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Correspondence of Dinosaur Figure in Sculpture

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Dinozor Figürünün Heykel Sanatındaki Karşılıkları

Öz

Hayvan figürü çağlar boyunca sanatın konusu olmuştur. Dinozorlar ise sanat tarihine daha geç dönemde dahil olmuşlardır. 1800'lü yılların başlarında İngiltere'de ilk fosillerin bulunması ile birlikte bu hayvanlara karşı ilgi artmıştır. Sanat tarihine dahil oluşları heykel sanatı aracılığıyla olmuştur. Halkın ilgisini çekeceği düşüncesiyle parklara yerleştirilen bu heykeller, onların görünüşlerini belirleme gibi bir görev üstlenmişlerdir. Böylece heykel sanatı ve resim sanatı sayesinde dinozor imgesi oluşturulmuştur. Bilim ve sanatın kesiştiği bu nokta heykel sanatının önemini bir kez daha vurgulamıştır. Dinozor kavramı günümüzde çocuk parklarından film sektörüne kadar hayatımızda yer edinmektedir. Bu metin ile birlikte, heykel sanatı içerisinde göze çarpmayan fakat var olmaya devam eden bir konu üzerinde durarak bu konu hakkında bilgi üretmek hedeflenmektedir. Bu şekilde alan literatürüne katkı sağlamak amaçlanmaktadır.

Anahtar Kelimeler: Dinozor, Paleo Sanat, Dinozor Heykeli, Çağdaş Sanat, Heykel

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Abstract

Animal figures have been a subject of art for ages. However, dinosaurs, which are extinct animals, were included in art history relatively recently. The first fossils were discovered in the early 1800s in England, sparking increased interest in these creatures. Dinosaurs were introduced to art history through sculpture, with sculptures installed in public parks to depict their appearance. As a result, the image of dinosaurs was created through the art of sculpture and painting. This intersection of science and art has once again emphasized the importance of sculpture. The concept of dinosaurs permeates various aspects of our lives, from playgrounds to the film industry. This study endeavors to elucidate a topic that often eludes attention yet persists within the realm of sculpture art. Through this endeavor, the aim is to augment the scholarly discourse within the field.

Keywords: Dinosaur, Paleo Art, Dinosaur Statue, Contemporary Art, Sculpture

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1. Introduction

Evolutionary discourse yields insights into the origins and potential trajectories of species, prompting diverse interpretations regarding the existential underpinnings of our presence. Within this context, dinosaurs occupy a pivotal position in natural history, having thrived on Earth for an extensive 168 million years, juxtaposed against the relatively recent emergence of human-like entities approximately 3 million years ago. Furthermore, the conceptual integration of dinosaurs into contemporary societal frameworks is examined, revealing their dual status as subjects of both natural sciences and consumer culture. This phenomenon is contextualized within historical frameworks shaped by 19th-century colonialism, whereby newfound territories prompted a paradigm shift from distrust towards untrodden landscapes to an avid pursuit of pristine natural environments in the 20th century. The cultural transformation spurred by these historical dynamics is notably reflected in the representation of dinosaurs in literature and cinema. From Arthur Conan Doyle's "The Lost World" to cinematic productions like "King Kong," dinosaurs traverse various genres and have become commodified entities within the children's market, particularly exemplified by the profound impact of the "Jurassic Park" movie. This research, situated at the nexus of art and evolutionary studies, specifically centers on the representation of dinosaurs in the history of art, with an emphasis on the sculptural medium. The intention is to carve a distinctive niche within the realm of plastic arts, conjoining the seemingly disparate domains of paleontology and artistic expression. By doing so, this study aims to establish a symbiotic relationship between art and a domain traditionally considered external to its purview, contributing to a nuanced understanding of the intersectionality between scientific narratives, cultural perceptions, and artistic endeavors.

It would be appropriate to briefly look at the historical trajectory through which the concept of dinosaurs permeated human consciousness, ultimately influencing their integration into contemporary cultural frameworks. Predominantly terrestrial beings, dinosaurs originated during the Late Triassic period, spanning 243-233 million years, with their extinction occurring approximately 65 million years ago, catalyzed by a meteorite impact near Mexico. This resulted in a catastrophic chain of events that culminated in the extinction of non-avian dinosaurs, leaving only fossilized remnants. The resurgence of dinosaurs into human awareness transpired during the 19th century, notably marked by the pioneering contributions of Mary Anning, a trailblazing paleontologist. In 1811, Anning and her brother, Joseph Anning, unearthed the inaugural Ichthyosaurus[2] fossil in Southern England, a monumental discovery that paved the way for subsequent findings such as the first plesiosaur[3] (1823) and the inaugural pterosaur[4] (1828) fossils. It is crucial to note that despite their temporal coexistence, these species are distinct from dinosaurs. Simultaneously, geologist and paleontologist William Buckland introduced the Megalosaurus[5] fossil in 1824, signifying the inaugural formal classification of a dinosaur species. This monumental event inaugurated dinosaurs into the collective human historical narrative. In 1825, British geologist Gideon Mantell contributed to the taxonomic lexicon by describing the herbivorous species Iguanodon, while Richard Owen, a prominent biologist, paleontologist, and comparative anatomist, discerned affinities between Iguanodon and Megalosaurus fossils. Owen subsequently bestowed the nomenclature "deinos sauros," translating to "scary lizard" in Greek, categorically designating these creatures as dinosaurs. A pivotal moment in the confluence of art and science transpired in the ensuing years when Richard Owen collaborated with sculptor Benjamin Waterhouse Hawkins to create the inaugural dinosaur sculptures within the confines of the Crystal Palace Park. This collaborative endeavor has etched its place in history as a noteworthy intersection

[2] Marine reptiles that lived in the Mesozoic era

[3] A large marine reptile species that lived in the Early Jurassic Period

[4] A type of flying reptile that became extinct with the dinosaurs that appeared in the Upper Triassic Period

[5] Giant carnivorous dinosaur species that lived in the Middle Jurassic Period

where artistic expression seamlessly complements scientific inquiry, embodying a symbiotic relationship that extends beyond disciplinary boundaries.

Meaning of paleontology is “a science dealing with the life of past geologic periods as known from fossil remains” (www.merriam-webster.com, 2023). While paleontology encompasses a broad spectrum of prehistoric life, the ubiquitous association of this scientific discipline with dinosaur fossils is a prevailing cultural phenomenon. Tracing back to ancient times, the encounter with dinosaur remains preceded the formal establishment of paleontology as a scientific field. In the absence of scientific understanding, ancient cultures wove legends around these enigmatic fossils, and the dragon figures found in numerous cultural myths are now perceived to be linked to these prehistoric remains.

The concept of dinosaurs, previously shrouded in mystical dimensions and intertwined with dragon folklore, represents a facet of nature that eluded human comprehension for centuries. Nevertheless, ongoing paleontological discoveries are progressively unraveling the mysteries surrounding dinosaurs, thereby expanding humanity's knowledge of these ancient creatures. In the words of the artist Alexis Dworsky, who did his doctorate on the cultural history of the dinosaur; “The wild dinosaur fighting against civilization refers to the binary opposition of nature and culture” (Dworsky, 2011: 47). His assertion underscores the transformative shift in the relationship between nature and culture, a theme elucidated in his article titled "Der Dinosaurier und der Wandel unserer Beziehung zur Natur" (The Dinosaur and the Transformation of Our Relationship with Nature). Drawing attention to cinematic representations, particularly the Jurassic Park movie series adapted from Michael Crichton's novel, Dworsky contends that the juxtaposition of nature and culture has evolved within the narratives of these films. Initially portraying the adverse consequences of tampering with natural order, subsequent installments witnessed a normalization of dinosaurs as commonplace entities. To maintain intrigue, the films introduced genetically engineered dinosaurs, extending beyond the confines of natural existence. In the latest film installment from 2022, dinosaurs coexist seamlessly with contemporary society, analogous to extant animals. In summary, cinematic portrayals exemplify humanity's ability, through fictional narratives, to resurrect extinct species, manipulate them according to societal needs, and integrate them into everyday life. As Dworsky's asserts, “At the turn of the 21st century the opposition between nature and culture disappears. Nature, so to say, disappears by transforming into a part of culture” (Dworsky, 2011: 47). This perspective also sheds light on the enduring human fascination with dinosaurs. “However, fictional dinosaur stories are no cultural phenomena that can be scrutinized isolated from other developments.” (Dworsky, 2011: 48).

2. Examples of Paleo Art Situated at the Nexus of Artistic Expression and Scientific Inquiry

The 19th century is noteworthy for instances exemplifying the intersectionality of science and art. In this epoch, the aptitudes of amateur artists, with a keen interest in paleontology and fossils, were systematically leveraged for the documentation and identification of fossilized specimens. Focused on the examination of bones and fossils, paleontology necessitates a profound understanding of anatomy, particularly skeletal structures. In this context, artists possessing expertise in plastic anatomy and morphology played a pivotal role in explicating and illustrating paleontological discoveries.

In the realm of paleontological art, exemplars include the lithographic prints crafted by Sir Henry Thomas De la Beche, an ardent supporter of Mary Anning and a distinguished geologist and paleontologist. De la Beche's seminal watercolor composition, "Duria Antiquior,"(picture 1) signifies the inaugural depiction of prehistoric fauna wherein organisms extracted from the fossil discoveries made by Mary Anning are collectively illustrated.

Picture 1. Duria Antiquior – A more Ancient Dorset

Resource: https://en.wikipedia.org/wiki/Duria_Antiquior#/media/File:Duria_Antiquior.jpg

Renowned American artist Charles Robert Knight emerges as an additional luminary within the realm of paleontological artistry. Throughout the initial half of the 20th century, Knight prolifically produced a plethora of paintings, murals, illustrations, and sculptures commissioned by museums, zoological institutions, and periodicals. “At the Field Museum of Natural History, Knight's famous battle between Tyrannosaurus rex and Triceratops, painted in 1927, is so well loved that it has become the standard encounter for portraying the age of dinosaurs” (Sherman, 2022)(picture 2). Charles Robert Knight, through his innovative depictions, notably revolutionized the prevailing perception of dinosaurs as cold-blooded, lumbering behemoths. His renderings imbued these prehistoric creatures with a dynamic and warm-blooded vitality, thereby challenging earlier conceptions. In an interview conducted by Kalt, Rhoda Knight, the artist's granddaughter, expounds upon his unwavering commitment to artistic discipline;

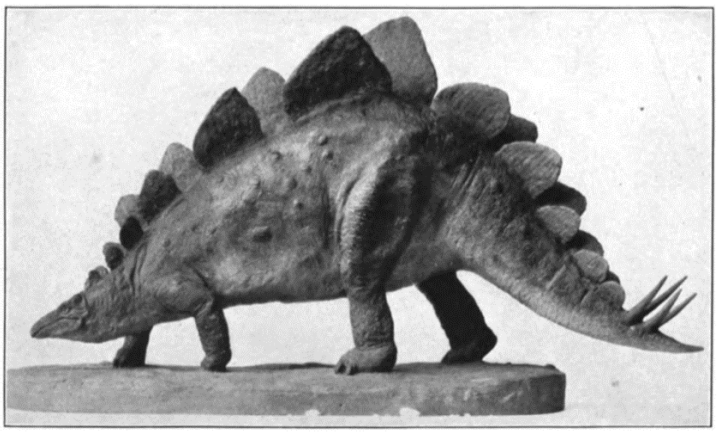
> “He always said he could do the prehistoric mammals because he studied the anatomy of today’s living creatures, without which you cannot understand the movements of the other creatures. I remember his insistence that everything be done as accurately as possible, and that anatomy of the modern animals is essential to know. And each animal he drew or painted he envisioned as an individual” (Kalt, 2005: 28).

Examining Charles Robert Knight's methodology provides valuable insights into the contributory role of paleoart artists to the field of paleontology and their interconnectedness with the scientific domain. In the words of Director Paleontological Research Institute Museum of the Earth Warren D. Allmon, “Art itself may be a direct influence on the scientific process of reconstruction and restoration of ancient life; artists have even been said to be “ahead” of scientists in exploring aspects of dinosaurs”

(Allmon, 2005: 27). For this reason, Allmon states that the name of Robert Knight's exhibition held at the Museum of Earth in April 2006 was called "Conquering Darkness" (Allmon, 2005: 27). Within the temporal context of Knight's artistic endeavors, it is imperative to refrain from appraising his works through the lens of contemporary artistic comprehension. The contemporary phenomena of interdisciplinary collaboration within the arts and the nuanced interplay of artistic expression across various domains were not explicitly defined during Knight's era. Evidently, Knight did not approach his craft with the sensibilities characteristic of a modern-day artist. Nevertheless, the exhibition context of his artworks is noteworthy. Rather than gracing the walls of conventional art galleries, Knight's paintings found residence in natural history museums. This distinctive choice indicates a deliberate departure from traditional artistic spaces, signifying an intentional fusion of art and science. In effect, Knight contributed to the transference of art from the confines of galleries to the educational realms of museums, underscoring the symbiotic relationship between paleoart and paleontology.

Picture 2. Charles Robert Knight, Tyrannosaurus and Triceratops.

Resource: https://www.advancedsciencenews.com/new-ideas-from-old-bones-how-paleoart-is-bringing-ancient-stories-to-life/



Picture 3. Charles Robert Knight, Stegosaurus Statue

Resource: https://upload.wikimedia.org/wikipedia/commons/9/9c/Charles_R._Knight_Stegosaurus_model.png

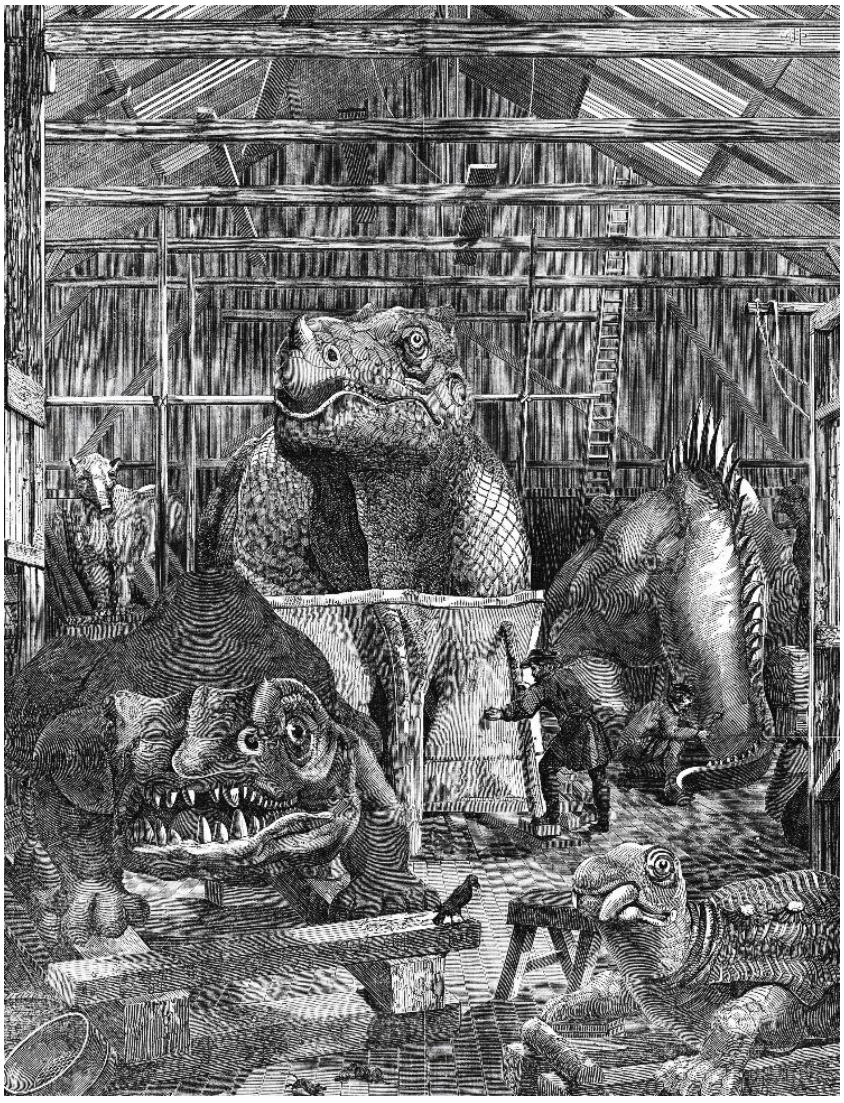
Numerous artists have made significant contributions to Paleo Art, extending beyond the aforementioned figures, including Édouard Riou, Rudolph Zallinger, Zdenek Burian, and Gregory S. Paul. Another notable presence in this domain is Gerhard Heilmann, recognized for his dual roles as an author and illustrator of the influential work "The Origin of Birds."

"Gerhard Heilmann was a Danish amateur zoologist and an artist who had observed birds for a long time" (Türkoğlu, 2021: 37). In alignment with the theories of English paleontologist Thomas Huxley (1825–1895) regarding the relationship between dinosaurs and birds, Heilmann endeavored to establish a connection between avians and bipedal carnivorous dinosaurs. "… Then in the year of 1926 he tried to illustrate the connection between avians and dinosaurs over the famous Archaeopteryx and hypothetical common ancestor Proavis" (Türkoğlu, 2021: 37). Heilmann's conjecture was influenced by the absence of bird collarbones in the dinosaurs unearthed at the time, leading him to speculate on a potential relationship between birds and earlier reptiles. Contemporary perspectives, as asserted by paleontologists Darren Naish and Paul Barrett, now firmly posit that birds are direct descendants of dinosaurs. This evolution in understanding underscores the dynamic nature of paleontological insights over time.

The visual representation of dinosaurs, driven by the human desire to envision these prehistoric creatures, found expression through the imaginative interpretations of artists in the absence of contemporary 3D software. According to American art and science historian Jane Davidson, "there isn't paleontology without imagination" and "paleontology and its illustrated impressions developed together" (Kegel, 2020: 89). Throughout the initial 150 years following the advent of paleontology, art played an integral role within the discipline, particularly in the absence of advanced visualization tools. Sculpture and painting emerged as crucial mediums for producing representations of extinct animals, with a pronounced focus on dinosaurs. This period, characterized by the inception of the Romanticism Movement, predates the advent of modernist movements, and under such circumstances, "Jane Davidson thinks that many of the distinctive characteristics of paleontological displays have their origins in Renaissance drawing techniques and 17th-century Baroque art" (Kegel, 2020: 89). While the primary intent of these artistic works was to serve the purpose of supporting paleontology, rather than pursuing artistic endeavors per se, they implicitly engaged in discussions related to modern and contemporary sculpture. Thus, these creations, inherently tied to the history of art, reflect the dynamic interplay between artistic expression and the advancement of paleontological knowledge.

The Crystal Palace dinosaur statues stand out as preeminent exemplars of paleontological art within the domain of sculptural art. "By 1854, paleoart had made the transition from academia to public education: the life-size sculptures of fossil vertebrates, produced by Benjamin Waterhouse Hawkins and displayed in south London, had an enormous impact on the public's perception of fossil animals and their appearance" (Witton, Naish and Conway, 2014). The exhibition would take place in Hyde Park, in a building made of iron and glass called the Crystal Palace. "The Great Exhibition was the first worldwide exhibition held in Hyde Park. The huge exhibition palace was built according to the plan of landscape architect Joseph Paxton, 563 meters long, 124 meters wide, had a floor area of approximately 80,000 square meters" (Kegel, 2020: 73). The exhibition, which opened in 1951, would be moved to nearby Sydenham and re-established in 1954. Sculptor Benjamin Waterhouse Hawkins brought the Crystal Palace sculptures to life in the light of scientific information given by Richard Owen. In the presentation of his book on Crystal Palace Dinosaurs, Mark Witton describes how Hawkins created images of dinosaurs; "Hawkins was also, however, making chimeric assemblages he was working with bones what we would now recognize as being several different, sometimes close related, sometimes unrelated animals … (Witton, M. and Michel, E., 2022)" "Ultimately, he made 33 extinct animals, four of which were dinosaurs. He also made ichthyosaurs, plesiosaur, and various extinct animals including the South African megaloceros. The sheer size of the sculptures meant "many of

them cast on site with a temporary workshop set up around them" (@TheHistoryGuyChannel, 2020). Based on archival records, the Crystal Palace dinosaur sculptures were fashioned in life-size dimensions using materials such as brick, concrete, and iron. Notably, the Iguanodon sculpture within this ensemble is accompanied by a noteworthy narrative. Gideon Mantell, the possessor of Iguanodon fossils during that epoch, characterized the creature as a colossal lizard adorned with nasal horns, a representation influenced by the incomplete nature of the fossils in his possession. Due to debilitating illness, Mantell was unable to contribute to the construction of the sculptures, yet his insights into Iguanodon were conveyed to Waterhouse Hawkins through Richard Owen. Subsequent discoveries in 1878, featuring more comprehensive fossils, debunked the earlier portrayal, revealing that the purported nasal horn was, in fact, the animal's thumb. Over time, further investigations disclosed variances in the anatomical renderings of other dinosaurs within the park.



Picture 4. Benjamin Waterhouse Hawkins' studio in Sydenham

Resource: https://en.m.wikipedia.org/wiki/File:Sydenham_studio.jpg

Despite their inherent inaccuracies, the Crystal Palace statues have effectively achieved their objective of acquainting the public with dinosaurs. Originally conceived with an educational and entertaining mission, this park has transitioned to fulfill a role analogous to contemporary 3D dinosaur animations accessible globally through computing devices. While the primary intent of these works is not to convey the artist's personal expression, these sculptures, as pioneering instances of Paleoart within the sculptural domain, embody a classical approach. Preceding contemporary discussions on transcending the delineations between modern sculpture and its audience, as well as the abandonment of pedestals, the Crystal Palace dinosaurs established a distinctive spatial context. Notably, these sculptures were situated within the environment sans pedestals, a deliberate choice aimed at enhancing the realistic presentation of the creatures. The spatial arrangements mirrored the eras in which dinosaurs existed, seeking to afford the audience a distinct experiential encounter. This innovative approach has set a precedent for dinosaur parks worldwide, even though some may lack significant artistic merit. “Victorian dinosaurs in a London park have joined Buckingham Palace as a Grade I listed monument. The Department of Culture, Media and Sport said the sculptures in Crystal Palace Park, south London, are of "exceptional historic interest”…. The dinosaurs were originally given a Grade II listing in 1973” (Dinosaurs given protected status, 2007).

Picture 5. Iguanodon Sculptures in Crystal Palace Park

Resource: https://en.wikipedia.org/wiki/Crystal_Palace_Dinosaurs#/media/File:Mantellodon_in_Crystal_Palace_Park.jpg

Picture 6. The Megalosaurs in Crystal Palace Park

Resource: https://en.wikipedia.org/wiki/Crystal_Palace_Dinosaurs#/media/File:2005-03-30_-_London_-_Crystal_Palace_-_Victorian_Dinosaurs_1_4887762470.jpg

In the context of the Crystal Palace sculptures, it is pertinent to acknowledge the reliefs and sculptures executed by Heinrich Harder, a German artist and professor at the Berlin School for the Arts, for the aquarium affiliated with the Berlin Zoo. These sculptures and reliefs, to a certain extent, extended the thematic mission of the Crystal Palace sculptures while simultaneously elucidating the scientific significance of the edifice by adorning the monumental facade of the aquarium. Collaborating on this endeavor, Heinrich Harder partnered with Gustav Tornier, affiliated with the zoological museum within the Berlin Natural History Museum, and Eberhard Fraas, a paleontologist based in Stuttgart (Nieuwland, 2020: 4). Notably, the Iguanodon statue, a conspicuous creation within Heinrich Harder's oeuvre, stands out as a life-sized and marginally more accurate representation. “Harder’s statue further bears similarity to (and might share its inspiration with) an Iguanodon statue that briefly stood in the Copenhagen Zoo. And then it was compared with the Iguanodon at Hagenbeck’s Stellingen zoo, which preceded Harder’s version by nearly 4 years; Harder’s version was far more artful” (Nieuwland, 2020: 7) (picture 5). Due to the devastations incurred during the World Wars, certain relief sculptures suffered damage, necessitating subsequent repairs.

Picture 7. Heinrich Harder, Iguanodon

Resource: https://www.copyrightexpired.com/Heinrich_Harder/jo_iguanodon.html

3.Dinosaur Representation in Contemporary Art

Dinosaur depictions manifest in Contemporary Art independently of traditional paleontological art. A noteworthy distinction in contemporary artistic examples lies in the shift where scientific themes become the focal point of artistic exploration, diverging from the conventional role of art as a determinant of scientific understanding. In an analogous manner to the incorporation of commonplace objects within the realm of art under the purview of pop art, dinosaurs—constituting a sub-branch of popular culture—are integrated into the artistic domain. Furthermore, within the productions of Contemporary Art, the conceptualization of dinosaurs is commonly employed to stimulate a reconsideration and the formulation of novel definitions pertaining to the intricate interplay between human beings and the natural world.

3.1. Mark Dion Toys 'R' U.S. (When Dinosaurs Ruled the World)

American conceptual artist Mark Dion's 1994 dated installation named Toys 'R' U.S. (When Dinosaurs Ruled the World) (picture 6) has projected a childlike subculture centered around dinosaurs. The artist, adopting an archaeological perspective, systematically investigates specific locales, collecting the unearthed objects and subsequently integrating them within the framework of an artistic composition. Within the artist's oeuvre, there exists an exploration into the anthropogenic environments, querying the reflections they offer concerning the intricate relationship between humanity and the natural world. The childhood fascination with dinosaurs is commonly regarded as an implicit manifestation of a broader interest in nature. This fascination underwent commercial appropriation within consumer culture, engendering a market centered around dinosaurs. This market, fueled by ongoing paleontological discoveries, spans a diverse production spectrum

encompassing toys to cinematic productions, giving rise to a distinctive subculture. One notable manifestation within this domain is the series of installations titled "Toys 'R' U.S.," where the artist, in the installation titled "When Dinosaurs Ruled the World," transforms the ostensibly innocent childhood interest in dinosaurs, commodified within consumerism, into an artistic creation. This particular installation emulates a child's room entirely adorned with dinosaur-themed merchandise. By presenting this childhood space as a standalone work of art and divorcing it from its original context, the artist elevates the mundane artifacts within the room, ranging from wallpapers to bedspreads to lamps, into symbols of popular culture. “These “dinosaurs” have little to do with real dinosaurs, and Dion emphasizes the fact that our understanding of the world is a product of capitalism. Recognizability trumps knowledge. Therefore, the solace we received throughout our childhood from imaginary forms that signify dinosaurs was preparation for a life of impossible longings and willful ignorance (Gelber, 2005)” Consequently, the work transforms dinosaurs into an object of pop art. Beyond a critical evaluation of the work, an alternative perspective unveils the significant cultural presence occupied by dinosaurs in contemporary society.

Picture 8. Mark Dion Toys ‘R’ U.S.

Resource: https://www.flickr.com/photos/pmeimon/38360228484

3.2. Andreas Greiner Monument for the 308

German artist Andreas Greiner is another artist who uses the idea of dinosaurs in his art pieces. The artist employs diverse materials in his artistic endeavors, with the sculpture entitled "Monument for the 308"(picture 7) standing out as a noteworthy illustration within the context of the subject. This particular sculpture was fashioned utilizing X-ray scanning and 3D printing technologies. Within this work, the artist conducted a comprehensive examination by subjecting the remains of a deceased chicken obtained from an industrial poultry farm to X-ray scanning. Subsequently, a three-dimensional replica of the chicken's skeleton, towering at 8 meters, was generated through the utilization of a 3D printing machine. The piece represents a twentyfold magnification of the original chicken, presenting the avian skeleton in a configuration that strikingly resembles the skeletal structures of dinosaurs showcased in natural history museums. “However, the animal depicted is a common Ross 308 broiler chicken and is not extinct like its prehistoric ancestor, the Archaeopteryx (selected works, 07)”.

Nevertheless, chickens persist in modern society, holding a significant position in the food industry. The Ross 308 type of chicken, after which the sculpture is named, is a specifically bred breed renowned for its rapid growth, cost-effective feed consumption, and efficiency for meat production. It reaches a suitable size for slaughter in a period of 1 to 2 months. However, as a consequence of achieving this swift maturation, it becomes a vulnerable and readily susceptible species to variable climatic conditions, prone to quick ailments. Losses may be incurred in the rapid production process to meet the escalating demand for meat. The sculpture is crafted from a scanned deceased chicken, representing one of the birds lost under such production conditions. When considering the evolutionary trajectory of birds from dinosaurs over millions of years, the reduction of this profound evolutionary journey to a cost-benefit analysis involving consumed feed and produced meat seems ironic. In Monument for the 308, this irony is accentuated in a striking manner, emphasizing the dimensions along with the inherent paradox, while concurrently paying tribute to the Ross 308 species. "Ross 308 has nourished billions of people with cheap and abundant protein. "Monument to the 308" honours this pillar of society and imagines a future in which we will grant nature the same 'human' rights, as we grant ourselves" (NOWs: Monument for the 308 by Andreas Greiner, 2017).

Picture 9. Andreas Greiner Monument for the 308

Resource: https://www.andreasgreiner.com/works/monument-for-the-308/

3.3.Sun Yuan and Peng Yu “I Didn’t Notice What I am Doing”

In this instance, the conceptualization of dinosaurs emerges within the artistic creations of Chinese practitioners Sun Yuan and Peng Yu. Artisans addressing the theme of contradiction in diverse manners formulate installations characterized by a hyper-realistic aesthetic. Collaborating since the latter part of the 1990s, these artists have integrated unconventional materials, including robotic appendages, human adipose tissue, and taxidermized fauna, into their artistic endeavors. Additionally, they incorporated a Triceratops-type dinosaur within their creation titled "I Didn't Notice What I am Doing."(picture 8) “I Didn’t Notice What I am Doing” is a perfect example: an installation composed of a series of objects which gives centre stage to the subliminal dimension which underlies cognitive processes and daily actions” (Sun Yuan and Peng Yu at Galleria Continua, San Gimignano, 2019). In this installation, a triceratops and an armored rhino model produced in a hyper realistic style were used. Triceratops is a herbivorous dinosaur species that lived in North America during the upper cretaceous period 68-65 million years ago. The armored rhinoceros is a modern mammal species that lives in Asia today. Both species are similar to each other in terms of appearance. Moreover, for a person who is not knowledgeable about animal classifications, it may even be thought that the two species are related to each other. In reality, the two species belong to completely different family trees. Even the encounter between two creatures is impossible due to the difference in time and space. In fact, this similarity is explained by a term called convergent evolution[6], which is frequently encountered in nature. Even though the origins of species are completely different, evolution produces similar results under similar conditions, independently of each other. For example, birds, bats and pterosaurs have wings. The body structures of all three species are similar to each other. In particular, the wing structures of bats and pterosaurs are almost the same, excluding their sizes. Examples in nature can be multiplied. In I didn't notice what I am doing, the artists convey their messages through the concept of convergent evolution visualized with triceratops and rhinoceros. A critical observation concerning this artwork suggests that the reliability of information obtained through sensory perception might be subject to skepticism in the absence of antecedent familiarity with the contextual background of the phenomena. The Art of Change: New Directions from China exhibition guide includes the following statements: “Sometimes, as the title of the work implies, such connections are made purely intuitively and have no basis in scientific fact. The artists explain that 'the main crux of the project lies in its investigation into the manner in which relationships are constructed or how correlations are made. (Sun Yuan and Peng Yu, 2023)” The composition constitutes a compelling examination within the framework of our subject matter in terms of addressing the ways we acquire knowledge, think and take attitudes, as well as in terms of convergent evolution and making a dinosaur species an object of contemporary art.

[6] Convergent evolution: the independent development of similar traits or features (as of body structure or behavior) in unrelated or distantly related species or lineages that typically occupy similar environments or ecological niches (https://www.merriam-webster.com/, 2023).

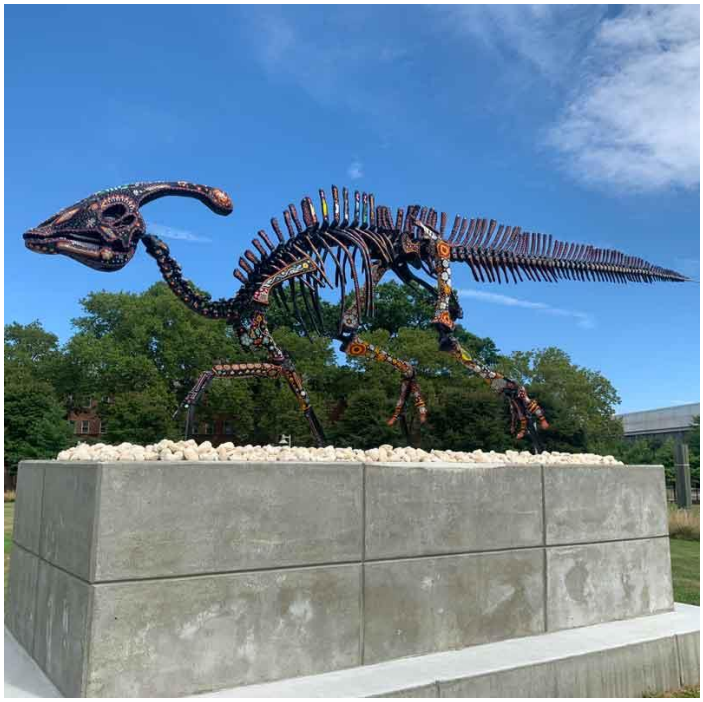
Picture 10. Sun Yuan and Peng Yu I didn't notice what I am Doing

Resource: https://www.galleriacontinua.com/news-detail/sun-yuan-peng-yu-i-didnt-notice-what-i-am-doing-480

3.4. Marianela Fuentes

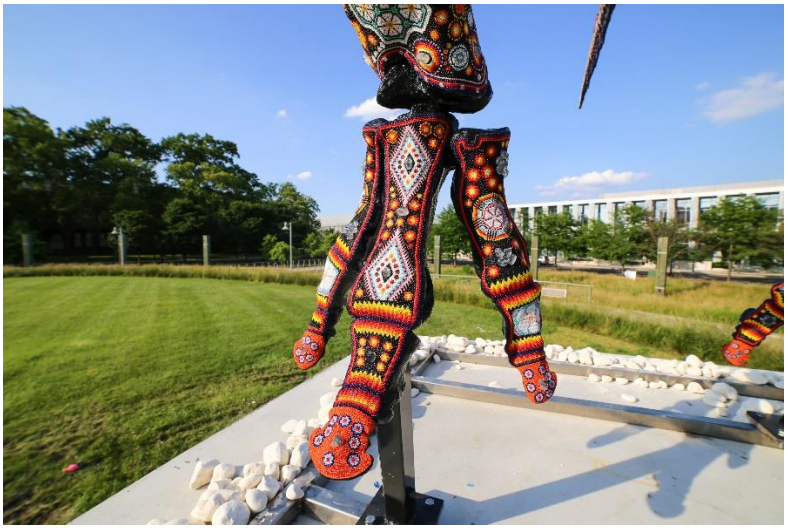
Marianela Fuentes, a Mexican artist with Native American heritage, draws inspiration from dinosaurs, infusing her works with a distinctive artistic interpretation that amalgamates elements from the Huichol indigenous culture and the concept of dinosaurs. Incorporating traditional Huichol bead art into her sculptures, Fuentes utilizes this indigenous form of artistic expression, traditionally crafted using threads, wax, bones, ceramics, or modern bead-making techniques. These vibrant and patterned works are steeped in the cultural motifs associated with Shaman practices. An integral component of Fuentes' artistic repertoire is the representation of dinosaurs. The artist meticulously adorns the dinosaur sculptures, crafted to scale, with Huichol beads. In doing so, she not only stays true to the authentic dimensions of the prehistoric creatures but also imbues them with the symbolic significance embedded in the cultural heritage she both possesses and safeguards. The artist articulates her approach to this synthesis as; "I believe that time is not linear," said artist Marianela Fuentes. "These beings were living in the same lands that we are now. So all the beadwork represents this time, and the dinosaur represents ancient times (Crimmins, 2022)". Dinosaurs can be considered indigenous to the geographic regions in which the artist originated and was nurtured. The American Continent, by virtue of its geological composition, stands as a continent abundant in dinosaur fossils. In her formative years, the artist, escorted by family members, was introduced to a fossil site where she encountered dinosaurs, leaving a lasting impression. The artist provided detailed annotations for the bead-encrusted craftsmanship adorning the Alpha Sacred Beings (The Origin of Creation) (Picture 9), a faithful rendition of a Parasaurolophus statue from the Late Cretaceous period, meticulously rendered to its true scale:

"The turtle on the crown symbolizes all the land throughout North America. Around the dinosaur's hips is a wampum belt that was given to recognize the friendship treaty under the Shackamaxon Elm between William Penn ("Mikwon"), and Tamanend ("the Affable One"). Along the spine, fire, water, wind, mountain, moon, sun, and stars appear in a set of seven to represent Seven Generations. The four cardinal directions are represented on each limb. Flora and fauna native to our region also appear throughout the beadwork. As with all things, from the tip of the tail to the end of the nose, the monument begins and ends in the stars" (Philly's Navy Yard Unveils "Sacred Beings (The Origin of Creation)," A New Monument Symbolizing A Bridge Between Two Indigenous Nations, 2022).



Picture 11. Marianela Fuentes, Alpha Sacred Beings (The Origin of Creation)

Resource: https://www.philart.net/art/Alpha_Sacred_Beings_The_Origin_of_Creation/1157.html



Picture 12. Marianela Fuentes, Alpha Sacred Beings (The Origin of Creation)

Resource: https://streetsdept.files.wordpress.com/2022/06/alpha-sacred-beings-the-origin-of-creation-5.jpg

3.5. All Yesterdays and All Tomorrow

Artistic exemplars within the domain of contemporary paleoart are encapsulated in the volumes "All Yesterdays" and "All Tomorrow," featuring illustrations by Turkish artist Cevdet Mehmet Kösemen. In collaborative endeavors such as "All Yesterdays" and "All Tomorrow," realized in conjunction with paleontologist Darren Naish and artists John Conway and Cevdet Mehmet Kösemen, depictions and descriptions of extant fauna are presented as though they are newly discovered, devoid of prior knowledge about their existence or fossil records. Kösemen reimagines prehistoric fauna through the lens of contemporary ecological conditions, envisioning them as organisms that have undergone evolution within the parameters of the present-day milieu. Regarding the publication "All Tomorrow," it can be asserted that; One only has to look at the skeletons of today's animals to realize how little information can be learned about the true appearance of animals from a skeletal structure. Naish, Conway and Kösemen ask how future paleontologists would describe today's creatures if they had nothing but skeletons in their hands, that is, if they did not know how their bodies looked, what their bodies and soft parts were, whether they were covered with fur or feathers like those of avians (Kegel, 2020: 160). The interpretative approach evident in the Crystal Palace dinosaurs historically evolves into a deliberate fictional construct within the illustrations of Conway and Kösemen. This intentional fictionality, ostensibly expected to align with scientific information, assumes an artistic quality within the pages of the book "All Yesterdays." Darren Naish provides commentary on the contentious nature of the book in his article titled "On All Your Yesterdays" within the publication "All Yesterdays."

> “However, when it comes to soft tissue anatomy and behaviour, many of the cherished ideas and themes of conventional paleoart are not always obviously less speculative than the sorts of images we explored in All Yesterdays: they frequently represent historical tropes that were arrived at by accident, they represent assumptions and conventions, and they are even, arguably, reflective of cultural and societal expectations” (Kösemen, Conway and Naish, 2017: 7).

“…Art can be driven by science, but it can be divorced from it entirely. Speculative art, ‘retro’ paleoart, and accurate, high-fidelity reconstructions all have their place in the way we choose to portray the animals of the past” (Kösemen, Conway and Naish, 2017: 8).

Picture 13. Cevdet Mehmet Kösemen, Swans

Resource: https://obscuredinosaurfacts.com/blog/post/2020/09/16/all-todays.html

4.Conclusion

Paleo art has traditionally centered on the depiction of extinct animals, particularly emphasizing dinosaur figures. The primary objective of Paleo art lies in serving as a complementary component to paleontology. Most practitioners of Paleo art, emerging concurrently with the advancement of paleontological science in the early 19th century, initially engaged with paleontology as enthusiastic amateurs. Despite their artistic prowess, these individuals often required scientific guidance to address technical aspects of their work. Paleo artistry entails the creation of visual representations that significantly influence the contemporary societal perception of living organisms, incorporating a detailed exploration of soft tissues akin to the methodology employed by forensic artists in identity determination. Notably, many paleontologists exhibit proficient drawing skills, employing them to enhance their work in the field of paleontology. The proclivity for interdisciplinary collaboration has become conspicuous within the contexts of Modernism and Postmodernism. Paleo art productions, serving as junctures between science and art, exemplify interdisciplinary pursuits that predate the

formal definitions of both Modernism and Postmodernism. In the 21st century, the responsibilities traditionally assumed by artists in the realm of paleo art have progressively shifted towards computer technologies. Advanced 3D animations and simulation tools now fulfill diverse roles, from interpreting new paleontological discoveries to contributing to the film industry. The dinosaur figure has transcended its historical association with paleo art and is now a prevalent motif within the realm of contemporary art. In contemporary artistic contexts, the dinosaur figure functions as a reference point, employed by artists to elucidate humanity's relationship with nature, drawing upon insights derived from the field of paleontology and contributing as a constituent of popular culture.

Ethics approval and consent to participate

Not applicable

Competing interest

The author declares no competing interests. The contribution of the 1st author to the article is 100%.

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