were asked about their opinions on which level of education the activity carried out in the museum could be applied to. Participants emphasized the importance of effective learning starting at an early age and believed that creating happy memories and fostering a love for museums can be achieved through a pleasant learning environment. Hooper Greenhill (1999) emphasizes the unique value of museum visits in enhancing children's learning experiences when they are used to support programs. Participants also suggested expanding these programs to include high schools and universities. Furthermore, it was determined that museum activities can be tailored to all age groups. The crucial factor here is determining the materials used to select the activity based on the characteristics of the group for which it will be held.

The result of this research that all activities carried out in the museum contribute to education is similar to the results in many studies. Aktekin (2008:109) concluded that museums have educational functions. Activities held in museums can be said to encourage participants to think, develop self-expression skills, and enhance creativity, leading to lasting learning. (Karadeniz and Okvuran, 2014:876). These informal learning environments present opportunities for educators that are sometimes challenging and require them to learn specific skills to deliver the best learning experiences in these short bursts (El Bedewy et al., 2024).

Museum education consists of the stages of managing all activity procedures related to the pre-museum, in-museum and post-museum processes, developing an educational program in the museum considering the museum conditions, determining the objectives of education in the museum, determining the methods and techniques to be applied during the education period, and defining and preparing the materials to be used in education. (Karadeniz and Okvuran 2014: 868). Before the museum, information about the topics to be covered is provided. Following the museum activities, an evaluation of the event is made (Ekinci and Kılıç, 2024). The majority of prospective teachers are of the opinion that the information given before the museum visit is sufficient. Participants offered suggestions such as providing a booklet for various age groups before the museum training, watching an introductory video, creating a clue sheet, and increasing the duration of the activity. It was particularly emphasized that time passes quickly and efficiently during the activities. It was emphasized that time passed quickly and efficiently while the activities were carried out. The presentation of materials prepared by the event organizer in this event demonstrates that museum training is a time-consuming, costly, and meticulously prepared process for the organizer. In order to make the museum learning environment more permanent and interesting, it is necessary to create a program and system for the museum visit in advance and to make serious preparations in every respect. (Şar and Sağkol, 2013). It was emphasized that the training here was prepared with sufficient exhaustive and care. Bu tür etkinliklerde müze yetkililere de çeşitli sorumluluklar alması gerektiği de önerilmiştir. It has also been suggested that museum officials should take on various responsibilities in such events.

When asked which of the activities held in the museum left a lasting impression on them, most participants answered that "all" of them were permanent. In their responses, the prospective teachers stated that all activities left a lasting impression on them, and listed the permanence of the relief animal print, tablet reading, improvisation, and the museum circle activity called the Assyrian Circle. It has been observed that implementing practices that allow students to express their own original ideas, implementing games that ensure everyone's active participation, and engaging in fun learning have lasting effects. Following the activity, prospective teachers continued to visit historical sites in the city and discussed their views on the activity. It was stated that, despite visiting the same museum many times, they discovered some new objects thanks to the event. It has been determined that taking an active role in the activities arouses curiosity and excitement in them. Learning through fun, learning through experience, learning through various methods and techniques, and especially learning through imaginative practice are some of the factors that ensure lasting learning. A participant who visited the museum many times stated that he noticed the object used in the event in this way and provided permanent information. To make museum visits beneficial for participants, educators need to know how to connect the museum to their curriculum (El Bedewy et al., 2024).

Experiencing the creation of artwork through hands-on experience in a museum environment provided lasting learning. Despite visiting museums numerous times, participants emphasized that this was the first time they had had so much fun and that the information was retained more, and that museums can become enjoyable places. Today, museums are reorganizing their spaces and collections to present themselves as experimental and self-directed learning environments (Greenhill, 1992). In particular, the application work was effective in learning by getting to know the object and having a fun time by taking part in a self-developing process in an unplanned way.

Participants expressed their appreciation for the methods and techniques used in the museum activity. They particularly selected the option indicating that drama and games were more effective. It was noted that many methods and techniques could be applied to each activity held in the museum, with techniques such as creative drama, improvisation, and brainstorming being used in the museum. The importance of play in fostering classroom dialogue was particularly evident in the comments. As an educational environment, the museum allows students to connect and integrate disciplines (Santaolalla et al., 2020). Participants discussed the impact of creative drama and games in relation to the methods and techniques used in the activity. Alkaya (2025,37) concluded in his research that creative drama is a versatile pedagogical tool that not only conveys content but also incorporates the individual's imagination, emotions, thoughts, and creativity into the process. Creative drama is one of the interactive methods that can be used in these processes (Ulu and Adıgüzel, 2019:265).

Museums value emotion, entertainment, and the creation of meaning (Hooper-Greenhill, 2004). Practices in museums offer advantages in connecting with real-life examples compared to those practiced online or in formal settings such as the classroom (El Bedewy et al., 2024). Research has shown that training in museums is an enjoyable and lasting learning environment that requires active participation. Based on this finding, the use of museums for educational purposes and the use of comprehensive teaching methods and techniques will contribute to participants' creative thinking skills.

5.CONCLUSION

Generally, it was concluded that museum environments support learning by doing and experiencing, offering fun, engaging, and emotionally rich experiences. The findings of the study indicate that using museums more systematically and systematically in the teaching and learning process will significantly contribute to teacher candidates' creative thinking, problem-solving, and critical thinking skills. In this context, it is recommended that museum-based learning experiences be integrated into educational programs and supported with multifaceted methodological techniques. Activities such as making applications, creating your own products, and constructing stories based on objects should be used more frequently as they contribute to permanent learning.

6.RECOMMENDATION AND FUTURE DIRECTIONS

Conflict of Interest: The authors have no conflict of interest declarations regarding the research.

Ethical Approval: Evaluation form data were obtained with the approval of the teacher candidates.

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REFERENCES

Aktekin, S. (2008). Museum experts' views on schools' museum visits for educational purpose. Ahi Evran University Journal of Kırşehir Education Faculty, 9(2), 103-111.

Alkaya, Y. (2025). Museum education through creative drama: A qalitative study based on participant experiences. Journal of Ankara Üniversity of Fine Arts, 7(1), 16-68.

Aykaç, N., Güneröz, C., & Aykaç, M. (2021). Müze eğitimi yaratıcı drama uygulamaları. Ankara: Pegem Akademi.

Dewey, J. (2022). The collected works of John Dewey. DigiCat.

Ekinci, B., & Kılıç, H.A. (2024). Mathematics lesson at the museum: Elephant clock. İ. Yıldız & M. S. Özerdem (Ed.) Dâhilerin ilham kaynağı el- cezerî'nin günümüze yansıyan mirası içinde (319-329)., Literatürk Academia.

El Bedewy, S., Lavicza, Z., & Lyublinskaya, I. (2024). STEAM practices connecting mathematics, arts, architecture, culture and history in a non-formal learning environment of a museum. Journal of Mathematics and the Arts, 18(1-2), 101-134.

Gögebakan, Y. (2018). The importance of using museums in education and training as alternative learning spaces. Journal of the Fine Arts Institute, (40), 9-41.

Greenhill, E. H. (1992). Museums and the Shaping of Knowledge. Routledge.

Güler, A. (2019). Müzede eğitim öğrenme ortamı olarak müzeler. S. Buyurgan (Ed.). Müzecilik ve müzede eğitimin tarihsel gelişimi içinde (s.59-87). Ankara: Pegem

Hein, G. E. (2004). John Dewey and museum education. Curator: The Museum Journal, 47(4), 413-427.

Hooper-Greenhill, E. (1999). Museum and gallery education ((MÖ Evren & EG Kapçı, Çev.). Ankara: Child Culture Research and Application Center.

Hooper&Greenhill, E. (2004). Measuring learning outcomes in museums, archives and libraries: The Learning Impact Research Project (LIRP). International Journal of Heritage Studies, 10(2), 151-174.

ICOM (2022). Museum Definition. https://icom.museum/en/resources/standards-guidelines/museum-definition/ (Erişim:20.10.2025)

Kahriman-Pamuk, D., Elmas, R., & Pamuk, S. (2020). Augmented Reality (AR) and Science Activities: The views of preschool pre- and InService teachers. YYU Journal of Education Faculty), 17(1), 671-699.

Karadeniz, C., & Okvuran, A. (2014). A night at the museum: Museum education with Ankara University students at Çorum Museum of Archeology. Elemantary Education Online, 13(3).

Merriam, S. B. (2018). Nitel araştırma desen ve uygulama için bir rehber (S. Turan, Çev. Ed.). Ankara: Nobel

Santaolalla, E., Urosa, B., Martín, O., Verde, A., & Díaz, T. (2020). Interdisciplinarity in teacher education: evaluation of the effectiveness of an educational innovation project. Sustainability, 12(17), 6748.

Schweibenz, W. (1998). The "Virtual museum": New perspectives for museums to rresent objects and information using the internet as a knowledge base and communication system. Isi,

Silverstone, R. (1988). Museums and the Media: A Theoretical and Methodological Exploration. International Journal of Museum Management and Curatorship, Vol. 7, No. 3, 1988. 231-241

Şar, E., & Sağkol, T. (2013). Eğitim fakültelerinde müze eğitimi dersi gerekliliği üzerine. HAYEF Journal of Education, 10(2), 83-90.

Ulu, M., & Adıgüzel, F. B. (2019). Opinions of the experts on employing creative drama as a method in social studies teaching in the museum. Creative Drama Journal, 14(2), 263-280.

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PROGRAM

SEPTEMBER 25 – 27, 2025

25/09/2025, THURSDAY

TIME	OPENING CEREMONY	HALL NAME
10:00-10:30		Main Hall

TIME	TITLE	SPEAKR	HALL NAME
Keynote 1 10:30 -11:20	How does painting mean? Practice and meaning in painting: Insights from a personal perspective	Prof. Dr. Vince Briffa University Of Malta, Malta	Hall 1
11:20 - 11:40	**COFEE BREAK**		

TIME	TITLE	SPEAKER	HALL NAME
Keynote 2 11:40 - 12:20 Thursday	A Subjective Look At Artificial Intelligence Through Art	Prof. Dr. Uğurcan Akyüz, University Of Toros, Turkey	Hall 1

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12:20 - 1:30	Lunch

TIME	TITLE	SPEAKER	HALL NAME
Keynote 3 1:30 - 2:20 Thursday	'Whose heritage?': multilingualism and the use of digital technologies as decolonial methodologies in practice-based research	Asst. Prof. Dr. Deniz Sözen, University Of Brimingham, England	Hall 1

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Session – 1 Oral Presentation
14:20 - 16:00
25/09/2025, Thursday
Hall 1

ORDER	TITLE	AUTHOR, AFFILIATION AND COUNTRY	HALL NAME
1	Woman, Museum and Education: Feminist Narratives and Pedagogical Approaches in Museums	Ceren Güneröz, Ankara University, Turkey Emel Aksan, Ankara University, Turkey	Hall 1
2	Multirouted Intangible Heritage in Multicultural Societies: Participatory Approaches from Austria, the Netherlands, and Türkiye	Ceren Güneröz, Ankara University, Turkey Fatih Özcelik, Vorarlberg Museum, Austria	Hall 1
3	Fashion design as craft, art and science	Bihter Caglayandereli Istanbul Bilgi University, Turkey	Hall 1
4	Coloration Of Towel Fabrics with Walnut Shells and Imparting Natural Antimicrobial Properties	Sinem Çavdar, EHM Retail Industry and Trade Inc., Burhaniye Neighborhood, Nagehan Street, No:2C/1, Üsküdar, Istanbul Recep Karadag Istanbul Aydin University, Turkey	Hall 1
5	The Art of Keeping: Exploring Narrative Pedagogy for Emotional Durable Fashion Design	Irem Arikan Eksi, Istanbul Bilgi University, Turkey	Hall 1

Session – 1 Oral Presentation
14:20 - 16:00
25/09/2025, Thursday
Hall 2

ORDER	TITLE	AUTHOR, AFFILIATION, AND COUNTRY	HALL
1	Animal Figures and Their Mythological Meanings in the Stone Works of Kayseri Ethnography Museum	Banu parlak Ugurlu, Cappadocia University, Turkey	Hall 2
2	Byzantine Cappadocia as Anatolian Cultural Trust: Visual Culture and Cultural Transmission	Sükran Ünser, Cappadocia University, Turkey	Hall 2
3	An Ankara Tale In The Capitalist Process	Ödül - Isitman, Middle East Technical University, Turkey Hakan Saglam, Baskent University, Turkey	Hall 2
4	Who Will Determine the Roadmap; Human or Humanoid? That's the Question?	Ödül Isitman, Middle East Technical University, Turkey	Hall 2
5	“Mesk” and Turkish Music Note Systems in Traditional Turkish Art Music Education	Selda Özcan Karaduman, Turkey	Hall 2
16:00 - 16:20	**Coffee Break**		

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Session – 2 Virtual and Oral Presentation
16:20 - 18:00
25/09/2025, Thursday
HALL 1

ORDER	TITLE	AUTHOR, AFFILIATION, AND COUNTRTY	HALL
1	Proposal to Add Nature-Based Lessons or Activities to the Primary and Secondary School Curriculum in the Light of Biomimicry Science	Melda Genç, Ondokuz Mayis University, Turkey Elif Omca Çobanoglu, Ondokuz Mayis University, Turkey	Hall 1
2	Recycling Studios in Art and Design Education in Line with Zero Waste and Green University Goals	Melda Genç, Ondokuz Mayis University, Turkey	Hall 1
3	Solution-Focused Approach in Architecture, Industrial Design, and Art Education: Biomimicry Course Recommendation	Melda Genç, Ondokuz Mayis University, Turkey	Hall 1
4	Transforming Experience into Narrative Through Creative Drama: An Arts-Based Practice Toward Aesthetic Awareness	Elif Ozcan, Baskent University, Turkey	Hall 1
5	Aesthetic Expression of Life Experiences Through Sound Journals: A Music-Based Participatory Practice	Elif Ozcan, Baskent University, Turkey	Hall 1

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Session – 2 Oral Presentation 16:20 - 18:00 25/09/2025, Thursday HALL 2			
ORDER	**TITLE**	**AUTHOR, AFFILIATION, AND COUNTRY**	**HALL**
1	The Use of Artificial Intelligence in the Conservation and Digital Transfer of Cultural Heritage	Aysem Yanar, Ankara University, Turkey	Hall 2
2	Decentralization Policies to Address the Side Effects of Rapid Urbanization: The Seoul Example	Sahra Basyazgan Mert,Yildiz Teknik University, Turkey	Hall 2
3	The Present Moment of Creativity: Conscious Awareness in Art Therapy Practices	Sema Bas, Ankara University, Turkey	Hall 2
4	Nevsehir Urgup Mustafapasa Cultural Heritage Information Design Proposal	Caghan Agca, Cappadocia University, Turkey	Hall 2
5	Climate Crisis on our Blue Planet, Design Areas, Projects, and Possible Solutions	Incilay Yurdakul, Usak University, Turkey	Hall 2

19:00 - 22:00	**Dinner** **Optional (Participants pay themselves)**

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26/09/2025, Friday

Session – 3 Oral Presentation
09:00 - 10:30
26/09/2025, Friday
HALL 1

ORDER	TITLE	AUTHOR, AFFILIATION, AND COUNTRY	HALL
1	Parklet Design According to Universal Design Principles	Ahmet Baskan, Amasya University, Turkey, Özlem DEMİR, Amasya University, Turkey, Dilara YAŞAR Amasya University, Turkey	Hall 1
2	Sustainable Model Design and Pattern Making: An Experimental Study with Draping and Origami Techniques	Pinar Cınar, Sakarya University, Turkey	Hall 1
3	Fashion Education in the Context of Environmental Sustainability: A Weaving-Based Learning Process with Waste Textile Materials	Sebnem Noyat, Dicle University, Turkey	Hall 1
4	From execution to curation: Rethinking the designer's role through generative branding systems	Münire Yildiz, Süleyman Demirel University, Turkey	Hall 1
5	The Horse Cult in Ceramic Art	Mehmet Celik, Aydin Adnan Menderes University, Turkey	Hall 1
10:30- 10:50	**Coffee Break**		

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TIME	TITLE	SPEAKER	HALL
Keynote 4 10:50–11:30	Artificial Intelligence Use and Ethics in Fine Arts	Prof. Dr. Hafize Keser, Ankara University (emeritus), Turkey	Hall 1

11:30- 13:00	Session - 4 Oral Presentation 26/09/2025, Friday HALL 2

ORDER	TITLE	AUTHOR, AFFILIATION, AND COUNTRY	HALL
1	The Impact of Spatial Quality on Students' Perceptual Evaluations of Studio Environments in Interior Architecture Education.	Gozde Kuzu Dinçbas, Haci Bektas Veli University, Turkey Kubulay Çağatay, Yalova University, Yalova, Turkey	Hall 2
2	"Migration, Identity, and Cultural Diversity in Modern Art Museums: The Case of Ai Weiwei, Shirin Neshat, Yinka Shonibare, and Mona Hatoum"	Zekiye Çildir, Artvin Çoruh University, Turkey	Hall 2
3	Mediating Spaces: Architecture, Collective Memory, and Sustainable Futures	Fazil Akdag,Erciyes University,Turkey Fatma Betul Kunyeli, Erciyes University, Turkey	Hall 2
4	The Status of Art Education in the Development Plans of the Republic of Turkey	Emel yilmaz, Ankara University, Turkey Yasemin Karaman Kepenekci, Anakara University, Turkey	Hall 2

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5	Creating the Visuals Based on AI Applications: What is Education Through the Eyes of Students?	Inci Ozturk Erkocak, Ankara University, Turkey	Hall 2
6	"Template Shapes" As an Indicator of Incorrect Art Education Practices Observed in Contemporary Turkey: Observations In 2025.	Safi - Avci, Pamukkale University, Turkey	Hall 2

13:00- 14:00	**Lunch**

TIME	TITLE	SPEAKER	HALL
Keynote 5 14:00–14:50	Art's Constriction Areas in the Twentieth Century: Technology, Image and Elitism	Bager Akbay Artist, Designer, Educator, Turkey	Hall 1

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Session – 5 Virtual Presentation and Oral Presentation
14:50 – 16:00
Hall 1

ORDER	TITLE	AUTHOR, AFFILIATION, AND COUNTRY	HALL
1	The Architectural and Artistic Legacy of the Samanid Mausoleum: A Cornerstone in the Evolution of Decorative Architecture in 9th–10th Century Bukhara	Lobar Shukurova, National Institute of Fine Art and Design named after Kamoliddin Behzod, Uzbekistan Mokhira Shodieva, National Institute of Fine Art and Design named after Kamoliddin Behzod, Uzbekistan Mahliyo Xoliqova,	Hall 1
2	“Ceramic Applications in Biomimetic Design and Sustainable Architectural Practice.”	pinar icemer, çankaya University, Turkey Elif Tolun, çankaya University, Tukry	Hall 1
3	Evaluation of the Graphic Design Project IV Course	Serap Buyurgan,Baskent University, Turkey A. Yigit Yamak, Baskent University, Turkey Batuhan Dikmen. Baskent University, Turkey	Hall 1
4	Documentation and Conservation Problems of Cappadocia Rocky Sites through the Examples of Karain Dovecotes and Karlik Church	Aytulu Dirik, Cappadocia University, Turkey	Hall 1
5	Digital Technologies in Art Education: A Case Study of Adobe Photoshop for Developing Design Skills in Children Aged 10–12	Natalia Ilina,Southern Federal University, Russia	Hall 1
6	The Use of the Transitional Object as an Art Object: Child, Play and Life	Isil Tufekci Ardic, Hacettepe University, Turkey	Hall 1

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Session – 5 Virtual Presentation and Oral Presentation 14:50 – 16:00
Hall 2

ORDER	TITLE	AUTHOR, AFFILIATION, AND COUNTRY	HALL
1	An Assessment Method for the Formal Language of Contemporary Miao Batik Painting: An Operational Framework Model Based on "UESBR-15"	Jian Wu, Faculty Of Art, Sustainability And Creative Industries, UPSI, Tanjong Malin, Malaysia Harozila Ramli, Faculty Of Art, Sustainability And Creative Industries, UPSI, Tanjong Malin, Malaysia	Hall 2
2	Opinions of Prospective Teachers on Educational Activities Held in the Museum	Berivan Ekinci Dicle University, Turkey, Zehra Apaydin Kaya, Dicle University, Turkey	Hall 2
3	An Analysis of Edmond Belamy's Portrait Generated with Artificial Intelligence, with Its Creative, Original, and Aesthetic Features	Berivan Ekinci, Dicle University, Turkey	Hall 2
4	Installation with Textile Materials: An Art Education-Based Study of Conceptual, Aesthetic, and Cultural Approaches.	Ozlem Uslu, Cukurova University, Turkey	Hall 2
5	The Impact of Art Workshops on Rural Tourism: Ihlara the Example of Güzelyurt Art Academy	Nilufer Nazende Ozkanli Aksaray University, Turkey	Hall 2
6	The Therapeutic Role of Ceramic Arts in Memory: A Study on Individuals with Alzheimer's Disease	Gamze - Arslan, Hacettepe University, Turkey Candan Terviel, Hacettepe University, Turkey Özge Arslan, Ankara Haci Bayram Veli University, Turkey	Hall 2

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Session – 5 Virtual Presentation and Oral Presentation
14:50 – 16:00
Hall 3

ORDER	TITLE	AUTHOR, AFFILIATION, COUNTRY	HALL
1	Epistemologies of Repair: The Self, the Object, and the Vocabulary of Sustainability	Sanem Odabasi, Eskisehir Technical University, Turkey	Hall 3
2	Alternative Fabric and Yarn Design Research to Yarn-Dyed Fabrics	Gizem Ulusoy Çakir, Turkey, Gozde Kartal, Turkey, Aycin Asma, Turkey, Sinem Budun Gulas, Turkey	Hall 3
3	Utopian Architecture in Fictional Film Universes: An Interdisciplinary Studio Experience	Can Baldan, Istanbul Esenyurt University, Turkey Ece CANTEMIR, Istanbul Gelisim University, Turkey Selma Gul USTUN, Istanbul Esenyurt University, Turkey	Hall 3
4	Reflections of Sustainability on Contemporary Ceramic Art in the Context of Environmental Problems	Seda Özcan Özden, Cappadocia University, Turkey	Hall 3
5	Narratives of Aging in Children's Picture Books	serdar malkoç, Ankara University, Turkey Özlem Kanat, Anakara University, Turkey	Hall 3
6	The impact of artificial intelligence on fine arts education in higher education institutions	Ihab Hanafy, Al Zahra College for Women,Design Department,Oman. Reham A. Sanad, Damietta University, Egypt.	Hall 3

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16:00 - 16:20	**Closing Ceremony**	**Hall 1**

27.09.2925

THE CAPPADOCIA HISTORICAL TOUR 13:00 Optional
(Participants pay themselves)

KAPADOKYA
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