

VIRTUAL MENAGERIES

Animals as Mediators in Network Cultures

JODY BERLAND



Virtual Menageries

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Virtual Menageries

Animals as Mediators in Network Cultures

Jody Berland

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For David, Jasper, and Lola

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Series Foreword: Leonardo/International Society for the Arts, Sciences, and Technology (ISAST)

Leonardo, the International Society for the Arts, Sciences, and Technology, and the affiliated French organization Association Leonardo, have some very simple goals:

1. To advocate, document, and make known the work of artists, researchers, and scholars developing the new ways in which the contemporary arts interact with science, technology, and society.
2. To create a forum and meeting places where artists, scientists, and engineers can meet, exchange ideas, and, when appropriate, collaborate.
3. To contribute, through the interaction of the arts and sciences, to the creation of the new culture that will be needed to transition to a sustainable planetary society.

When the journal *Leonardo* was started some fifty years ago, these creative disciplines usually existed in segregated institutional and social networks, a situation dramatized at that time by the “Two Cultures” debates initiated by C. P. Snow. Today we live in a different time of cross-disciplinary ferment, collaboration, and intellectual confrontation enabled by new hybrid organizations, new funding sponsors, and the shared tools of computers and the Internet. Sometimes captured in the “STEM to STEAM” movement, new forms of collaboration seem to integrate the arts, humanities, and design with science and engineering practices. Above all, new generations of artist-researchers and researcher-artists are now at work individually and collaboratively bridging the art, science, and technology disciplines. For some of the hard problems in our society, we have no choice but to find new ways to couple the arts and sciences. Perhaps in our lifetime we will see the emergence of “new Leonardos,” hybrid creative individuals or teams that will not only develop a meaningful art for our times but also drive new agendas in science and stimulate technological innovation that addresses today’s human needs.

For more information on the activities of the Leonardo organizations and networks, please visit our websites at <http://www.leonardo.info/> and <http://www.olats.org/>. The Leonardo Book Series and journals are also available on our ARTECA art science technology aggregator: <http://arteca.mit.edu/>.

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Introduction

To suppose that animals first entered the human imagination as meat or leather or horn is to project a nineteenth-century attitude backwards across the millennia. Animals first entered the imagination as messengers and promises.

John Berger, "Why Look at Animals?"¹

The simplest images can call for the most complex interpretive strategies. A picture of a smiling goat, say, with a flower in its mouth. Perhaps you have encountered images of a soaring bird, an ingenious beaver, an adorable cat, a noble lion, a stately giraffe. Who doesn't love these pictures? Our species' capacity to be stirred by our encounters with animals defines us as human as much as their fur or feathers define them. This does not explain everything about our relations with nonhuman animals any more than biology alone explains our relations with each other. It certainly doesn't explain how a goat came to advertise a telephone company.

I began this project with a simple question provoked by the images and links suddenly crowding my inbox. Why are there so many cats on the Internet? My curiosity led to a broad interdisciplinary exploration of animal-mediated encounters and how closely these were tied to the emergence of new media technologies (defined in the broadest sense) and spaces. Why people assign these inaugural roles to animals or animal figures; what critical ideas best explain the work they are doing in these contexts; how groups of animals resembling menageries came to launch the tools and platforms of digital culture; what role the animal-technology figure plays in managing the risks of the Anthropocene;² what, if an animal is a mediator, it is mediating, and how; and what the current eruption of digital animals means for the future of human-animal relations: these are what this book is about.

In carrying out this research I spent a lot of time looking at the faces of cheerful animals. It is almost impossible to escape such images in our

contemporary mediascape, not only online, and not only in children's books and toys. You would think we were all children. I will admit that right now I am not optimistic about the future of human-animal relations. There are fires and floods out of control all over the world; our politicians are madly terminating regulations protecting endangered species and bodies of water; palm oil producers are eliminating so much forest that orangutans, Sumatran tigers, and some parrots will be extinct in the wild in no time, giraffes and elephants the week after that; people eat so much meat they are killing themselves and denuding the planet; hermit crabs are living in tin cans, whales are devouring plastic, every time I go into social media I risk becoming paralyzed with distress.

Perhaps ironically, the screens and virtual spaces on which I read this news launched each of their landmark changes with digital-savvy images of animals, some of them comprised of messages that demanded attention and some squirreled away in brands and interfaces just below the threshold of an ordinary user's perception. *Virtual Menageries* highlights the use of animals in the spread of global communicative networks, and shows how animals and representations of animals have been put to work in changing social configurations and have helped to alter them. These configurations are part of what makes us human—not because we are different from them but because they are an essential part of everything we are and do. We are equally dependent on the technologies of mediation that we use to communicate with one another. “We have committed the fundamental error,” Marcel Mauss writes in “The Technologies of the Body,” “of only judging there to be technology when there is an instrument.” Mauss means that the human body can be understood as a technology, as an instrument or “a living mediation of intersections between orders, artifact, and nature.”³ The same can be said of nonhuman bodies, or even of the parts, fragments, or representations of animal bodies which appear in the following pages.

To elaborate how animals have served as what Mauss calls “instruments” in the emergence of global communicative networks, and to explain how the trope of the menagerie links these events across historical eras, I draw on Régis Debray's outline of a mediological perspective. In his 1996 book *Media Manifestos*, Debray rejects the idea of analyzing a medium in the singular.⁴ In a critique that takes aim equally at McLuhan, semiology, and sociology, Debray calls for “looking not for *that which is behind* a symbolic utterance, but rather *that which takes place between*.”⁵ His book advocates an approach that reconnects the technological, semantic, and political spheres so as to generate the right questions about a media event:

In the word "*mediology*," "*medio*" says not media nor medium but mediations, namely the dynamic combination of intermediary procedures and bodies that interpose themselves between a producing of signs and a producing of events. These intermediates are allied with "hybrids" (Bruno Latour's term), mediations at once technological, cultural, and social.⁶

The mediological manner or cast of mind consists in putting one's finger on the intersections between intellectual, material and social life, and in making these two silent hinges grate audibly. [It focuses on] the first appearance of nodes and networks of sociability, interfaces bearing new rituals and exercises, proving worthy as means of producing opinion.⁷

Debray's emphasis on intermediates and intersections is driven by the need to analyze "first appearances" and "events" which hold the potential to remix the configurations of the society in such a way that constituent elements of its "procedures and bodies" are changed. In the occurrences I have chosen to investigate in this book, animals are conscripted to participate in some of the "first appearances of nodes and networks" that Debray describes. In these intersections between the animal, the milieu, and the emergent technology, the animal's presence matters. The animal does not arrive later to symbolize or legitimate what has occurred, or to compensate for what is not there or lost. If the meanings of these events seem to be exclusively the prerogative of humans, this reflects an ethical judgment (and mainly the right one) but not a historical or mediological analysis. The animal is there when the story begins, its presence is essential to the search for new ways of life, and it is an inextricable part of what the story becomes.

Exposing this mediological hinge between the constituent elements of change—between the animal, the milieu, and the emergent technology, for instance—shows how a perceptible event emerges from one set of meanings and conditions while opening doors to new possibilities. Constructing a mediology of the animal also helps to illuminate essential links between our colonial past and our Anthropocenic present. Focusing on animals in these contexts confirms how often the exploitation of animals involves the exploitation of other humans, and how often the exploitation of other humans involves the exploitation of animals. The question of the animal is important to the humanities. In what ways are nonhuman animal lives meaningful, in what ways are human lives shaped by the same instincts or drives we habitually ascribe to those others, and how, where, or when do such distinctions matter? Furthermore, if rational reflection and the ensuing control over one's self are the basis of human superiority, why is the

world in such a mess? Can the global proliferation of digital animal images inspire humans to transform their relations with other animals and the natural world? What unanticipated shifts in our relations with the nonhuman world could help make this happen?

The questions that drive this project appear at the intersection of critical animal studies, media studies, postcolonial studies, and environmental humanities. Much of the work in critical animal studies can be located on a spectrum that spans two nominally opposed approaches. In one, the representation of animals mimics and/or reproduces existing forms of domination by hiding or displaying them through the spectacular aesthetics of capitalism and prevents humans from forming less oppressive relationships with animals. With so many layers of technological processing now involved in animal display, it is possible that “the estrangement engendered by this mediation makes it all the easier for humans to dominate, subject and mistreat other animals.”⁸ In this prognosis, the overriding forms and logics of animal representation are determined by the technological processing and exploitation of industrial capitalism, and such representations carry no meaning outside the logics of domination.⁹ Yet on the other hand, the presentation of images of the animal body¹⁰ can function as an “agonistic force” that reasserts the unique and inescapable presence of animal life.¹¹ The “creaturely” dimension of the depicted animal speaks to us and calls forth an ethical response. In a parallel debate, feminist and STS critics have observed that science researchers are taught to develop a stance of neutrality or “objectivity” involving distance from their subject whose instrumentalism is explicitly antithetical to the cultivation of empathy for animal subjects.¹² And yet, as Alexander Pschera claims in his recent book *Internet Animal*, the development of digital technology enables science to know more about animals than was ever possible in the past. Because of this, scientists and everyday observers can learn about the unique qualities of individual species or animals with their own tracks, habits, and voices, or even discover new species. In this view, the knowledge and visual beauty created by digital technologies will help to save animals from human-caused suffering or extinction.¹³ These two approaches form in opposition to one another, and each asks readers to accept its critique of the other side. If a representation of an animal is performing one of these agendas, it can’t be implicated in the other. From the vantage point of cultural studies, however, the negotiation of contradictory values or identities is key to the formation of all cultural texts, and we seek to understand them as such.

As inhabitants of a contradictory, strife-ridden world we are drawn to works that seem to accomplish some creative reconciliation of conflicting

situations or desires. The same kind of negotiation can be discerned in the worldly ecologies (which are also texts) through which we might encounter such works. Indeed, critical attention to the medium is essential, for otherwise no matter how innovative your aesthetic language your work becomes the “fodder,” as Bertolt Brecht put it, for an already compromised medium (in his case, the stage) which must continue to feed its audiences.¹⁴ The sense of freedom and creativity we associate with digital media contains its own contradictory relationship with a powerful apparatus: the concentrated corporate power that produces these devices and inexorably traces our movements and moods while doing so. These tensions haunt our relationships with our devices, as does the presence-absence of the animal. In this context technological innovations (re)mediate our encounters with animals, just as animals (re)mediate our encounters with technology. As the concept of mediology makes clear, thinking of animals as essential figures in these encounters is radically different from viewing animals as part of the content transmitted via a particular medium. Whether in ecological or symbolic terms, we humans can no more be separated from nonhuman animal bodies and meanings now than when our species was new.

While critical animal studies research has taught us a great deal about representations of animals, I see an absence in these accounts: an explicit engagement with mediation itself as a process with its own complex and sometimes unpredictable dimensions and effects. With important exceptions, this work tends to rely on an idealist understanding of the media as a more or less adequate, more or less authentic representation of the world. The critique highlights the ethical framework, visual language, or dominant ideology the critic wishes to expose. While deeply indebted to such work, *Virtual Menageries* asks what insights a focus on mediation such as that outlined by Mauss, Debray, and others can offer to understanding representations of animals in the age of hypermediation and environmental crisis.

In pursuit of this question I draw on my own background in media theory for its insights into materiality and assemblages. But this literature has its own problems; it needs to take better account of the agency or lack of agency (quasi-agency?) of living, nonhuman bodies and meanings. Without acknowledging the central presence and the central problem of animal life, our understanding of mediation is narrowed and restricted, and our understanding of human experience both universalized and animalized.

Does it make a difference to the difference that mediation makes, if the mediator is an animal? McLuhan defines “the medium” as an extension

of our limbs and nervous systems that transforms what it extends and alters the sensory balance of the body as a whole. His focus on the sensory transformation of the body by the technological extensions it produces anticipates the thought of posthumanism. When I think about media as an extension of my own activities, I think about what is at the end of my hands: a pen, a fork, a musical or alphabetical keyboard, my cat's fur, my dog. Without them, my participation in the world is diminished; my hands are incomplete, I am not-me. When forms of mediation change, whether from cow to coin, fur to logo, horse to car, stage to cinema, birdsong to relaxing soundtrack, pet cat to Grumpy Cat, people change. To be human doesn't just mean to think or reason; it means to be incomplete, to rely on shoes and coats, pens and glasses, keyboards and cats, and to adapt as best one can when these mediations are changed. To be a better human is to struggle for better awareness not just of our diversity but also of our own inherent mutability, incompleteness, and need for supplementation. Analyzing the human-machine-animal performativity engendering new media spaces might therefore help to ensure a better "ecology of ideas"¹⁵ concerning the interdependence of interspecies and intrahuman lives. With this goal, "nature itself is not faithfully represented but 'our participation *within* nature,' our material-discursive intra-action, is."¹⁶

I explore these questions in connection with an insight that appears briefly in writings by John Berger, Jonathan Burt, and W. J. T. Mitchell: that new visual capacities have, perhaps from the time of the first cave drawings, been launched with images of animals. My approach to this irresistible hint for further research is to divide this idea into two ideas and then reconnect them. Animals have served as first contact between previously separate societies or entities, and have provided the first images in testing and launching new forms and rhetorics of technological mediation. Bringing these two proximate but distinct themes together helps to fill in some of the continuities between colonial empire-building and capitalist processes of commodification and risk management. To explain this double exposure requires reference to concepts of animal magnetism or animal spirits which play a substantial but slippery role in these events. I use this interdisciplinary stereoscopic mediological lens to analyze the role of animals in the transformation of social space and human-animal relations.

Virtual Menageries begins with the menageries of early modern Europe and follows their traces into the digital menageries that emerged in the 1960s. In this more recent era, early innovators in computing software created an iconography resembling the classical menagerie to identify their products.

The identification of digital tools with images drawn from menageries calls to mind the wonder and acquisitiveness of early colonial exploration. But this confluence of old and new configurations raises unexamined questions about how and why animals have served for so long—and now appear so extensively—as mediums in the growth of networks and technologies of connectivity. What are they mediating? The answer depends profoundly on the context. The convergence of animal theory and medium theory is at an early stage of development. My shorthand for this inquiry is to address the animal as a medium of communication in the contemporary event of technological mobilization, wherein it is dematerialized and repackaged in the name of love.

The events I examine suggest that in the neoliberal era, however, the constellation of animal spirits, love, and desire can transgress boundaries while strangely promising to damage nothing. Defining love as the force that unites multitudes, Michael Hardt and Antonio Negri write in *Empire* that the “creation of a new humanity is the ultimate act of love; ... without this love, we are nothing.”¹⁷ It seems wrong to dispute this idea. As Eleanor Wilkinson notes in a discussion of Hardt’s own work on love, however, “Hardt is attempting to think affect beyond subjectivity, and to instead focus on the potentia that emerges when bodies come together. Yet, this fails to address the uneven terrain on which bodies encounter each other to begin with. For, as Ahmed notes, affect cannot be separated from issues of power, privilege, and oppression.”¹⁸ To imagine a love that brings no disruption, conquest, or pain—as some of these animal figures invite us to do—means moving backward, away from any useful engagement with animals or life or love that can be orchestrated in time to save the world. In any case, it is with moving backward that we begin.

Constituting the Menagerie

While rulers and aristocrats have owned menageries since the time of ancient Rome, the early modern European menagerie was reshaped by new capabilities for capture made possible by transcontinental travel. Charismatic nonhuman animals have since then frequently appeared as inaugural or “first contact” participants in the emergence of new technologies and spaces of connection. The term “first contact” ordinarily refers to colonial agents who organized encounters with others to advance the profits and desires of their patrons. Animals transported to other parts of the world can also be first contacts and agents of change. The practice of international trade in exotic animals led to the creation of menageries as heterotopias

in which, following Foucault, diverse and incompatible spaces are brought together in one place.¹⁹ Through such transformative spatial processes, humans and animals entered one another's worlds and altered one another's planes of existence.

Animals have served as mediators for human interaction as far back as records exist. They have been conscripted as sacrifices, symbols, items of trade, gifts, and tokens in the circulation of kinship, wealth, belief, and power. That these objects of exchange predate the mediation of money is evidenced by the inscription of animals onto the faces of coins when they first appeared. With the exchange of animals in these new colonial encounters, agents sought to initiate new connections and to occupy new spaces. Showing animals' importance to these enterprises clarifies the parallel I wish to draw between the animal body as emissary or mediator in early modern colonialism, and the animal image as emissary or mediator in the launching of electronic and digital media. The revival of the menagerie to launch digital communication—subliminal progeny perhaps of the dog and the chimp launched by rocket ships on the first Soviet space missions—bridges these eras and extends the use of the animal emissary to mediate new electronic and digital media spaces.

The menagerie's ability to evoke and supplement power in these historic processes works in part because of the incontestable power of the animal itself. The exotic animal triggers feelings such as amazement, curiosity, enchantment, repulsion, envy, and fear, while containing them within the untouchable bodies of animals and the uncrossable walls of the estate. One does not normally seek to touch a lion or a rhinoceros. The emperor who owns a lion acquires some of its physical and symbolic power, but this is not a power to be shared. The images of animals that appear with new digital devices and virtual spaces inspire a lighter but in the end no less imperative fealty to the technological milieu with which they are associated and the potentialities to which they point. The virtual menagerie reassures late modern spectators of their own power, not just over animals, whose images and sounds gratify users as though they are the new overlords, but more importantly over increasingly touchable technologies, whose powers (and those of their creators) seem increasingly untouchable, and finally over themselves, as they strive continuously to retrain their skills and emotions.

In asking what such animal mediators mediate, though, we must be careful to acknowledge the complexity of the relations in or from which they appear. Both old and new, hard and soft menageries help us to imagine and anticipate an unfolding future, and are in this sense virtual. The potential

achievements arising from these magnetic moments require great exertion if their promises are to be realized. The word “virtual” has three usual meanings: (1) cybernetic, simulated, not real; (2) potential, waiting to unfold from the complex material and symbolic planes of social life and become actual; and (3) almost, a meaning that muddies the semantic distinction between the first two. The animal emissary or mediator exemplified by the menagerie calls for a mode of analysis that connects these meanings. All menageries evoke or simulate wild untamed landscapes full of beasts; they open a window onto the possibility of taming that wildness or meeting it halfway; and they (almost) span distances between places, species, and peoples. Exotic animals have been used as emissaries to announce (to perform or simulate) and advance (to unfold or draw near to) the senders’ and receivers’ desires to transform their worlds in the early modern period. The possibility of a crack emerging between power and desire, like the possibility of fracture between colonizer and subject, never disappears.

As Richard Grusin argues, there are different ways of looking at the future; one is based on a model of prediction, which implies that the future is more or less settled, and the other based on the idea that the future is immanent in the present, that it consists of “potentialities that impact or affect the present whether or not they ever come about.”²⁰ Viewing this past of the future from the future of the present, the menagerie slides forward and backward as a zoological and discursive entity intersecting the tangled threads of colonial conquest, the extraction of wealth from nature, the fissures in modern culture, animal rights, visual and digital media, the loss of species, and climate change. In these processes, animals are not merely the cargo of various media of transport and communication. They play important roles in microscopic and macroscopic shifts in the meaning and governance of human and nonhuman lives. The two nonhuman entities that supplement the human—animals and machines—come together in foundational ways to form the world we are and know today.

From Heterotopias to Money and Mediation

Like early modern menageries, virtual menageries are heterotopias that actualize links between dispersed spaces. The menagerie’s original meanings—spectacle, marvel, the exotic, the conquest of distance—anticipate and survive their migration to global digital networks. There are traces of the visceral power of the animal body when it is taken up in graphic and digital forms. These virtual mediators share an admirable semantic economy through their ability to catch our attention while slipping between the

tangible and the intangible, and between animal and machine. They model a vision of nature in which such boundaries are increasingly slippery. Unlike representations of raced or gendered people, these virtual animals can sneak social meanings in without controversy; unlike representations of software, they can impart a sense of the vitality of living things; unlike live animals, they can be encountered without risk or fear. Their antics reveal and contain the vulnerabilities that humans share with nonhuman animals.

These virtual menageries play out their mediological roles in the context of a capitalist economy which since John Maynard Keynes, writing in the 1930s, has been characterized as a foundational oscillation between rational deliberation and “animal spirits,” the latter describing an outburst of energetic spending that could be fueled by either confidence or uncertainty regarding the health of the economy.²¹ The idea of an economy driven by opposing forces in human nature can be traced to Adam Smith, who wrote that “there are some situations which bear so hard upon human nature, that the greatest degree of self-government, which can belong to so imperfect a creature as man, is not able to stifle, altogether, the voice of human weakness, or reduce the violence of the passions to that pitch of moderation, in which the impartial spectator can entirely enter into them.”²² Smith believed in the possibility of moral judgments that could be made in interaction with other people. Like Smith, Keynes characterized judicious self-government and intense passion as opposing forces, but not surprisingly, writing after World War I, he was less confident than Smith in the human capacity for judicious self-government. For Keynes, even the most powerful motivations to defend “our own dignity and honor” could be overtaken by “sufficiently intense passions.”²³ Because people driven by animal spirits enact their passions rashly, Keynes argued, government intervention was needed to balance the fluctuations of the market. This position is widely known as Keynesian economics. The connection of animal spirits and capitalist risk was revived for obvious reasons after the 2007 economic crash. A recent commentary uses the “bullish” market after the election of Donald Trump to illustrate the point: “Animal spirits is a component of economics and one that helps to explain why individuals and firms sometimes make poor investment decisions.”²⁴ Once again one side of economic behavior is characterized as rational, self-controlled, and future-oriented, while the other, the impulsive “animal spirits” side, is unpredictable and affect-driven. In this account, both are needed to drive the capitalist economy, which is thus implicitly sustainable.

Keynes’s concept of animal spirits was indebted not only to Smith but even more to Freud, whose work was known to Keynes through the latter’s

involvement with the Bloomsbury circle in the 1920s.²⁵ Keynes's "animal spirits" is a variation of what Freud called the "animal magnetism" of repressed instincts which hold power through their sublimation. Keynes appropriated Freud's description of the unconscious to explain the role of irrationality, particularly the neurotic love of money, in economic behavior.²⁶ Keynes writes in *The End of Laissez-Faire* that the "essential character of capitalism" is the dependence on an "intense appeal to the money-making and money-loving instincts of individuals as the main motive force of the economic machine."²⁷ The fact that capitalism relies on irrational spirits suggests that these individuals base their beliefs on evidence that they know at some level is questionable or false. In another extrapolation of Freud's capitalism, the animal spirit is associated with the movement of electricity and the possibility of its capture.²⁸ Either way, the animal spirit is not susceptible to reason.

Migrating across our screens, my virtual menageries appear to be speaking the language of these animal spirits, implicitly associating "instinct" (the animal) with naturalized desires to explore, acquire, and own according to the impulse of the moment. Their graphic unification of animality and digitality also conveys the assurance that the decision to own something digital is a rational investment, since the evolution of technology follows the same inexorable logic as the evolution of species.²⁹ To accept the invitation of the iconic animal spirit is to believe that the warring sides of human nature (and perhaps then of the economy?) can be reconciled through the rational/magical digitalization of capitalism, regardless of what Freud or Keynes might have thought. Unwrapping these syntaxes of form in the images comprising the contemporary menagerie thus involves acknowledging not only the presence of animal spirits but also their intended use in risk management strategies directed at the beliefs and dispositions of its viewers. In this negotiation, government plays an interesting role, if not exactly that which Keynes intended.

In a commercial context, these animal figures vitalize the market for digital devices on which the new security state depends. They have also helped to create online spaces for activists defending animal welfare or endangered species and for bored workers doting on cats' antics. They have enticed young children into using interactive toys—some of them the very embodiment of animal spirits—and prepared them to interact cooperatively with intelligent machines.³⁰ They have supported the growth of a three-dimensional informatics grid that makes it possible to fight wars with robot dogs and hummingbirds, track endangered wildlife, and monitor any and all forms of life including some as yet undiscovered, with the

hope perhaps that they might make up for those being lost. They have provided the sights and sounds of a therapeutic apparatus designed to help humans cope with physical and mental stress. They have helped ensure that the potentially decommodified spaces and devices within digital networks continue to reward the financial and creative investments made in them.³¹ These activities reanimate and alter the hinges that connect our material, social, and intellectual life. This summary may oversimplify what animal representations actually do in the world created by digital technologies, but what they actually do cannot be understood without these ideas.

What had to happen for these animal spirits to acquire this agency in the contemporary mediascape? The process follows a definite pattern borrowed from the menagerie. The giraffes we see in the next chapter are not wandering the savannah in the company of their extended families; the industrious beaver from which pelts and logos were extracted is not swimming across a river; the penguin announcing new ways to distribute data is not standing on the ice; the singing bird is not flying through the trees. We encounter them as solitary subjects whose powerful affects and capabilities are enveloped by the social and technological power to extract their life and vitality for human purposes. This mobilization pushes the animal habitus away and locks animal figures into a complex of animal, human, and material entities that act upon one another in sometimes unpredictable ways. The animal that joins and supplements other mediums enhances the powers of some people and groups and depletes the powers of others. The animalization of the technology involves a de-animalization of the animal. As we will see, it can become in the process what Fredric Jameson has termed a “vanishing mediator.”³²

The final question for this introduction concerns the actuality of the objects I am describing. Is this figure an image or a life? A photograph or a map? Animal or mineral? Analog or digital? Smiling goat or binary code? Instinctive peep or musical expression? Once the animal has been removed from its natural environment, and its image removed even further from that ground, what exactly are we looking at, or listening to? Does it even make sense to speak of it as an object? Yuk Hui writes:

Digital objects appear to human users as colorful and visible beings. At the level of programming they are text files; further down the operating system they are binary codes; finally, at the level of circuit boards they are nothing but signals generated by the values of voltage and the operation of logic gates. How, then, can we think about the voltage differences as being the substance of a digital object? Searching downward we may end up with the mediation of silicon and metal. And finally we



Figure 0.1

T-shirt. Photo by the author, Toronto.

could go into particles and fields. But this kind of reductionism doesn't tell us much about the world.³³

The “colorful and visible beings” Yuk Hui describes call on researchers to develop new understandings of the syntax of digital images that can “tell us much about the world” without excluding the codes and silicon. These colorful beings seem to point our attention toward what is outside their own codes and signals. At the same time, the lively images and sounds explored in the following chapters deliberately divert our attention from that same outside universe with its lives and deaths and complicated challenges. In this context, “images” refer to a complex interplay of digital data, screen technologies, zoological tropes, scientific rationalities, neurological

interventions, design aesthetics, politics, history, and risk management. In this complex interplay, “material images fix mental ones and vice versa.”³⁴

The images’ double-talk tells us something important about the world in which they arise. As a recent study found, for instance, the average French citizen “will see more virtual lions through photos, cartoons, logos and brands in one month than there are wild lions left in west Africa.” Said one of the authors of this report, William Ripple, “The appearance of these beloved animals in stores, in movies, on television, and on a variety of products seems to be deluding the public into believing they are doing OK. If we don’t act in a concerted effort to save these species, that may soon be the only way anyone will see them.” Ripple adds that “a major threat faced by nearly all of them is direct killing by humans, especially from hunting and snaring,” a reality he described as “sadly ironic.”³⁵ These colorful beings are thus ambiguous but potent icons in a climate in which the idea of a vanishing mediator takes on new dimensions.

Summary of the Book

Chapter 1 elaborates the history and practice of the menagerie and explains how this collection of animals came to bridge peoples and territories that were previously unconnected. It examines how this precolonial formation opened a space for new routes and heterotopias that continue to build and define the technologies of global connectivity. It traces the menagerie’s inaugural role through animals’ key appearances in the first moving pictures, the earliest computing software, the commercial adoption of mobile phones, and the spread of social media.

In chapter 2, a ruler in Bengal sends a giraffe captured in Kenya to join an emperor’s menagerie in China. This gift of a previously unseen exotic animal serves as a first contact between imperial leaders and opens the door to new transcontinental trade relations. But what about the giraffes? Jameson’s concept of the “vanishing mediator” illuminates the suffering, deaths, and disappearances of these animals as they contribute to a global colonial and capitalist network of exploration and exchange. The chapter compares the emperor’s giraffe of 1414 with April the pregnant giraffe, the famous online sensation of 2017, to help elaborate the concept of the event that underlines the mediological approach.

Chapter 3 addresses the beaver’s body as the central commodity for the Canadian fur trade. Beaver pelts became the currency of new relations between colonial settlers and Indigenous peoples, while the whole beaver became the emblem of a political identity built on the conquest of

Indigenous people and the dead bodies of the animals. The beaver trade generates first contacts between the settlers and the Indigenous people and new relations between colonial representatives and the “home country” to which the pelts are sent. The beaver’s role in the colonization and settlement of this dominion is unwrapped as the source of a rich body of narratives, commodities, symbols, and archives. In the process of extracting value from the beaver, first from its body and then through its symbolic proliferation, the history of colonization, the animal’s valuable hydrological activities, and the furriness of the animal are all left behind.

Chapters 4 and 5 document the graphic reinvention of the menagerie and its widespread use to advertise virtual spaces and mobile devices. The exotic species featured in these virtual menageries mimic, in more ways than one, and with multiple projections of affect, the exotic animals captured and displayed in the original menageries of ancient and early modern times. These digital heterotopias are promoted as the chosen habitat for a neoliberalized self. As iconic first contact, digital animal emissaries promise liberation from local or social constraints through the fable of digital empowerment. By promising power to users while absorbing them into the matrix, these carefully purified animal spirit-figures are put to work altering geopolitical relations, human experience, and the alchemy of connection. The promise of human transformation is inseparable from the performativity of these nonhuman animals. Whether the primary role of these animal emissaries is to reenchant the secularized, disenchanting (as Max Weber influentially called it) modern world through accomplishments in the technosphere, or to naturalize reliance on mediated communications, infantilize consumers, mimic robot pets, merge pets and small humans together into cell phone hyperactivities, or promote the “coolness” of their creators,³⁶ a mediological understanding of this animal imagery is vital to the politics of the present.

Cats have drawn millions of people’s waking hours into the enticing spaces of social media. Chapter 6 explores this remarkable phenomenon, wherein the domestication of computing technologies has built upon and played havoc with the unique role of cats in the history of religion, philosophy, and gender. Many significant philosophical interventions have been punctuated with references to cats; as companion animals they continue to attract controversy. The Internet cat phenomenon builds on these histories while creating a new phenomenon shaped by the techno-domestic spheres from which it arises. The online cat once again makes explicit the degree to which the animal is central to extending and engaging with social networks.

In chapter 7, I stage an encounter between the history of field recording, musicology, and media emotion research to analyze “nature” soundtracks and their use in therapeutic spaces. The genre is contextualized intersectionally here in relation to debates about animal language and meaning in musicology and evolutionary biology. Do birds sing? The story draws on the technical history of sound recording, the development of experimental neurological and affect research on humans, the transformation of birdsong meanings and silences with the publication of Rachel Carson’s *Silent Spring*, and the dislocation, disembodiment, and disempowerment of the bird in the sonic vocabulary of these soundtracks. I follow the collapse of ontological distinctions between human, animal, and machine narrated here into a brief rumination on monsters that concludes the book.

When social groups and human tools move into new configurations, animals often play a significant mediating role. We deny our humanity when we deny our deep connections with these animals. As Gayatri Spivak writes in *An Aesthetic Education*, “To be born human is to be born angled toward an other and others.”³⁷ These others toward which we are angled are not necessarily human. What is at stake here is not just the importance of animal bodies and images in the formation of colonial relations or technological assemblages, or vice versa. What is at stake is our need for new ways of thinking about animality, humanity, nature, culture, and capitalism. It is in our “nature,” even when that nature is twisted and skewed, to be intertwined with nonhuman animals and technological entities that are increasingly intertwined with one another. Grappling with questions about these relations is crucial for dealing with the issues of risk and sustainability that confront us all. Hold on to these thoughts as we angle toward the future.

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