

## CONTENTS



	<i>List of Illustrations</i>	xi
	<i>Acknowledgments</i>	xv
	<i>Introduction</i>	1
1	Image and Economy in the Ancient World: The Bronze Age of Mikhail Rostovtzeff	8
2	Materials for an Epidemiology of Culture	19
3	The Hidden Shaman: Fictive Anatomy in Paleolithic and Neolithic Art	33
4	Urban Creations: The Cultural Ecology of Composite Animals	50
5	Counterintuitive Images and the Mechanical Arts	74
6	Modes of Image Transfer: Transformative, Integrative, Protective	88
	CONCLUSION	108
	Persistent, but Not Primordial: Emergent Properties of Cognition	
	<i>Notes</i>	113
	<i>References</i>	133
	<i>Index</i>	161

## INTRODUCTION



The first age of mechanical reproduction belongs to Mesopotamia, and to the remarkable efflorescence of urban life that took place there some six thousand years ago. Its impact on visual culture, and on the history of design, has gone largely unnoticed. Walter Benjamin's famous (1936) essay on *The Work of Art in the Age of Mechanical Reproduction* looked no further back than the cast bronzes, terracottas, and coins of the ancient Greeks.<sup>1</sup> And when Henri Frankfort's compendious study of *Cylinder Seals* appeared three years later, it was as a *Documentary Essay on the Art and Religion of the Ancient Near East*,<sup>2</sup> rather than a treatise on the origins of print. Almost as quickly as it had emerged from the ground, the first age of mechanical reproduction disappeared from scholarly view. And the images it produced, in accordance with modern tastes and intellectual concerns, have found a new afterlife as singular works of art.

In this book, I reinstate the first age of mechanical reproduction as a context in which to discuss the relationship between image and cognition. Linking these various interests is the theme of "monsters,"<sup>3</sup> a term that I will shortly do away with and replace with "composites," which more accurately describes what I am interested in. That is, the early history of a particular kind of anatomical experiment, taking place in the visual domain. The essence of the experiment lay in isolating the limbs or other features of diverse species and recombining them to form images of beings that have no counterparts in the visible world. By a "history," I mean an analysis of how that experiment unfolded within a particular set of institutional and

technological conditions, and what it contributed to the establishment and reproduction of those conditions.

Visual experiments of this sort are of course much older than urban life. As I will go on to discuss, they can occasionally be detected within the preserved record of prehistoric—Paleolithic and Neolithic—art. But their presence there is highly attenuated, almost to the point where one begins to suspect a pattern of deliberate avoidance. It is understandable that interpreters of prehistoric art, seeking clues to the origins of religious thought or symbolic expression, have placed great emphasis on the few surviving candidates. But this should not distract attention from the much stronger association between composite figures and the emergence of urban life, in the western part of the Old World, around six millennia ago.

Once established as subjects for regular depiction, images of composite beings often led remarkably cosmopolitan lives. They achieve distributions in the archaeological record that far outstrip those of other figural images, a pattern that continues into later periods of antiquity, beyond the scope of this book, the focus of which will be upon the Bronze Age (ca. 3000–1200 BC) with an eye to the Iron Age (ca. 1200–500 BC) as an axis of comparison. The distributions that I am referring to do not follow a random pattern: they are clearly associated with the expansion of political and commercial networks and, on a local scale, with the growth of urban settlements and the emergence of social elites—in other words, with the periods often labeled “proto,” “archaic,” or “formative”—because they precede the coalescence of cultural traditions into officially sanctioned canons or styles.

From the appearance of Mesopotamian composites in the art of protodynastic Egypt to the spread of “orientalizing” motifs in the Iron Age Mediterranean, the adoption of such images far beyond their source areas has long provided archaeologists with a sensitive tracer for the growth of commercial routes linking otherwise remote societies. Long-range image transfers of this kind are usually considered as isolated phenomena. I will suggest that, when viewed

collectively, they provide evidence for a pattern of cultural transmission that unfolds with impressive consistency across chronological and cultural boundaries, inviting consideration in more general terms. In interpreting that pattern, I will be drawing upon recent approaches to the analysis of culture that are grounded in the study of cognition.

I will be particularly, though not exclusively, concerned with a body of theory called the “epidemiology of culture.” Developed on the cusp of evolutionary anthropology and cognitive psychology, and most closely associated with the work of Dan Sperber and Pascal Boyer,<sup>4</sup> its goal is to explain the differential spread and durability of cultural representations in terms of evolved biases in human cognition. Such theories, as currently formulated, have been applied mainly to language-based aspects of culture. They offer no ready-made methodology for understanding the relationship between cognition and the transmission of a wider range of cultural practices, artifacts, or institutions; nor were they designed with a view to the analysis of visual images or archaeological data. My aim, in relating them to material of the latter kind, is not to “fit square pegs into round holes.” It is rather to probe the boundaries of analytical fields that claim, in the last resort, to be addressing a common problem: the unified understanding of culture as a product of both history and cognition.

As Barbara Stafford observes, one of the greatest attractions of a rapprochement between cognitive and cultural studies is the promise of deeper insight into “the potency and longevity of certain types of representation.”<sup>5</sup> The desire for such a rapprochement is increasingly felt in archaeological and anthropological research,<sup>6</sup> as well as in art history. Major cultural turning points such as the earliest appearance of pictorial art, the invention of farming, and the development of writing, mathematics, and metrical systems, are now often considered not only as technological transformations but also as transformations in modes of thought.<sup>7</sup> Bridging the disciplinary gap between cognitive psychology and archaeological reconstructions of



the past is, however, a complex and risky affair. A brief example of the pitfalls will serve to further introduce the main theme and problematic of this book.

Cognitive psychologists in the 1990s proposed that our ability, as a species, to generate mental images of impossible beings (three-headed men, horses with wings, and so on) may have evolved in tandem with our capacity for complex social interaction. The hypothesis derived from controlled experimental studies in which children who exhibit behavioral deficits in social interaction and imaginative expression were asked to produce drawings of creatures that do not exist. By comparison with typically developing children, they performed poorly in this task.<sup>8</sup> The study, tentative in its conclusions, was subsequently incorporated into archaeological debates concerning the interpretation of prehistoric art. In light of its findings, it was proposed that the rendering in Upper Paleolithic rock art of composite figures—such as the famous “Sorcerer” of Les Trois Frères (shown later in figure 3.1b), whose body comprises both human and animal parts—may have reinforced the development among early hunter-gatherers of cognitive capacities for complex symbolic communication that would otherwise have remained latent.<sup>9</sup>

It may be surprising for some readers to learn that, despite established critiques (such as those mounted by the anthropologist A. Irving Hallowell in the mid-twentieth century),<sup>10</sup> behaviors observed in modern infants are still being used to frame hypotheses about the evolution of human cognition in prehistoric times. In this particular instance, it was subsequently demonstrated that, under modified experimental conditions, children with the same range of behavioral symptoms are, in fact, perfectly able to draw pictures of imaginary beings, including anatomical composites.<sup>11</sup> Experimental psychology is a fast-moving field, and evolutionary hypotheses based on an uncritical acceptance of its findings are inherently fragile.

But there are other methodological issues at play. Data for psychological experiments of the kind described often derive from controlled observations of how subjects make and perceive images.

It is commonly assumed, in the course of such experiments, that physical images provide faithful reflections of evolved, mental representations, projected mirror-like onto the material world. But the creation and perception of images is always mediated by other factors, of which cultural historians have long been aware. They include sensory-motor skills, developed in relation to particular tools and materials, and socially learned expectations about what can and cannot be seen in the world.<sup>12</sup> Cultural historians might then be inclined to ask how far the boundaries of visual imagination are set by nurture rather than nature, over historical rather than evolutionary timescales.

For instance, an Egyptologist noting the routine appearance of griffins among the (real) desert animals mentioned or depicted in ancient Egyptian sources has commented:

We should recognize that our categorization of “real” and “imaginary” animals is far from being an objective criterion of universal applicability. An ancient Egyptian would have reckoned with the possibility of really encountering a griffin, especially if walking around in the area near the Red Sea coast, and there is even a demotic tale telling of a griffin that comes from the Red Sea and wreaks havoc among the Egyptian army.<sup>13</sup>

At least some evolutionary psychologists would want to qualify that statement. They would point out that openly stated beliefs in the reality of griffins or dragons—while perfectly valid within certain cultural contexts—are likely to be of a different cognitive order to beliefs in living species, including species that we may never encounter in reality. The reason they would give is that human minds possess a hard-wired mechanism for classifying and processing information about living kinds of plants and animals.<sup>14</sup> That mechanism evolved over many thousands of years through adaptation to ancestral environments in which things such as griffins and dragons did not exist. Cultural norms may suppress, exploit, or manipulate those innate neurological dispositions, but cannot override them entirely.

Theoretical and philosophical debates have so far done little to bridge the chasm between constructivist and biological understandings of human cognition. The current impasse and the increasing specialization of cognitive neuroscience have allowed many in the humanities and social sciences to beat a quiet retreat into apparently more familiar territory, even as the analytical ground on which they work is shifting beneath their feet. Anthropological understandings of cognition, as Susanne Kűchler observes,<sup>15</sup> are similarly torn between extremes: the notion of autopoiesis through an “embodied mind,” flexibly learning to cognize its surroundings through tactile encounters with a culture-laden world, and the opposing (but no less romantic) notion of a pristine and immutable hunter-gatherer brain, still fighting its primeval battles through recalcitrant cultural terrain, in a modern situation of its own mysterious making.

In an effort to break this deadlock, and to broaden the debate beyond the domain of language, both Kűchler and Stafford have highlighted the role of physical objects as nonhuman bearers of thought-like processes, carrying “images that make shared learning possible.”<sup>16</sup> The advent of artificial intelligence, they point out, has taken the notion of animated objects far beyond the realms of metaphor and theory, locating it at the center of current knowledge economies and communicative practice. Rather than taking this development to mark an unbridgeable rupture with the past, they ask how, in preelectronic and predigital worlds, images—and their media of transmission—may nevertheless have encapsulated forms of associative reasoning that do not simply encode what is already in the mind but also organize thought into patterns that are historically and culturally distinctive.<sup>17</sup>

Images of composite animals pose a series of interesting conceptual problems in this regard. Their transmission can be interpreted via two very different notions of modularity, one rooted in cognition and the other in technology. From the perspective of evolutionary psychology they can be viewed as “taxonomic aberrations,”<sup>18</sup> activating a dedicated neurological device (or “mental module”) for the

recognition of living kinds, but at the same time confounding its expectations by combining elements from different species or genera. This point is complex, and I will return to it in more detail. But composite bodies are also the products of another kind of modularity, which is concerned with the practical and conceptual division of the physical world (including the world of images) into standard and interchangeable subunits. Although their respective starting points are very different—one beginning inside the mind and the other outside the body—both concepts of modularity have implications for cultural transmission, and as I will try to show, the early history of the composite figure obliges us to address the relationship between them.

It was in fact an ancient historian, Mikhail Rostovtzeff, for whom these lectures in their original form were fortuitously named, who first pointed out an association between the earliest expansion of urban life and the spread of what he termed “fantastic creations formed by the amalgamation of favorite animals of the period with each other and sometimes with human beings.”<sup>19</sup> My first chapter asks what led him almost a century ago to compare distributions of composites from China to Scandinavia, and to seek links between them. In the remainder of this book, I consider—from various perspectives—how the distribution of composite figures in the visual record offers fertile testing ground for an “epidemiological” approach to culture, and ultimately forces a revision of some of its central assumptions. In doing so, I offer a number of general observations about the relationship between image, cognition, and early state formation in the western Old World.



## INDEX



- Abydos (Egypt), 45–47  
Afghanistan, 60  
Arabia, 60, 64, 96–98  
Arnheim, Rudolph, 24–25, 28, 75  
art: “animal style,” 9, 18; “international style,” 94–95; Neolithic, 37–43, 51; “orientalizing,” 12–15, 17, 28, 91–92, 115n14; Paleolithic, 33–37, 51, 118n14, 118n15; predynastic (Egyptian), 43–49, 121n47  
Assur (Iraq), 99  
Ataç, Mehmet-Ali, 105  
autism, 118n15
- Bactria-Margiana culture (Turkmenistan), 61, 64  
Bagley, Robert, 85  
Baxandall, Michael, 113n12  
Benjamin, Walter, 1  
Bevan, Andrew, 90  
Breuil, Henri, 34–36  
bronze vessels, 83–87  
Bowersock, Glenn, 8  
Boyer, Pascal, 22–23, 80  
bureaucracy, 70–73, 89; “bureaucratic eye”, 71
- Canetti, Elias, 117n35  
canon, 2, 90  
Çatalhöyük (Turkey), 42–43, 120n30  
Caucasus, 11, 100  
Cauvin, Jacques, 39  
ceramics, 43, 45–47  
Childe, V. Gordon, 12  
China, 7, 9, 18, 83–87  
classification, 5–6, 21–22  
cognition, 3–7, 19–24, 82, 110–112  
composite figuration, 24–28, 69–73  
counterintuitive representations, 22–24, 50, 80, 102, 110  
Crete, 61, 63–64, 75, 92  
cuneiform script, 69–71  
cyclops, 79
- cylinder seals. *See* seals  
Cyprus, 79
- demons, 26, 56, 100–104  
Descola, Philippe, 26, 116n25  
diffusionism, 16  
diplomacy, 95, 108  
dragon, 5, 17
- Ebla (Syria), 61  
Egypt, 105–106, 131n41; Neolithic, 43–45; predynastic, 43–49; protodynastic, 51–59, 62, 92–94  
Elsner, Jas, 12  
“epidemiology of culture.” *See* cognition; evolutionary psychology  
evolutionary psychology, 3, 20, 50, 88–89, 111, 115n4. *See also* cognition
- farming (origins of), 39  
Feldman, Marian, 95  
Frankfort, Henri, 1, 12
- Göbekli Tepe (Turkey), 40  
gods, 25, 39, 121n16  
Gombrich, Ernst, 82, 85  
*gorgoneion*, 77–78, 103  
*Göttertypentext*, 75  
Greece: Bronze Age, 12–13, 61, 63–64, 78–79, 92; Iron Age, 9, 13, 17–18, 80, 90–91  
griffin, 5, 17, 62–64, 124n42, 124n43, 129n12
- Hallowell, A. Irving, 4  
Hierakonpolis (Egypt), 45  
Houma (China), 86  
Humbaba, 77, 80  
hunter-gatherers, 30–32, 34–40, 44, 110; Inuit, 30–31, 117n32; San, 31, 36
- immunology, 107  
Indus Valley, 60, 64, 98

- “integrative mode,” 89, 94–99  
“intercultural style.” *See* stone vessels  
Iran, 18, 43, 61, 62, 64, 96–98, 108
- Kerma (Sudan), 92  
Kohl, Philip, 98  
Konar Sandal (Iran), 98  
Küchler, Susanne, 6  
*Kulturkreislehre*, 16  
*kurgan*, 15  
Kwakiutl, 31
- Lamashtu*, 101–103  
Ledderose, Lothar, 85–86  
Leonardo da Vinci, 27  
Lewis-Williams, David, 36  
lion-man (Hohlenstein Stadel), 33–34, 36
- magic, 56, 89, 100–104, 123n39, 131n41  
*mappa mundi*, 109  
masking, 31–32, 37, 42  
mechanical reproduction, 1, 74, 80–83, 86–87, 88–89, 111  
medieval Europe, 82, 108  
Mesopotamia, 1, 16–17, 62; Bronze Age, 59–62, 98; Iron Age, 13, 99–106; Neolithic, 39–43; Uruk period, 65–73  
metals, 11, 60, 62, 105  
Mithen, Stephen, 4, 36, 118n15  
modularity, 6–7; mental, 20–23; technological, 55–59, 68–73, 110  
mold casting, 80, 83–87, 100–103  
monsters, 24–26, 109, 113n3, 116n22
- Napier, David, 30, 103, 106–107  
Nineveh (Iraq), 99  
Nubia, 60
- orientalizing. *See* art  
Osborne, Robin, 90
- Pazyryk (Siberia), 28  
Persian Gulf, 60, 64, 96, 98  
Phoenicia, 13, 105, 129n9  
Porada, Edith, 103  
pottery. *See* ceramics  
Poulsen, Fredrik, 13
- print media, 1, 81, 109  
“protective mode,” 89, 99–106  
Proto-Elamite culture (Iran), 64–65
- Qazwini, al-, 109
- Riegl, Alois, 12–13  
rock art, 4, 34–37, 118n14, 119n17  
Rostovtzeff, Mikhail, 7–19, 50, 60, 83
- Schmidt, Klaus, 40  
Scott, James C., 110  
Scythians, 9–11, 18  
seals, 1, 62, 65–73, 80–81  
shamanism, 31–32, 37, 117n3, 119n18, 119n20  
Sperber, Dan, 20–23  
sphinx, 17, 63–64, 124n42  
Stafford, Barbara, 3, 19–20, 23–24, 71  
state formation, 2, 51, 54, 81, 88, 90–94  
stone vessels, 95–99  
Syria, 60, 64–65, 105
- taotie*, 84–86, 128n37  
*Taweret*, 63–64, 92, 123n39, 123n40, 129n11  
Tepe Yahya (Iran), 98  
textiles, 67, 123n39, 124n42  
Tiryns (Greece), 77–79  
Tomasello, Michael, 111–112  
trade, 2, 8–12, 54, 60–62, 89–94  
“transformative mode,” 89–94  
*tupilak*, 30–31, 117n32  
Turkey, 40–43, 69
- urbanization, 2, 59–62, 64–73, 88, 94–95
- Vapheio cups, 12–13
- Weeks, Kent, 54  
Whitley, James, 90–91  
Wiggermann, Frans, 99  
Wittkower, Rudolph, 108–109
- Yangshao culture (China), 83  
“Zakros Master,” 75–76