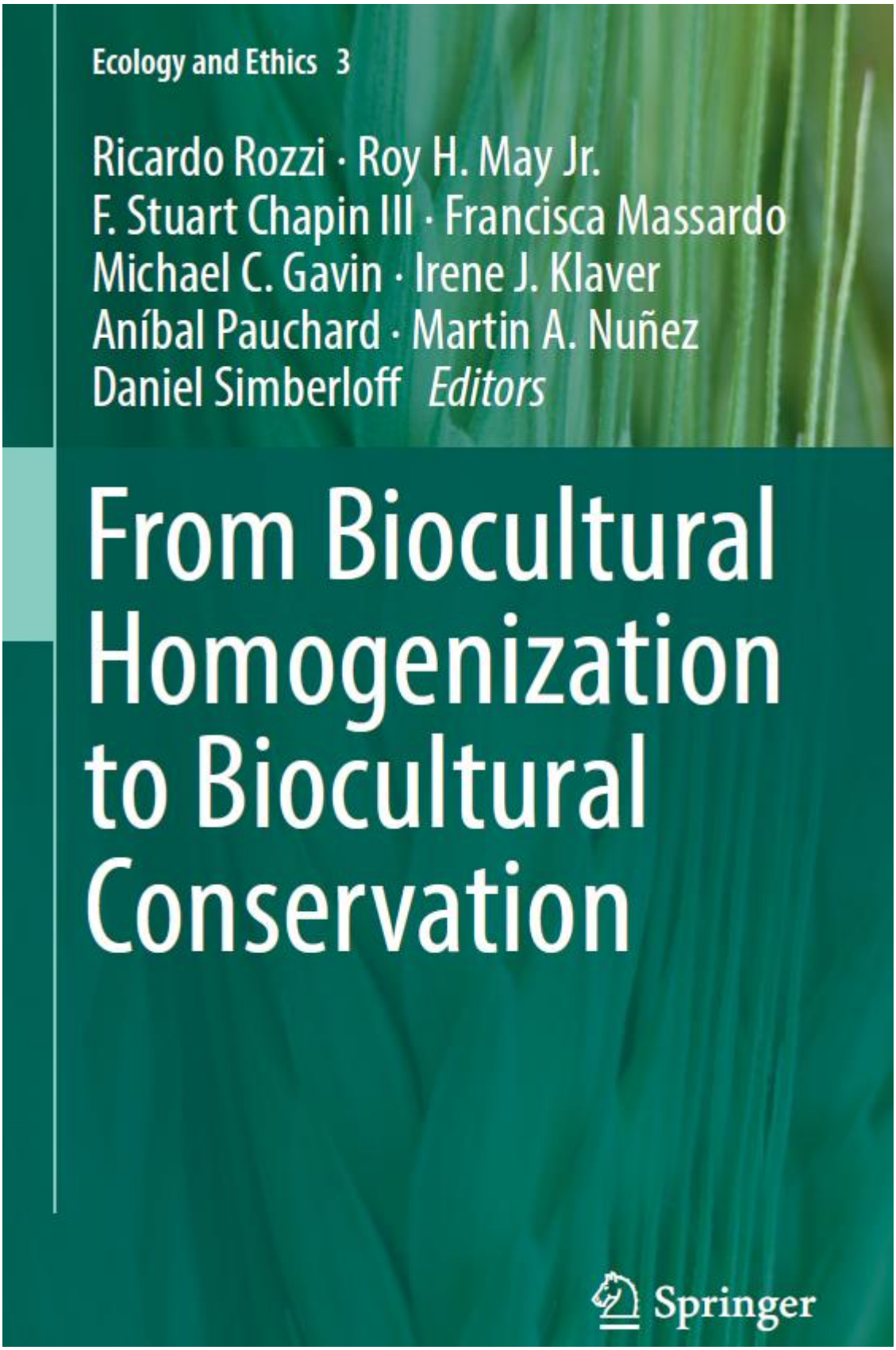
Ecology and Ethics 3
Ricardo Rozzi · Roy H. May Jr.
F. Stuart Chapin III · Francisca Massardo
Michael C. Gavin · Irene J. Klaver
Aníbal Pauchard · Martin A. Nuñez
Daniel Simberloff Editors
From Biocultural Homogenization to Biocultural Conservation
Springer

Ecology and Ethics

Volume 3

Ecology and Ethics

This series is devoted to continuing research at the interfaces of ecology and ethics (embedded in the multiple fields of philosophy and ecology) to broaden our conceptual and practical frameworks in this transdisciplinary field. Confronted with global environmental change, the academic community still labors under a tradition of strong disciplinary dissociation that hinders the integration of ecological understanding and ethical values to comprehensively address the complexities of current socio-ecological problems. During the 1990s and 2000s, a transdisciplinary integration of ecology with social disciplines, especially economics, has been institutionalized via interdisciplinary societies, research programs, and mainstream journals. Work at this interface has produced novel techniques and protocols for assessing monetary values of biodiversity and ecosystem services, as illustrated by the Millennium Ecosystem Assessment. At the beginning of the 2010s, however, an equivalent integration between ecology and philosophy still remains elusive. This series undertakes the task to develop crucial theoretical and practical linkages between ecology and ethics through interdisciplinary, international, collaborative teamwork. It aims to establish a new forum and research platform to work on this vital, but until now insufficiently researched intersection between the descriptive and normative domains. The scope of this series is to facilitate the exploration of sustainable and just ways of co-inhabitation among diverse humans, and among humans and other-than-human co-inhabitants with whom we share our heterogeneous planet. It will address topics integrating the multiple fields of philosophy and ecology such as biocultural homogenization, Planetary or Earth Stewardship.

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Chapter 9
Dürer's Rhinoceros: Biocultural Homogenization of the Visual Construction of Nature

José Miguel Esteban

Abstract In this paper I will try to show that the printing press was forming a visual culture that uniformized the construction of images of the fauna discovered in Africa, Asia, and the Americas during the Renaissance. Isolated from its background or ecological context, the figure of the animal, unattached and floating, absorbed a symbolic load that assimilates it to other images constructed according to that visual culture. In this chapter we will see how the figure of Dürer's rhino absorbed the symbolic load of the visual culture of Renaissance colonialism. The warlike attributes of the printed image incorporated in the Indian rhinoceros the epic and military dimension of the colonial adventure. The visual construction of Dürer could very well represent the cultural homogenization of the biotas east and west of Europe. The pictorial construction of the otherness of exotic animals reaffirmed the beneficial exceptionalism of Europe and, consequently, reinforced the legitimacy of Western colonization of a wild and alien nature, waiting to be reduced and converted into merchandise. The history of the numerous reprints of Dürer's rhino reproduces the biocultural consequences of positive feedback between processes such as representing, conquering, and commodifying nature. Finally, I present Dalí's rhinoceros as a reference to the quantitative homogenization of the images of nature and culture. To conclude, I conclude that one of the challenges of biocultural conservation is to denounce the construction of homogeneous biocultural habitats based on habits such as visual production and the consumption of images.

Keywords Art · Biocultural ethics · Biocultural conservation · Colonialism · Eurocentrism

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9.1 Introduction

In 1958, Charles Elton, a father of the ecology of invasive species, predicted that in the long run, the biota of all continents would become increasingly similar (Elton 1958: p. 51). In 2016, Elizabeth Kolbert warned that this would happen sooner rather than later. Today, global processes seem to drive us backward through geological history at *full speed*, operating as a kind of inverse tectonics that impoverish and homogenize the biological diversity of the planet (Kolbert 2016: p. 22). The reports of the Anthropocene Working Group of the International Union of Geological Sciences reinforce that warning. The stratigraphy of the Anthropocene will be characterized by biocultural homogeneity, with an overwhelming predominance of plastic residues and chicken bones (Carrington 2016).

As with many other systemic processes, planetary biocultural homogenization (*sensu* Rozzi 2013) is not growing in lineal but rather exponential progression. In this I address one of its possible points of inflection, the Renaissance. In this historical period, biological homogenization received positive feedback from ascendant cultural processes such as economic monetarization, expanding interurban commerce, concentration of wealth and the incipient creation of financial services, strengthened military power of monarchs and nobles, and the technological renewal of the sciences, arts, and trades. The biocultural colonization of the world also was propelled by the printing press, which unleashed a new visual culture that revolved around the graphic icon of the globe.

The British anthropologist Tim Ingold argues that the move from the notion of a spherical cosmos, characteristic of non-modern societies, to that of a global cosmos, had deep cultural implications. "[T]he lifeworld, imagined from an experiential centre, is spherical in form, whereas a world divorced from life, that is yet complete in in itself, is imagined as a globe," he explains (Ingold 2000: p. 210). This external perspective reduces the properties of places to those that allow its cylindrical projection onto a Euclidean plane. The Mercator chart is a uniform cylindrical projection that retains the angles and shapes but deforms and sacrifices distances and surfaces. Mercator's map is not a neutral reflection of nature, but projects the world's availability for a linear, homogeneous, and constant navigation that maximizes the arrivals to port in a process of colonial expansion. Spheres are experienced from within; globes can be perceived only from without. For Ingold, the image of the earthly globe supposes a kind of cosmic exile, in which some parts of humanity imagine themselves as separated from the world in order to *contemplate* it from without, putting in parenthesis the worldly relationships of interdependence that the spherical notion required. The image of the globe leads to the objectification of the world as homogeneous and universally available extension that can be controlled by meridians and parallels.

At the beginning of the sixteenth century, two woodcuts by Albrecht Dürer, prepared at the request of Stebius, the official geographer of Maximilian I of Habsburg, seem to corroborate this thesis. Dürer located in this cosmic exile a muse and four great figures in the history of astronomy. "Urania the Muse of Astronomy" (c. 1502)

(Fig. 9.1) portrays Urania, a daughter of Zeus and the Titaness Mnemosyne, who was said to have inspired curiosity in people about the firmament and usually was represented with a light blue cloak, a diadem of stars, a globe, and a compass. Dürer simplifies these aesthetic attributes, presenting her as a powerful, nude woman who holds in her hands a circumference of the zodiacal globe that seems to rotate thanks

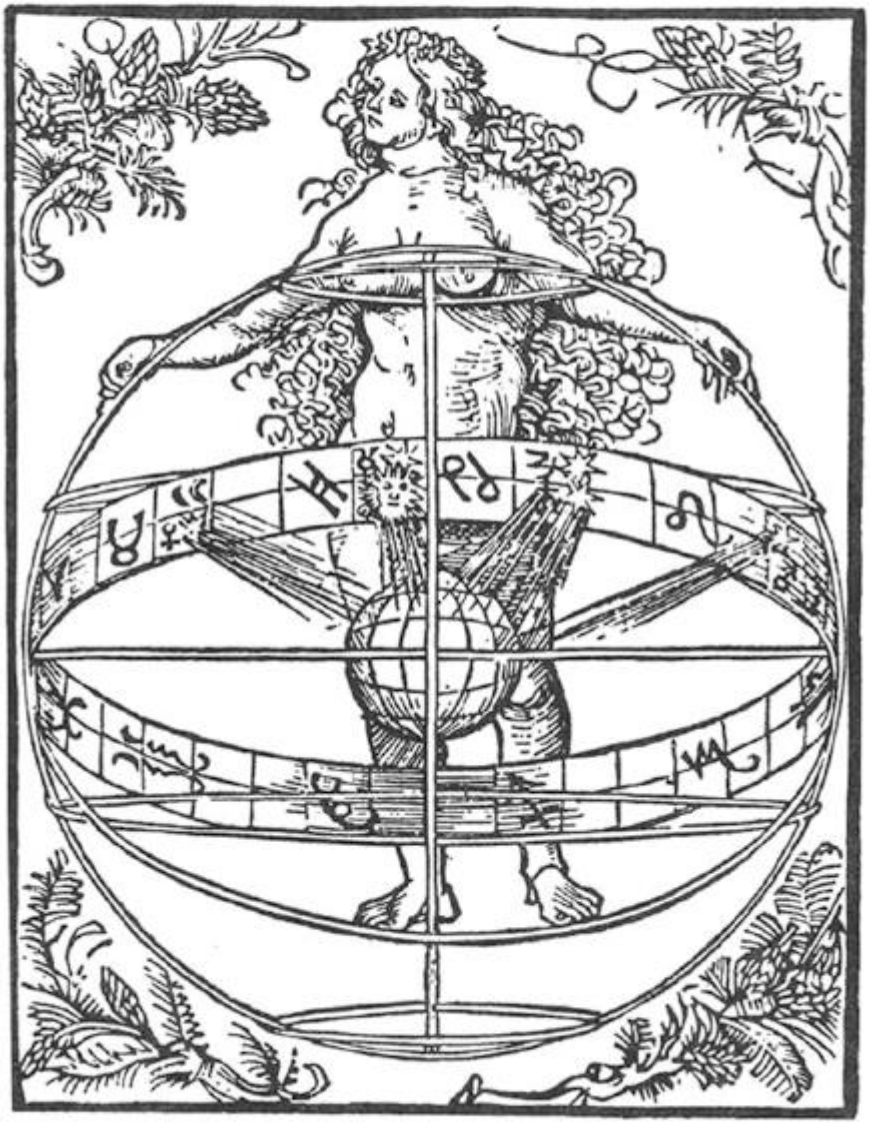


Fig. 9.1 Albrecht Dürer, "The Muse Urania with the Zodiac" (c. 1502). Woodcut. (Current location: Staatliche Graphische Sammlung München/Public Domain {PD-art})

to the muse herself. Along the equator is a band containing twelve astrological symbols. In the interior of the zodiacal globe, the terrestrial globe appears as segmented by parallels and meridians. Together they are similar to an armillary sphere, a celestial sphere that was employed from the time of Ptolemy to determine star coordinates and to show their apparent movement in relation to the Earth and the Sun. The armillary sphere is part of the coat of arms adorning the flag of Portugal. The idea of an external imperial power over the globe is reinforced by three bundles of fine lines that represent the supposed influence of the Zodiac on our planet.

The strict relationship between Renaissance astrology and astronomy characterizes this historical period as an interregnum or "in-between" stage. "Map of the Northern Sky" (Fig. 9.2) (c 1515) shows the celestial globe of the northern hemi-

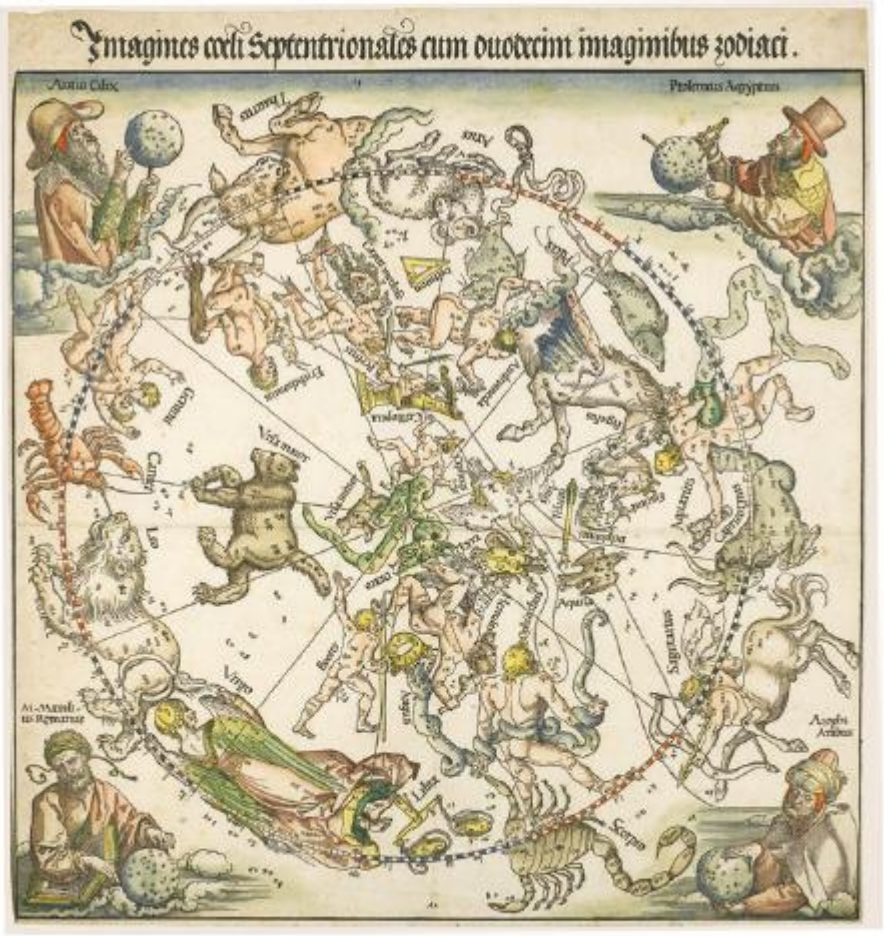


Fig. 9.2 Albrecht Dürer, "Map of the Northern Sky" (c. 1515). Woodcut. (Source: National Gallery of Art/Public Domain {PD-art})

sphere with the positions of the stars around 1499–1500. The hemisphere is surrounded by Zodiac signs. Each of the four corners of Dürer's woodcut is occupied: an astronomer who, although outside the celestial globe, holds in his hands a smaller sphere that represents the celestial globe.

Like Urania and the astronomers, Europeans saw themselves as "outside the globe" although holding it in their hands. Like Urania, they could manipulate it and like the astronomers contemplate it from outside, thus, as Ingold says, separating themselves from ecological interdependencies. The world understood as a globe could be universally homogenized.

Maps and muses are not the only images of the period that are marked by cultural biases. Renaissance images of animals share these cultural biases and represent what the US art historian Janice Neri (2011) calls the *logic of the specimen*. According to this logic, the figure of a biological organism appears isolated on a uniform background, empty or reduced to schematic representations, which permit geometric techniques of perspective. Two artistic renderings, both following Dürer's previous works, illustrate this logic of the specimen. In "The Small Horse" by Franz Isaac Brun (1550–1610) (Fig. 9.3), all socioecological context is removed, and grids and geometric techniques are emphasized to create the optical illusion of depth and tridimensionality. This mathematical and geometrical vision might symbolize the imposition of rational control over animal behavior. In the "Beetle" by Hans Hoffmann (1574) (Fig. 9.4), the insect is illustrated as though in motion over a cream-colored oval superimposed on a gray background. The beetle is completely removed from any ecological context.

I endeavor to show that, thanks to the printing press, the logic of the specimen facilitated a uniform visual culture that governed the construction of homogeneous images of colonial biota. In the first place, the graphic reproduction of exotic animal *figures* on a neutral and homogenous *background* favored the mental construction of habitats as undifferentiated receptacles, functionally empty, that could be occupied by any organism, *ad libitum*. On the other hand, by isolating it from its context, the image of the animal, unanchored and floating, made it possible to join it to other images constructed according to that same visual logic. Consequently, this Renaissance artistic custom homogenizes not only the representation of habitats but also the inhabitants of the distinct regions of the planet. In this way emerged the pervasive root of biocultural homogenization, conceptualized by Rozzi (2012) as the homogenization of life habits, habitats, and identities of coinhabitants. Note that, also, following the logic of the specimen, individuals are represented as isolated inhabitants, not as coinhabitants that interact and coinhabit their respective regions (cfr. Rozzi 2013, 2015).

This interpretation can be illustrated by a notable example of the logic of the specimen and the root of Renaissance biocultural homogenization: Dürer's "Rhinoceros" (Fig. 9.5). This woodcut by the German painter and printmaker symbolically represents the visual culture of European colonialism. This image was printed on all types of backgrounds, from flat and empty planes to Chinese, European, or tropical landscapes. For example, the Dutch tapestry artist Pedro Van Elst (1549) inserted it into a forest capable of accommodating the fauna of any

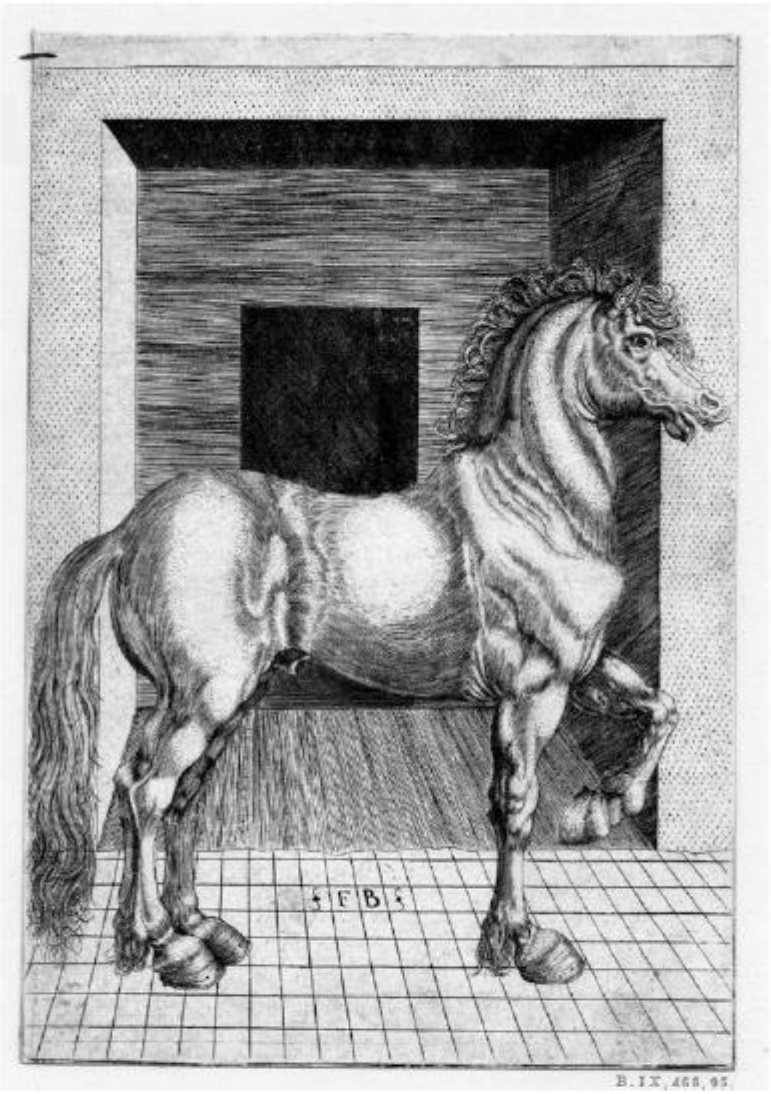


Fig. 9.3 Franz Isaac Brun (after Albrecht Dürer), "The Small Horse" (1550–1610). Engraving. © The Trustees of the British Museum

continent, from Asiatic elephants to African camels, even including a marine crustacean (Fig. 9.6). The Dutch artist Willem Goeree (1689) shows it disembarking the biblical ark, together with unicorns and South American armadillos (Fig. 9.7). Both animals are armored mammals, with external defenses made of bony plates – the reason Plinio, Dürer, and De Huerta related them with the turtles. Goeree's inclusion of the armadillo apparently was inspired by the German Jesuit Athanasius

Fig. 9.4 Hans Hoffmann (after Dürer), "Beetle" (1574). Watercolor on paper. Public Domain {PD-art}

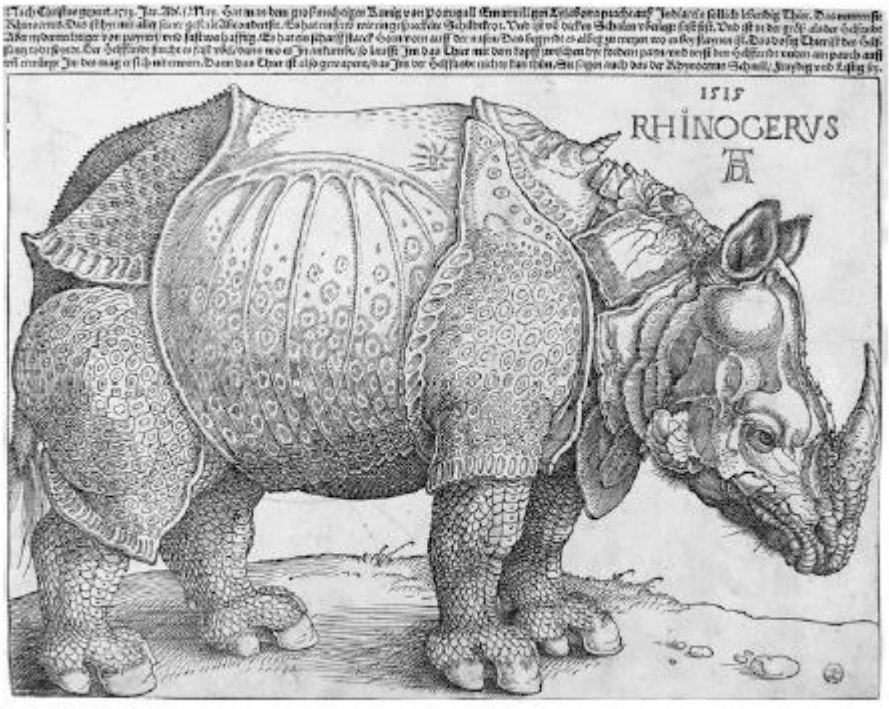


Fig. 9.5 Albrecht Dürer, "Rhinoceros" (1515). Xylograph engraving. Collection National Gallery of Art/Public Domain {PD-art}

Fig. 9.6 Peter van Elst, "Animals in a wood, including an elephant, rhinoceros, monkeys, camels and a lobster" (1549). Pen and brown ink and gray wash, squared for transfer. Tapestry. © The Trustees of the British Museum

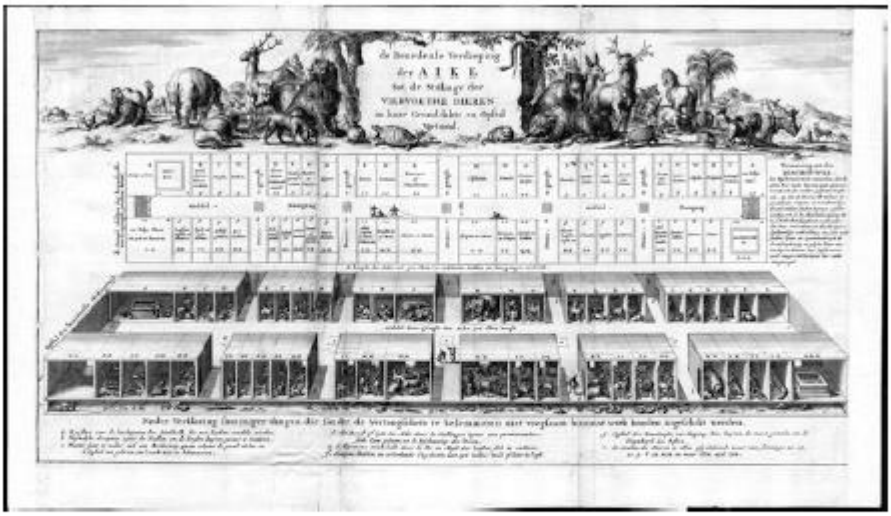


Fig. 9.7 Willem Goeree, "Noah's Ark" (1689). Engraving on paper. The engraving formed part of a series dedicated to the ark and its construction in *Introduction into Biblical Wisdom and the Use of the Holy and Ecclesiastical Histories* by Willem Goeree and Jan Luyken, his Dutch engraver (Amsterdam 1689), about the presence of New World animals in the ark. (Courtesy of the Amsterdam Museum/Public Domain {PD-Art})

Kircher who put both Dürer's rhinoceros and the armadillo into Noah's ark in a 1675 book. His doing so, however, betrays deep cultural Eurocentrism. Kircher believed that after the biblical deluge, life forms entered into a process of irreversible decomposition. Animals such as the armadillo were the degenerate products of hybridization that occurred as the animals that had been on the ark immigrated into various parts of the world. According to Kircher, the animals of the New Indies were products of corruptions and aberrations of the pristine fauna of the biblical earth, so the Mexican armadillo is the result of the cross between turtle and hedgehog. The German Jesuit never touched the American continent, of course. His image of the Mexican armadillo actually comes from the representation of one of the Brazilian species that another German naturalist, Georg Marcgraf, who explored Brazil in the seventeenth century, captured in his *Historia Naturalis Brasiliae* (1648). We know little of Willem Goeree, but it seems obvious that his inclusion of the armadillo among the passengers of the ark implicitly defies the degenerationist theory of Kircher. Visual representations of the logic of the specimen inevitably were culturally conditioned.

These representations are not limited to the Renaissance. In the final part of this chapter, I analyze a contemporary version of Dürer's "Rhinoceros," the sculpture by Salvador Dalí, another graphic representation of the rationalization – homogenization – of nature. Dürer's "Rhinoceros" and its many reproductions illustrate the ecological consequences of the cultural processes of representing, conquering, and commodifying nature. This rhinoceros condenses visually what Canadian philosopher Herbert Marshall McLuhan called in the mid-twentieth century "The Gutenberg Galaxy," a period crucial in the gestation of biocultural homogenizing processes that have affected all continents.

Although it is difficult to classify a scholar such as McLuhan, the truth is that his work is much broader than the slogan that made him popular in the 1960s and 1970s: "the medium is the message." In my opinion, McLuhan is one of the first humanists of the twentieth century who practiced an interdisciplinarity without being ashamed. He started as an engineer, studied classical literature, and was able to build his arguments nourished by philosophy, literature, history of art, history of technology, ethnology, psychiatry, or psychology of perception. Those who accused him of being a dilettante did not know how to understand the guiding thread of his work. Witnessing the various technological revolutions of the twentieth century, McLuhan devoted much effort to support the thesis that the so-called media, from the alphabet and printed materials (*The Gutenberg Galaxy*) to the telephone, radio, and television, were something more than mere means of expression. With a historical perspective, McLuhan sought to prove that these means are extensions of the contemporary human perceptual and cognitive structure. In addition to enhancing the transmission of information, these media profoundly alter our mental and social life; therefore, they operate as causal factors in the development of human societies. For McLuhan, remaining ignorant about these causal mechanisms limits the possibilities of reflective thinking, and this ignorance submits us to the forces of

technological determinism. In the *Global Village*, McLuhan was able to successfully anticipate many of the scenarios that characterize digital globalization of our time. Following McLuhan, I argue that today the logic of the specimen and the biocultural homogenization it implies is carried on aggressively by digital technologies that reduce reality to quick, simplistic, and manipulable visual images easily transported throughout the globalized world.

9.2 The Rhinoceros that Drowned in the Sea

Historians of Renaissance art consider it likely that history's first *best seller* was not a book, but a woodcut that Albrecht Dürer signed with his celebrated logo, a kind of copyright for future reproductions. The truly original animal represented in the engraving was a rhinoceros that the German artist never even saw. Nevertheless, the representation of the animal amazed the European bourgeoise of the time, so fond of spectacles of exotic specimens.

The rhinoceros had been captured in the Portuguese Indies, loaded in Goa and unloaded in Lisbon on May 20, 1515. The animal disappointed the expectations of King Manuel I of Portugal, who decided to give it as a gift to Pope Leon X as a kind of bribe to assure his mediation in the king's colonial disputes in Asia. Unfortunately, the boat transporting the animal to Rome sank off the coast of Liguria on January 24, 1516. Bound in chains, the rhinoceros perished in the sinking ship. But the cadaver was brought up from the bottom of the sea, dried out and filled with straw, displayed in various European cities, and finally being given a fixed residence in Rome. In the end, the stuffed carcass of the rhinoceros disappeared following the sacking of Rome by Emperor Charles V in 1527.

What Dürer had at hand was a sketch of King Manuel's rhinoceros (Fig. 9.8) made by a merchant living in Lisbon who had sent it to colleagues in Nuremberg, Dürer's birthplace. Today we know that the German painter forged armor for military horses for the armorer's guild. Not having all the descriptive details he needed, Dürer decided to fashion the rhinoceros of Manuel I as a horse with armor.

Easily reproducible, thanks to readily available printing formats, along with accessible prices, the woodcut was widely distributed among the European bourgeoise, becoming a kind of prototype for many other artists to rework in their own way. During the sixteenth and seventeenth centuries, there were other more realistic representations of a rhinoceros, but Dürer's woodcut was the most imitated. It figured in the *Cosmographia* of the German cartographer Sebastian Münster (1544), in the *Historiae Animalium* by the Swiss naturalist and bibliographer Conrad Gessner (1551), and in the bestiary *Historie of Foure-footed Beasts* of the English naturalist and cleric Edward Topsell (1607), among others, thus becoming recognized as *the* canonical visual representation of the rhinoceros for zoological treatises up to the mid-eighteenth century. The inclusion of Dürer's woodcut by

Fig. 9.8 Gianni [Giacomo] Penni, "Sketch of rhinoceros" (1515). Above the sketch, Penni wrote in verse, "Form, nature and customs of the rhinoceros taken to Portugal by the captain of the King's fleet together with other things worthy of admiration coming from these recently found islands." Following the death of the animal, the sketch was not printed but a copy was placed in the Biblioteca Colombina de Sevilla/Public Domain {PD-old}

Topsell was especially influential because it reaffirmed many of the myths about the animal kingdom prevalent among classical authors such a Pliny, and it imprinted fantastic ideas about wild animals in people's imaginations (e.g., the idea that elephants worship the stars). Among the fantastic animals that inhabit the bestiary of Topsell, we can find carnivorous hippos that devour crocodiles, an image also present in the graphic index of the translation of *De Huerta of the Historia Naturalis* by Pliny. An example of the profound cultural impact that Topsell's bestiary had is demonstrated by the appearance of his animals in Shakespeare's *Macbeth* where reference is made to "The arm'd rhinoceros, o th'Hyrcan tiger," allusions to Dürer's works that appear in Topsell (Macbeth Act 3, Scene 4; Jackson 2013). In 1708, the

Fig. 9.9 François Leguat, "Divers kinds of rhinoceros" (1708). Florón del libro, *A new voyage to the East-Indies by Francis Leguat and his companions. Containing their adventures in two desert lands, and an account of the most remarkable things in Maurice Island, Batavia, at the Cape of Good Hope, the Island of St. Helena, and other places in their way to and from the Desert Isles.* Adorned with maps and figures (London, 1708). Courtesy of the Rhino Resource Center/Public Domain {PD-old}. The image of Dürer's rhinoceros with variations appears on page 297. The book contains many easily recognizable images of species of insects, fish, and marine animals observed during the trip

French explorer[1] and naturalist François Leguat used Dürer's rhinoceros for imagining various distinct species of rhinoceros (Fig. 9.9). His influence also was retroactive as he illustrated classical works by Pliny and Aristoteles using Dürer's rhinoceros (Fig. 9.10).

[1]Years earlier, Dutch traveler Caspar Schmalkalden (1618–1668) included a drawing of Dürer's rhinoceros carbon as an image of the Java rhino among the 111 illustrations of his manuscript Description of *Travel to the West and East Indies* (currently in the library of the University of Erfurt University Chart B 533). The rhino of Schmalkalden also serves to illustrate part of the biocultural itinerary of the engraving of Dürer. Supposedly, the Dutch author compiled these illustrations from his travels as an officer of the Dutch Companies of the West Indies and East Indies. It appears that the material in which the rhinoceros of Java is printed differs markedly from the rest of the manuscript, suggesting that it belongs to a later addition (Somers 2005, 166). According to the Dutch author, the drawing was made live by a Chinese painter from a rhinoceros who was in Batavia, present-day Jakarta. According to Krauss (2005) this shows the influence of Dürer in Asian culture through illustrations in zoological works such as the Johannes Jonstonus *Historiae naturalis de quadrupedibus libri,* cum *aeneis figuris, Johannes Jonstonus...concinnavit* (J.J. Schipperi, Amsterdam, 1657). On the other hand, Somers emphasizes that Schmalkalden reports having seen skins and horns of rhinoceros during his trips in Asia, which may have led him to accept the representation received from these data and from the confluence of his own biocultural load with that of the Chinese painter. The Schmalkalden rhino can be seen at https://commons.wikimedia.org/wiki/Caspar_Schmalkalden#/media/File:CasparSchmalkalden_Rhinoceros.jpg


ARISTO-
TELIS METEORO-
LOGICORVM LIBRI
QVATVOR,
Ioachimo Perionio interprete:
per Nicolaum Grouchium
correcti & emendati.
IN SILENTIO, ET SPE
ERIT FORTITVDO. ESA. XXX.
VALENTIAE.
Excudebat Antonius Sanahuja, è regione
portæ Apostolorum, Templi Maximi.
1555.

Fig. 9.10 Page from Aristotelis *Meteorologicarum libri* IV (Valencia, 1555). (Courtesy of the Biblioteca Valenciana Nicolau Primitiu Biblioteca Valenciana Digital (BIVALDI) http://bivaldi.gva.es/es/consulta/registro.cmd?id=3973/Public Domain {PD-old})

9.3 Rhinoceros and Elephants

In his woodcut of the Rhinoceros (Fig. 9.5), Dürer significantly fills the upper part of the image with a written text (that also is part of the image's visual text), situating the animal in the Lisbon of Manuel I. Dürer wrote, in German, the following text:

> The first of May in the year 1513 [sic] [1515], the powerful King of Portugal, Manuel of Lisbon, brought from India a live animal called Rhinoceros. This is a faithful representation. It has the color of a mottled turtle and is almost completely covered by thick scales. It is the size of an elephant, but has shorter feet and is almost invulnerable. It has a powerful and sharply pointed horn on the tip of its nose that it files on rocks. The stupid animal is the mortal enemy of the elephant. The elephant is frightened by the rhinoceros because when they meet, the rhinoceros charges head-first between the hind legs of the elephant and tears out the stomach. Against this the elephant has no defense. The rhinoceros is so finely plated with armor that the elephant cannot injure it. It is said that the rhinoceros is rapid, impetuous, and astute.

Dürer took this description of the rhinoceros as the brutal enemy of the elephant from chapter XX of book VIII of the *Historia Naturalis* of Pliny the Elder. The biocultural history of the West from Roman times to the nineteenth century cannot be understood without knowing this work of Gaius Plinius Secundus (23–79 CE). It greatly influenced explorers such as Marco Polo and Hernán Cortés, and during many centuries zoology was no more than commentary on *Historia Naturalis*. In this work, Pliny the Elder dedicated the first 11 chapters to elephants and their exemplary behavior. According to Pliny, the elephant understands what it is ordered to do and can remember tasks that it learns, so it is really part of a domesticated nature and therefore capable of being incorporated into the Roman biocultural imagination as something suitable for themselves. For Pliny, the rhinoceros, to the contrary, embodied the residues of savage nature yet to be dominated: the wild beast, as stupid as dangerous, could not be domesticated, at best only reduced. In Lisbon, it seems the good King Manuel I wanted to prove with his own eyes what Pliny spoke of and so organized a duel between a rhinoceros and an elephant in the palace gardens. Both animals disappointed the king by their gentleness, but the elephant fled terrorized. Interestingly, Pliny's description of the bellicosity of both animals seems to have been taken literally from book II of the *Library of History* of the first-century Greek historian Diodorus of Sicily. However, Diodorus' rhinoceros easily can be defeated by the elephant if it can use its trunk and tusks to ward off the rhinoceros' attack (Diodorus 1935). As had been the chiefs of defeated tribes, the rhinoceros already had been paraded in the triumphal marches of Pompey, and in time, the images of the rhinoceros even appeared on some Roman coins.

It is known that Pliny's *Historia Naturalis* fed the zoological expectations of Christopher Columbus who carried a copy with him on several of his voyages. It is also known that Pliny's book circulated widely in colonial America. In 1624, Gerónimo de Huerta, physician of the Inquisition, translated it into Spanish and added an index of images. Dürer's rhinoceros opens chapter 20 (Fig. 9.11). So more than a century after drowning in the Mediterranean Sea, the rhinoceros of Manuel I reappeared in Spain and America. The extensive annotations made by De Huerta on chapter 20 of Pliny's book recall the celebrated, heroic animal brought to Lisbon in 1515. Apparently the king wanted to see with his own eyes the combat of which Pliny spoke, organizing a real duel between the rhinoceros and an elephant in the palace gardens. Both animals disappointed the king by his meekness, but the elephant fled in terror. The Inquisitor corroborates what Pliny says and adds that only the faithful horse is capable of driving the rhinoceros away. The rhinoceros

Fig. 9.11 Graphic index of *Historia Naturalis* by Pliny the Elder, translated and annotated by Gerónimo de Huerta (1624). Note Dürer's rhinoceros in the upper part of Chapter XX. (Courtesy of the Bibliothèque Sainte-Geneviève; https://ia800803.us.archive.org/20/items/OEXV10R/BSG_OEXV10_02_000009.jpg/Public Domain {PD-old})

sharpens the horn against the stones before the combat in which, according to Pliny, invariably defeats the elephant.

Some other of De Huerta's annotations show Dürer's rhinoceros as an image that encompasses wild nature, dangerous and useless, that had to be replaced in the colonies by species useful to Christian colonists. The translator assumes Augustine's classification in which animals could be harmful, innocuous, or useful. In order to accent the absolute uselessness of the rhinoceros for human endeavors that the horse and elephants fulfilled perfectly, De Huerta appeals to Job. This biblical figure contrasts the willing disposition of horses to go into battle with soldiers and to do so covered with armor (Job 39:19–25), with the stupidity of other beasts, whom God "made forget wisdom" and to whom had "given no share in understanding" (Job 39:17).

The struggle between elephants and rhinoceros also formed part of the biocultural imaginary that colonial Europe inherited from Rome. Inspired by its supposed bellicosity toward elephants, Alexander of Medici elected Dürer's rhinoceros as his emblem, with the slogan, "I will not return without victory." Based on Dürer, the father of modern surgery, Ambroise Paré, reproduced a battle between the two species (Fig. 9.12). In 1608, the Italian painter and engraver Antonio Tempesta also

Fig. 9.12 Ambroise Paré, "Combat between rhinoceros and elephant" (1589). *Les œuvres d'Ambroise Paré*, P. Rigaud, Lyon 1652. (Courtesy of BIU Santé, Paris/Public Domain {PD-art})

Fig. 9.13 Jan Griffier (after Barlow), "Elephant struggling against the rhinoceros" (1684). Engraving on paper. Current location: British Museum of London. This is not the only engraving that Jan Griffier (1652–1718) made of animals fighting following Francis Barlow. The British Museum has an engraving of a monkey forcing a cat to put its paw into a fiery furnace in order to reach some nuts. In a 1686 engraving, a vulture and a monkey guard the leftovers of a hare that had been caught by a pair of raptors. (These images can be viewed in http://www.britishmuseum.org/research/collection_online/search.aspx?searchText=Jan+Griffier. © The Trustees of the British Museum)

depicted this combat. The English painter and prolific book illustrator Francis Barlow illustrated in 1604 the battle that Dürer's rhinoceros never had. That same year the Dutch painter Jan Griffier, who was living in London, reproduced the same battle Barlow imagined (Fig. 9.13), thus reinforcing a long-standing cultural *meme*.

Dürer was named the official painter of the Sacred Empire of Maximilian I. His rhinoceros figured in a graphic image of the coronation of his successor, Maximilian II (Fig. 9.14). Dürer placed his rhinoceros at one of the foundations of the arch, face-to-face with an elephant located at the other foundation base. Both animals symbolize the robustness of the empire, capable of supporting on their backs the personifications of six feminine provinces. Above them is the imperial lion flanked by prudence and justice. These animal figures visually reaffirmed the colonial power of the imperial dynasty. Decades before, the rhinoceros of Dürer easily could have been the visual symbol of the Treaty of Tordesillas, in which the Catholic kings of Spain and John II of Portugal, father of Manuel I, decided to divide the world between them along a meridian. The Indian rhinoceros pertained to the biota east of

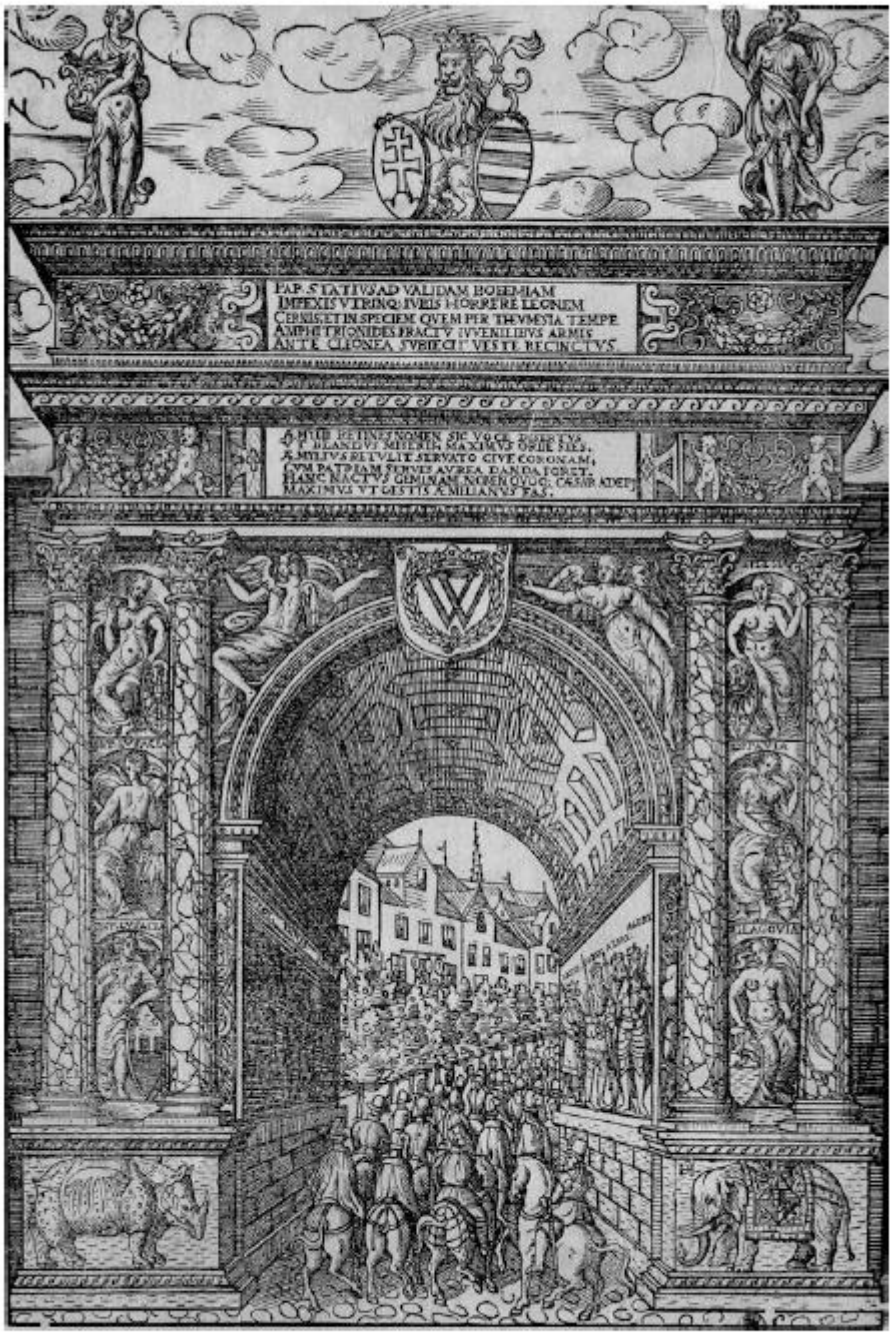


Fig. 9.14 Caspar Steinhofer, "The entry of Emperor Maximilian II in Vienna after his coronation at Frankfort" (1563). From a series of six woodcuts. 1563–1566. (Current location: British Museum of London. © The Trustees of the British Museum)

Fig. 9.15 Wenceslaus Hollar, "Map of Africa" (1670). Engraved on p.1 of John Ogilby, *Africa* (London 1670). Current location: British Museum of London. The map of Africa appears at the center of the image, drawn over the taunt and stretched skin of a lion. An admirer of Dürer, Hollar, used animals as hunting trophies as the theme of several of his works. (Courtesy of the University of Toronto Wenceslaus Hollar Digital Collection/Public Domain {PD-Art})

the line, reserved for the king of Portugal, but Dürer's visual construction, large and hyperbolic, could very well represent the cultural homogenization of the biotas to the east and west of Europe. In fact, in his map of Africa, the Dutch artist Wenceslaus Hollar elected Dürer's rhinoceros from India and the elephant as the emblematic species of African fauna (Fig. 9.15).[2] An admirer of Dürer, Hollar, often portrayed the rhinoceros along with elephants.

9.4 Rhinoceros, Dragons, and Behemoth

Dürer's rhinoceros has the scaly texture of Saint George's legendary dragon (Fig. 9.16). Furrowed by nerves, the lateral outer shell is similar to the winged extremities of dragons. These warlike attributes given to the Indian rhinoceros effectively incorporated the animal into the European colonial and military epic. This imaginary would last until the end of the nineteenth century, as illustrated by the 1890s engraving "Behemoth" by Reginald Savage (Fig. 9.17). In this engraving, Dürer's rhinoceros is represented as Behemoth, who, in the biblical tradition, has an immensely destructive power that blindly charges anything that moves. The image comes from Job 40:15–24 where Behemoth is described as the primeval creation of God, an implacable monster that only God is capable of taming. In the biblical text, Behemoth is parallel with Leviathan (Job 41: p. 1–34) who also is a terrible,

[2]Wenceslaus Hollar (1607–1667) was a Dutch artist who lived on horseback between the Netherlands and Great Britain, where he enjoyed the protection of the English nobility. His accession to the royalist camp in the English Civil War (1642–1651) costs him some time in jail, before escaping to Antwerp. His vision of the so-called English revolution is embodied in a work titled *Civil Sedition*, in which a snake is torn by the thrust of its two heads, one at each end. He was able to live on the spot of the battle of the ship St. Rose Mary in front of seven Algerian ships, represented in an engraving of 1643. It is said that he charged per hour of his works, counted with a clepsydra. Apparently he passed away ruined. Most of Hollar's works can be viewed at http://www.britishmuseum.org/research/collection_online/search.aspx?searchText=+Hollar&page=1

Fig. 9.16 Albrecht Dürer, "Saint George slays the dragon" (1501–1504). Xylograph engraving. Current location: British Museum of London. The dragon's body armor is identical to that of the devil of Saint Michael or the apocalyptic beast of Babylon. (Courtesy of the National Gallery of Art/Public Domain {PD-art})

Fig. 9.17 Reginald Savage, "Behemoth" (1890s). (Current location: British Museum of London {PD-Art})

primeval monster. Michael Coogan believes that it is probable that Behemoth and Leviathan were understood as primitive animals that God had to tame at the beginning of time and which, following the final judgment, will be food for the just (Coogan and Metzger 2001, p. 33). In Savage's engraving, the rhinoceros, the most powerful of beasts, lies defeated or at least sleeping, suggesting that Europeans, like God in the Bible, have tamed the forces of evil, thus making possible civilization.

9.5 Animals and Otherness

One by one, the rhinoceros' traits were sufficiently recognizable to have been assimilated by European visual culture, although, seen all together, nothing like this had been seen on the continent before. Europe craved a cynegetic component that promised much more fame than the game animals so benignly engraved also by Dürer: the elk eating from the huntress Diana's hand (Fig. 9.18) or the elk above

Fig. 9.18 Albrecht Dürer, "Apollo and Diana" (c.1502). Current location: British Museum of London. (Courtesy of the National Gallery of Art/Public Domain {PD-art})

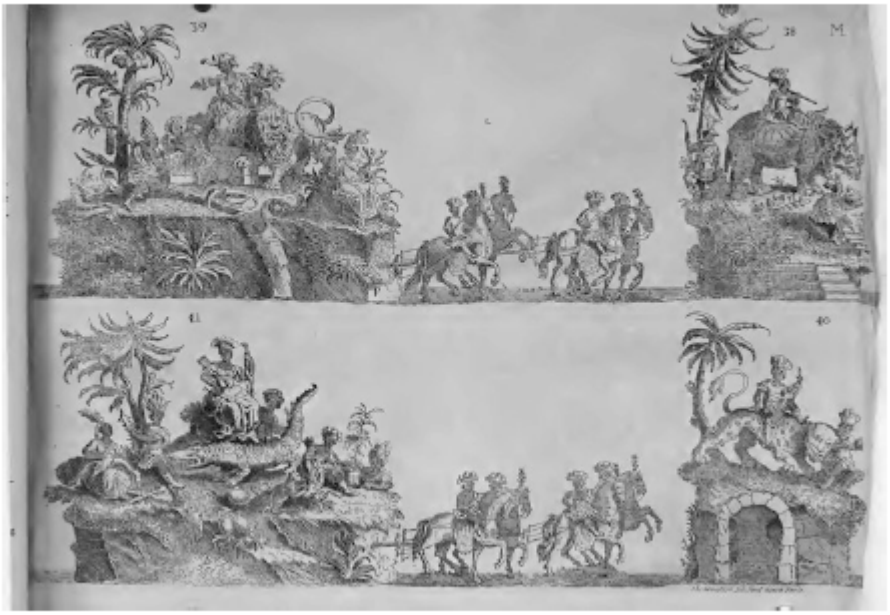


Fig. 9.19 Unknown, "Ghent 1767" (1767) Rhino Resource Center

whose head the figure Christ on the cross appears and provoked the conversion of Saint Eustace.

The artistic construction of the otherness of exotic animals reaffirmed the beneficent exceptionality of Europe and, consequently, reinforced the legitimacy of Western colonialization of the wild and alien nature of Asia, Africa, and America in order to convert it into exotic and lucrative commodities. An anonymous engraving of the celebrated parade in Ghent in 1767 shows Dürer's rhinoceros with other wild animals, mounted and tamed (Fig. 9.19), as a propitiatory offering to Saint Macario who protected the city against the plague. In 1591, the supposed miracle powers of the rhinoceros horn seduced the physicians of Pope Gregory XVI, and today's price on the black market of the horn is equal to that of cocaine (Carrington 2017).

Dürer's rhinoceros represents a decisive phase in biocultural homogenization associated with mercantilism that reduces diverse forms of life to exchange value subject to the ups and downs of the market. The environmental economy continues being a global market: its objective is to internalize biodiversity into a global price system in order to unquestionably determine its value as *monetary value*, independent of any other biocultural, ecological, or ethical consideration.

Ironically, an event that occurred in an ex-colony reveals the biocultural inadequacy of the market economy and at the same time shows the falsity of the narratives by Pliny, Dürer, and De Huerta. After thousands of years of cohabitation among rhinoceros and elephants, African aboriginal people have known that, when they confront each other, it is the rhinoceros that invariably is defeated by the elephant. Westernized elites in the former Asiatic and African colonies have

inherited a series of mercantile habits that alter the ecological equilibriums of the habitats of large mammals. Without any apparent motive, in July of 2003, three large, male elephants killed 63 rhinoceros in a park in Pilanesberg, South Africa (Siebert 2006). The three were part of a group of young elephants that had been uprooted and transferred to the Pilanesberg National Park in order to increase the park's economic potential as a place where Western tourists could encounter elephants during photography safaris. Traumatic separation from their elder family members and being transported to a strange place explain the elephant's aggressive behavior. This is a good example of the devastating ecological effects that some human habits can have on habitats and coinhabitants exclusively governed by economic rationality, homogenized by the law of supply and demand.

9.6 Dalí's Rhinoceros: Rationalization of Nature and Culture

In 1956, Salvador Dalí added another version to the history of Dürer's rhinoceros. The sculpture "Rhinoceros Dressed in Lace" (Fig. 9.20) can be interpreted as a symbol of self-referential Western art. Dalí's composition viewed as Western art self-reference, turned inward toward oneself, reinforces a constructive rationality common to Western natural history and fine arts. The rhinoceros of Dalí is not alone.

Fig. 9.20 Salvador Dalí, "Rhinoceros Dressed in Lace" (1956). This sculpture is located in Puerto Banús, Marbella, Spain. (Photo by Manuel González Olaechea used under Creative Commons License)

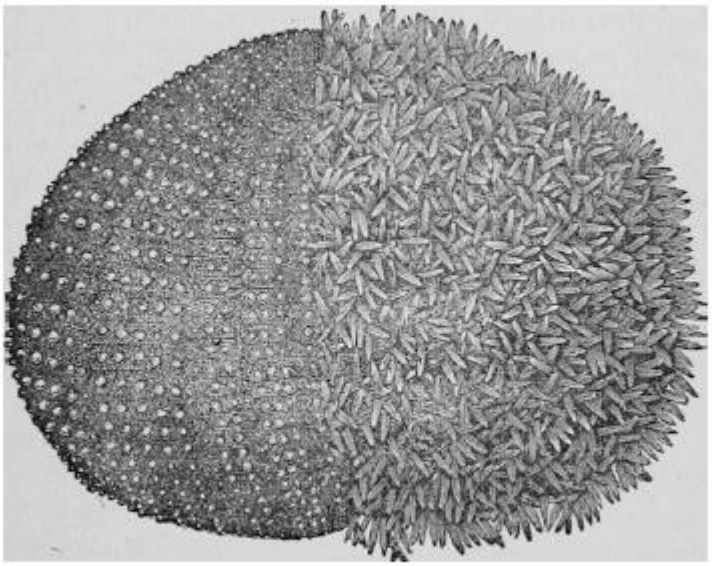
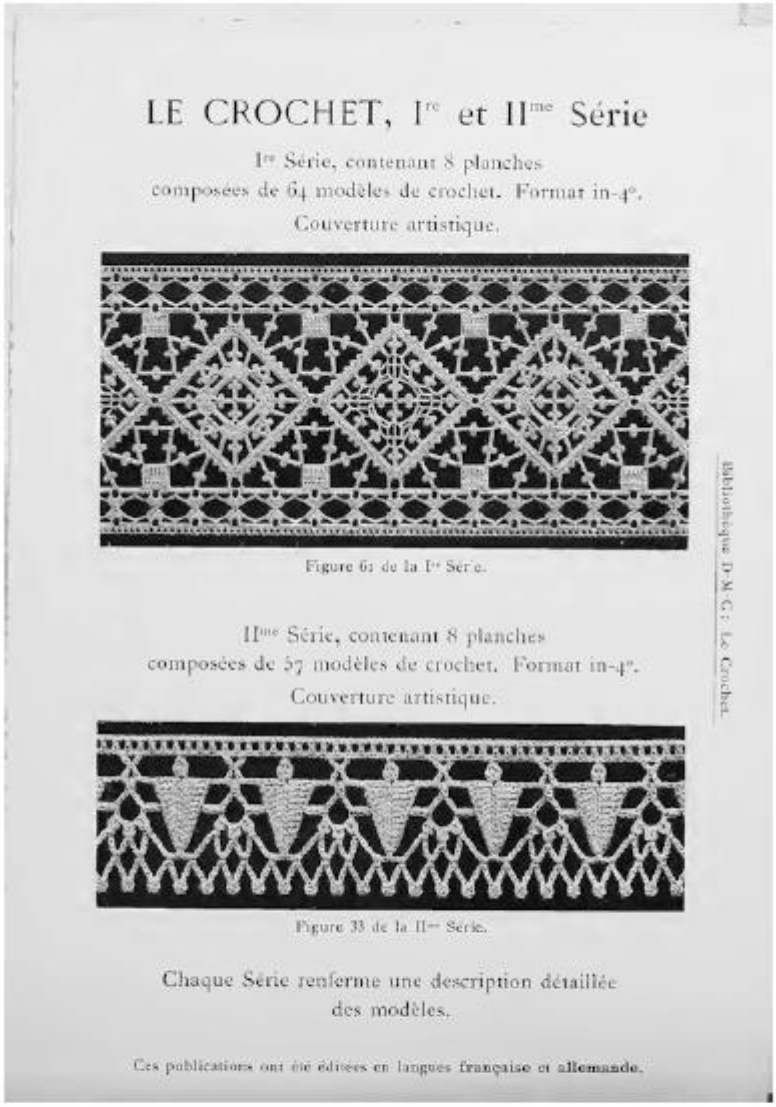


Fig. 9.21 Louis Agassiz et al., "Comparative anatomy of Echinodermata" (1870). https://archive.org/stream/outlinesofcompar00agas/outlinesofcompar00agas#page/n130/mode/1up/Public Domain {PD-old}

On its back and next to the horn, Dalí has displayed sea urchin skeletons, seemingly a reminder of the shipwreck that Dürer's "model" suffered.

Abundant among his works, the rhinoceros incarnated for Dalí animality and irrationality as the irreducible conditions of life (Dalí 2003, cited by Moure 2011). Sea urchins, with or without spines, also are an important element in Dalí's iconography. With spines, they appear numerous times in his works as icons of tangled and disordered natural parts of the female anatomy, such as axillary hair or that of the pubic triangle: nature in its organic and corruptible character (Fig. 9.21). Without spines, the urchin skeleton seems to incarnate the abstract idea of underlying rational order, a lifeless, concave figure ordered in convergent points: nature rationalized in a mathematical formula or in genetic sequence A-C-T… (Moure 2011). The connection of sea urchin skeletons with Dürer's rhinoceros in the sculpture "Rhinoceros Dressed in Lace" can be understood as a critique of the cultural rationalization of nature: the rhinoceros represents nature drowned by the cultural enterprises of merchants, kings, and popes, an animal that reemerges from the sea after death, sacked of its vital internal parts by taxidermists, and pulling with it from the sea floor calcified organic remains. These are skeletons of sea urchins, of whose rotten spines only stubs remain, now aligned in a series of convergent successions as a synopsis of its nature in exquisite proportionality to its *ratio* or the beautiful exactness of a mathematical equation. Cloth work such as crochet and lace also requires ordered, numerable, and recurrent patterns like algorithms and genetic sequences (Fig. 9.22).


LE CROCHET, Ire et IIme Série

Ire Série, contenant 8 planches
composées de 64 modèles de crochet. Format in-4°.
Couverture artistique.

Figure 61 de la Ire Série.

IIme Série, contenant 8 planches
composées de 57 modèles de crochet. Format in-4°.
Couverture artistique.

Figure 33 de la IIme Série.

Chaque Série renferme une description détaillée
des modèles.

Ces publications ont été éditées en langues française et allemande.

Fig. 9.22 Thérèse de Dillmont, "Illustration of crochet techniques" (1922). Courtesy of Smithsonian Libraries. (Source: https://archive.org/details/motifspourbroder01dill/Public Domain {PD-old-70-1923})

In this way, we can understand Dalí's rhinoceros "dressed in lace" as a complex of biocultural and interdependent metaphors. To dress is to culturally cover the nakedness of nature. By dressing Dürer's rhinoceros, covering the bulges of the skin and its tridimensional projection with the "spiny points" of sea urchin skeletons (calcitic structures shaped in lines converging in a small pentagon that are geometric

symbols of the pentaradial symmetry of echinoderms such as starfish and urchins), Dalí covers nature's nakedness. Perhaps with some sarcasm, Dalí summarizes in this lace dress the reduction of nature to a homogeneous and quantifiable visual extension, shaped by the abstract rationality that is shared by the plastic arts and sciences at least since the Renaissance.

9.7 Final Comments

Following the ideas of British ethno-psychiatrist J.C. Carothers (1959), in the 1960s Marshall McLuhan attributed this logic of visual abstraction to the perceptive and conceptual revolution that the invention of the printing press presupposed. McLuhan popularized during the 1960s and 1970s the idea that "the medium is the message." Witness to numerous technological revolutions, he argued that the so-called means of communication, from the alphabet and the printing press to the telephone, radio, and television, were more than just means of expression. From a decidedly historical perspective, McLuhan endeavored to show that these means are extensions of the perceptive and cognitive structure of humans that, besides optimizing the circulation of information, profoundly altered our mental and social life and, consequently, were causal factors of the development of societies. For McLuhan, to remain ignorant of these mechanisms limits the possibilities of reflexive thought and subjects us to the forces of technological determinism. Both texts and printed images, he argues, pertain to the abstract logic of visual space, thus permitting subjective distancing from the emotional constrictions of orality, of the word spoken and heard (McLuhan 2011, p. 133). The abstract character of visual images in some way mutes the emotions and determines them in semantic and behavioral terms. Their visual construction supposes the suspension of peremptory emotionality that gives the act of speaking an obligatoriness difficult to bribe away. The emotional neutralization of recurrent and identical visual sensations, all precedent from the same graphic impression, opens the possibility of representing the image as an abstraction that, for the subject that contemplates, can open up a repertory of available alternatives.

The graphic image of Dürer's rhinoceros pertains to what Heidegger called "the epoch of the image of the world" (Heidegeer 1995) that in reality was the epoch in which the world began to be reduced to a visual extension, homogeneous and abstract, fragmented into floating, assimilable and available, and reproducible and interchangeable parts. The US environmental thinker Paul Shepard warned in the 1970s that, in order to confront the non-differentiation of biotas and cultures, the human species would have to go far beyond abstractions to the time of perceiving nature: "The substitution of places by images was the first step in the construction of places similar to the images" (Shepard 2003, p. 36).

Today the image of the world has become the tactile screen, a technological device that reinforces more than ever the manipulable condition of images that can be expanded, multiplied, interspersed, or hyperlinked. One might say that the

biocultural diversity of the world of life is buried under a digital surface, flooded by uncountable number of *menus* superimposed as visual layers that release images on the screen and that end up materialized as market offerings. The new technologies even allow incorporating into our texts graphics and icons that are printed on crystal lenses with lightweight touches of support or optical devices impressed directly on contact lenses that "enrich" the visual stimuli of the retina surfaces, therefore constructing an "enlarged" reality in view of maximizing the information supposedly useful for the preceptor.

Marshall McLuhan feared that visual technologies would end up producing a kind of psychological death by separating us from the ecological order through a narcissistic turning inward on ourselves (McLuhan and Powers 1990, p. 17). Heidegger's phrase "there toward where man looks, he finds only himself" perhaps diagnoses the narcissistic craziness that biocultural homogenization of the planet means. Under the never-ending offer of visual products, digital technologies are gestating a globally uniformized culture, whose inhabitants occupy anthropogenic habitats that are increasingly homogeneous (Ellis and Ramankutty 2008; Meyer 2006) and, following the logic of the specimen, that are populated by biological species best accommodated to the habits of humans.

Paraphrasing Ricardo Rozzi, we can conclude that, in times of tablets, smart phones, Facebook, and Twitter, our minds acquire mental habits globally homogeneous and construct globally homogeneous habitats (Rozzi 2013, p. 14), hence the urgency for biocultural conservation of "specific ecosystemic units of habitats-habits-inhabitants," permeated by an ethos that reintegrates the identity of inhabitants with their own way of inhabiting their local habitats (Rozzi and Arango 2008, p. 117). This ethos is fundamentally distinct from that of *Homo economicus*, whose global habits are ruled by the subjective preferences of individuals, whose inhabiting is reduced to consuming, and whose habits are built on the absolute preponderance of economic relations over ecological interdependencies. The ethos of biocultural conservation is incapable of constructing habitat only to be contemplated or as a place only to produce and to consume. As Heidegger said, we build habitat, but to build, in the sense of protecting and caring, is not to produce. Caring is something more than abstaining from harm. The fundamental characteristic of inhabiting is caring as surrounding protection, not *looking to* but rather *looking at* the world that encompasses us (Heidegger 1994, p. 128–131).

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