

BOOK REVIEW

Medusa's Gaze and Vampire's Bite: The Science of Monsters by Matt Kaplan. New York: Scribner, 2012. 244 pp. \$26.00 (hardcover). ISBN 978-1451667981.

The Dark Ages lie deep in the past, the isolated folk community has grown almost as rare as the unicorn. Nevertheless it is amid this modern age of technology and enlightenment that we live in the golden age of monsters. They no longer crouch under the bed at night but leap out from the big screen in 3-D. Turn on the TV, pick up a popular novel, and you risk attack by vampires, zombies, dinosaurs, or aliens—while abundant videogames offer an opportunity to fight back. Monsters have stayed with us throughout human history but their persistent and insistent intrusion in modern times poses a phenomenon in need of scholarly attention, and such attention is now very much at hand. A subject that was once beneath academic dignity as mere fashion in lowbrow entertainment or superstitious survivals from the childhood of the species has risen to prominence across multiple disciplines. The grounds of that interest underlie not so much the monsters themselves as a realization that if monsters saturate modern culture, that fact tells us something about ourselves; and even if we no longer need to hunt the primeval forest for our quarry or venture beyond where the map leaves off, understanding the monstrous is no less important, and perhaps all the greater because the source lurks so close to home.

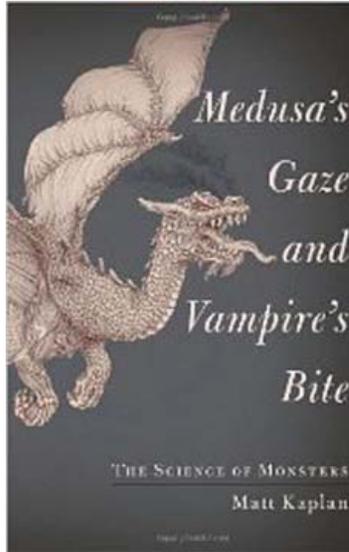
Why do we love our monsters so? Why do we even have monsters, of all things? Don't we know better? The issues inspired by the universal presence of big, ugly, dangerous, and disturbing creatures breaking into the order of the everyday world have given rise to an impressive scholarly literature. Anthropologists inventory the prolific array of monsters recognized by peoples around the world, and consider the social functions these creatures serve. Folklorists and psychologists have pondered the monster as a personification of otherness, an expression of deep-seated fears, or a response to the uncertainties of modern life. Literary scholars long preoccupied with the role of the hero are now giving his adversary its due, while books, articles, and conferences devoted to cinematic treatments of vampires and TV series like *Buffy the Vampire Slayer* have mined the rich representation of these creatures as romantic anti-heroes and outsiders at once alluring and terrifying. Zombies derive their popularity as versatile

metaphors for a consumer society wherein everyone performs only mindless routines, while all too many of us join the ranks of the cell-phone variety to stumble around in semi-conscious oblivion. For scholars of religion the monster of ancient as well as modern texts exemplifies the forces of chaos ever biding, always threatening the divine order. Postmodernists look ahead to see our monsters portrayed more and more as human inventions. For example, the monster movies of the patriotic 1950s cast scientists and the military as heroes saving the world from aliens and creatures from the deep, while the countercultural 1960s began a turnaround that transformed the former heroes into the villains creating robots, hybrids, and viruses that threatened the world.

How monsters originate has also been the subject of extensive scholarship. Psychoanalytic theory with its attention to dreams and psychic conflicts traces monstrous imagery to fantasy processes. Folklorist David Hufford, in his seminal book *The Terror That Comes in the Night* (1982), proposed an experience-centered approach to understanding bedroom attacks by malevolent, suffocating creatures, the original bearers of the term “nightmare.” He concluded that this universal phenomenon could be explained in part by the physiological process of sleep paralysis and thus, contrary to standard academic wisdom, some seemingly supernatural encounters were not imaginary but in fact had an experiential basis. A growing literature honors the legitimacy of experience in making monsters, among them Paul Barber in *Vampires, Burial, and Death* (1988), who argues that the physical phenomena of death and decay provided the imagery for vampire accounts; and Adrienne Mayor in *The First Fossil Hunters* (2000), who attributes the origin of many monsters to the discovery of fossil skeletons by ancient peoples. Some of the most complex and compelling theory on the origin of monsters comes from cognitive psychology, which takes into account the evolutionary history of the human species and certain predispositions that became hard-wired into human thought through processes of natural selection. As prey for giant predators and often in competition with members of their own kind, early humans and proto-humans underwent a long mental process that shaped certain responses still with us today, such as fear of the dark, fear of snakes, and xenophobia. In theory, many aspects of social behavior, religion, imagination—and its monsters—have this evolutionary basis.

A new addition to the literature of monsters is Matt Kaplan’s *Medusa’s Gaze and Vampire’s Bite*. Kaplan, a science journalist published in many leading magazines, subtitles his book “The Science of Monsters,” a phrase that keynotes an attempt to find rational origins for the monsters of myth, legend, and storytelling past and present, and to draw out some

understanding of why they fascinate us. He defines monsters in a broad, informal sense as creatures that are horrible to behold and threatening in some way, though even these basic characteristics turn inside out as he explores the evolution of the monstrous and sees, for example, the vampire transform into screen heartthrob or the giant ape King Kong become sympathetic and his exploiters the villains. An important sub-theme of the book is that human fears have changed over time as human circumstances have changed, yet our monsters have evolved in parallel to stay with us, adapting as our fears change and renewing themselves as relevant embodiments of those fears.



Kaplan's plan is to showcase a certain type of monster in each chapter, provide notable examples, consider possible natural sources, and follow up with appearances of the type in such modern contexts as the movies. He starts with creatures made monstrous by unusual size and ferocity. Examples include the Nemean Lion and Calydonian Boar from Greek mythology, the Rukh (or Rok) from Persian folktales, and the modern King Kong. Another step upward in complexity arrives at the monster of mingled parts. The Chimera has the head of a lion and tail of a snake with a goat's body in between, the Sphinx has the head of a human and the body of a lion. What makes these creatures monstrous is their disturbing, unnatural mixture of parts, an unsettling property exploited by H. G. Wells in *The Island of Dr. Moreau* as the scientist surgically transformed animals into semi-humans. Some monsters like the Minotaur and Medusa abide beneath the earth, or like Leviathan and the shark in *Jaws* belong to the depths of the sea. The dragon deserves a chapter of its own as one of the most widespread and versatile monsters. It draws on the inherent fearfulness of the serpent and adds the ability to fly as well as the fabulous quality of breathing fire. As the form of the elder gods dragons threaten to destroy the world, as subterranean guardians of treasure they imperil heroes from Beowulf to Harry Potter, yet in China they trade off much of their terror to appear as godlike agents of benevolence, fertility, and good fortune.

Another class of monster belongs to the realm of the supernatural. Some are disembodied spirits like ghosts and the demons that can assume

physical form to attack people in their sleep, often to rob them of sexual or life energies. Others prey on the living, among them humans that transform into ravenous werewolves, the undead vampires that suck human blood for sustenance, and zombies that are animated corpses with an appetite for human flesh. In these cases the monsters are predatory, malevolent, merciless, possessed of superhuman powers, often cunning and intrusive in their attacks so that the usual places of safety like home or bedroom are vulnerable—all in all a potent combination for evoking terror. A third class of monster originates in human creation. The Golem, Frankenstein's monster, and robots begin with good intentions but eventually, inevitably, run amok. The same can be said of the dinosaurs resurrected by science for *Jurassic Park*. These monsters tell a straightforward morality tale of human hubris usurping a power that belongs to God alone, and the punishment that always ensues. Kaplan closes with aliens as the modern restoration of endless opportunity for monstrosity, since in the vastness of space there is no danger of running out of room on the map and all fears become possible once again.

So where do these striking creations of the human imagination originate? They provoke fear by being horrible to look at, terrifying in their behaviors, or dangerous by placing us in the position of prey or victims. Fear itself holds an appeal for humans. Whether the feeling is relief that comes from escape or the adrenaline-pumping excitement that comes from the presence of danger, fear represents one of the strongest emotions a human can sense and we have sought it through the ages in our actions and our storytelling. For many of us an occasional taste of fear is a good thing; for some of us it is a drug, even an addiction.

No doubt about it, an underlying psychological predilection creates a receptive audience for stories of monsters. Even so, Kaplan is not content to explain them as purely psychological phenomena and settle for imaginary products of the psyche. He puts his faith in concrete origins and searches for the experiences that might reasonably occasion the monsters he catalogues. For him monster stories are accounts of reality and not just tales, however many misunderstandings and distortions intervene between experience and the story we read today. He promises that while his solutions will be speculative, they will stand on informed scientific foundations.

Some of his explanations sound thoroughly plausible. A story of depredations by an unusually large lion or boar requires nothing more mysterious than human contact with uncommon wildlife or an exceptional specimen of an indigenous species. Geological causes offer phenomenology with a striking similarity to some activities attributed to monsters. Take, for example, the rumbling sounds of an earthquake that might be mistaken

for the subterranean bellows of the Minotaur, and the heaving ground for evidence that he stirred just beneath the surface. A mass of bones left by several animal species killed in a flood could be mistaken for one animal of many parts, while ancient peoples puzzling over the gigantic bones left by extinct reptiles and mammals might well have imagined serpentine monsters, bird monsters, monsters with enormous teeth and grotesque form. His answer for elements of the dragon story is particularly convincing. The dragon of Beowulf guards underground treasure, breathes fire, and spews poison. The burial of treasure in caves and underground tombs placed these objects in an environment where flammable gases like methane might collect, where a grave robber with a torch might set off a fiery explosion that, combined with the roaring noise of the fire and the noxiousness of the gases, could persuade a survivor or onlooker that a deadly monster was punishing the intruder.

Naturalistic explanations continue to work for some supernatural monsters: Sleep paralysis and the hallucinations that accompany it have surely contributed much to demonology, while many attributes of vampires mimic the phenomenology of bodily decay, plague, and rabies too closely to doubt a connection. When passing into the realm of man-made monsters Kaplan has to give up natural sources and rely on fears of technology mingled, in the case of movie portrayals of cloned female monsters, with the threat of a sexually alluring creature made dangerous by a lack of humanity. To find the (acceptable) science in aliens, he talks only about the prospects for extraterrestrial life, the fear of colonization played on by invasion stories like *The War of the Worlds*, and human reaction to the parasitic and predatory monsters of the *Alien* series.

Kaplan stays true to his goal of seeking out the scientific issues related to monsters, and this approach is fine as far as it goes. He emphasizes an experiential basis for many famous examples of the breed, and though he consistently reduces the experience to mistakes and misinterpretations of natural phenomena, at least he does not resort to facile dismissals of everything anomalous as mere imagination. Kaplan's fascination with the scientific implications of monsters is infectious, though he sometimes becomes digressive. Some readers may tire of the lengths he goes to, for example, in arguing the many reasons that giant animals are not likely to be genetic mutations, or that the La Brea tar pits in Los Angeles are admirable preservers of prehistoric animals, but the absence of such pits in Greece means no bone beds of this type could have influenced the Greeks. A detour into the scientific realities of parasitism seems unnecessary for understanding the terror response to the *Alien* creature exploding out of the chest of an infected crewman. The movie's visuals were quite sufficient

for a good scare. While his explanations are never completely impossible, Kaplan sometimes stretches them into implausibility, as in his argument that the ancient Greeks got the idea for Medusa turning people to stone from observations of bones petrified by fossilization.

One shortcoming in Kaplan's argument is his reliance on natural science to the near-exclusion of anthropological, sociological, psychological, and humanistic contributions to the subject. Natural science can answer many questions, but cognitive psychology offers some of the most exciting current pathways to understanding the nature and persistence of monsters, and he devotes only passing attention to these findings. The symbolic and metaphoric functions of the monster as an agent of chaos or expression of the Other holds as important a place in explaining the cultural hold of such ideas as natural origins or even the evolutionary foundations of fear, yet the reader finds little reference to this extensive literature.

Another serious omission is the life of monsters as verbal entities. Once described, talked about, and cast into stories, the verbal monster can evolve as readily as any organism, and a great deal faster. No argument about things rarely seen but often discussed should overlook the prospect that exaggeration and stereotyping shape the beast, rumor and boasting build it up, and the pressures of pleasing an audience betray facts in favor of an entertaining story. A verbal entity also enjoys mobility. Stories pass from mouth to mouth often over great distances, and those stories or others reformulated out of borrowed plots and motifs circulate ideas about monsters without need for experience. Kaplan's emphasis on the ancient Greeks is understandable since those monsters are famous and familiar, but his hermetic treatment hastens to a natural source without considering cultural influences on the Greeks, who were, after all, well-traveled and exposed to the ideas of many surrounding peoples. He makes only occasional mention of the monsters of Mesopotamia, barely touches on chimerical Egyptian gods such as Thoth, with the ibis head, or Horus, the falcon god, and says nothing at all about Alexander's encounter with the wonders of India. The ultimate source of such figures may have been natural, but a small bet might be in order that the proximate origin for chimerical figures of classical antiquity was a traveler's tale, a statue or image traded in a market, or some other instance of culture contact. If scholars have hitherto done our understanding a disservice by downplaying the importance of experience, this book would gain balance with more acknowledgment that transmission of ideas also contributes to our monsters.

The book succeeds in what it sets out to be, a tour through a gallery of scary, semi-imaginary beings from both long ago and here today, and proposals for scientifically reasonable origins of each. These goals

sacrifice depth for breadth and the result is limited, disappointing for the anomalist interested in the possibility of genuine cryptozoological entities, or for the scholar concerned with a well-rounded discussion of all aspects of monster theory. The casual reader or newcomer to the field will find a readable, informative, and entertaining introduction to monsters and an answer for some of the questions foremost in any reader's mind. A nuanced understanding will require deeper pursuit, but this book is a good starting place, not least because of its respect for experience in the creation of seemingly fantastic stories, and for its reminder that monsters are not just things of the past. Adaptable and meaningful still, they may change shape but they continue to haunt the shadows beneath every bed.

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