The Bee and the Sovereign? Political Entomology and the Problem of Scale

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Without the animal, there is no human. Or so recent work, often grouped under the rubric of animal studies, suggests. Given the bull market for animal studies across historical periods and national traditions, and given a wave of recent work that seems, at once, to consolidate a first wave of early modern animals studies and cry out for version 2.0, scholars of the age of Shakespeare and his contemporaries are left struggling with weighty questions. How can we best write about forms of life, their complex histories, and their relationships to the so-called human, which include, at a minimum, entanglement, indistinction, opposition, and indifference? What, precisely, is an animal and how useful is the concept as we consider the Renaissance?

The inadequacy of the term “animal” has been the subject of some conversation of late, most particularly in Laurie Shannon’s “Eight Animals in Shakespeare; or, Before the Human,” which contrasts the scarcity of use of the term “animal” in the works of William Shakespeare with “the ubiquity of those we conventionally shepherd into the enclosure of the term animals” in those works. Much more common, Shannon points out, are terms such as “beast” and “creature”: “In this pattern, he is typical. As the OED confirms, animal hardly appears in English before the end of the sixteenth century. What does the scarcity of this collective noun, despite the texts’ menagerie, suggest about present idioms concerning the forms of life, idioms that habitually invoke a dualistic logic of human versus/and animal?”

The “shepherd ing” Shannon refers to (itself an activity primarily concerned with animals or beasts, livestock, as opposed, say, to insects, birds, or fish), has consolidated various senses of an animal-
human divide or dialectic that often makes “the animal” into “the organism against which human status was asserted” 3 or “the thing which the human is constantly setting itself against.” 4 This often also implies the structure of a border or boundary in the work of Erica Fudge and of the divide or regime of distinction in the work of Bruce Boehrer and Andreas Höfele; these foundational accounts of human and animal witness the complex ways in which these borders, boundaries, divides, and distinctions are often simultaneously established and effaced creating what are often referred to as, borrowing terminology perhaps most notably deployed by Giorgio Agamben, “zones of indistinction.” 5 Shannon and Höfele offer terms similarly spatial if more explicitly political in examining, respectively, early modern “zootopias” and “heterotopias.” 6 To add to the list, Rebecca Ann Bach refers to an “animal continuum” while this special issue begins with the notion of a human/animal interface. 7

And yet, neither the historical realities of terminology that Shannon describes nor the regimes of (in)distinction suggested by scholars quite explains a particular sovereignty accorded to terms like “animal” or “beast,” which seem to capture all creatures while also implicitly dictating those forms of life to which attention will be directed. I would suggest not only that a complex interplay of scale and sovereignty structures the way early modernity imagined a rich world of cohabitant life forms but also that scale and sovereignty have structured the way scholars shepherd forms of life into schemas in which beast and animal constitute sovereign terms, a fact that should not be obscured by the important interrogation of human assertions of sovereignty over non-human life. To begin to understand how to unpack the claims of scale and sovereignty that often dictate to which creatures we turn our gaze, I begin with a representative moment in the works of Jacques Derrida whose writings have been central to animal studies.

When, in the first volume of his posthumously published lectures, The Beast and the Sovereign, Derrida addresses a historically extensive “political bestiary,” one with deep roots in Renaissance Europe, and he proposes, as a method, a “slow and differentiated deconstruction of the logic and the dominant, classic concept of nation-state sovereignty.” 8 In addressing these figures, beast and sovereign, seemingly opposed yet similarly positioned outside the law in a “complicity” that also invokes the “criminal” (17), Derrida uses beast most often to refer to a series of figures more or less eas-
ily referred to as animals in common contemporary parlance and to a series of monsters or human-animal hybrids. The first seminar alone refers to wolves (perhaps the most critical beast for Derrida in both volumes of *The Beast and the Sovereign*), doves, lambs, falcons, and others. As the seminars proceed, so too do the beasts multiply. Between beast and sovereign lies the human, or more properly, "man" who "is caught, evanescent, disappearing, at the very most a simple mediation, a hyphen between the sovereign and the beast, between God and cattle" (13).

In the course of this seminar, which builds upon earlier essays in *The Animal That Therefore I Am* (and a naked encounter between an Actaeon-like Derrida and a cat), Derrida describes how "the supposed sovereign subject begins, by an invincible attraction, to look like the beast he is supposed to subject to himself (and we already know, having often—last time too—verified it, that in place of the beast one can put, in the same hierarchy, the slave, the woman, the child," (33). Derrida repeats this formulation. "The beast," he says, "was often the living thing to be subjected, dominated, domesticated, mastered, like, by a not insignificant analogy, the woman, the slave, or the child" (66).

On the one hand, the force of the analogy makes sense with respect to the action of sovereign power to subject, dominate, domesticate, and master. On the other hand, what about the objects of analogy? And what of the structure of analogy itself: is it sufficient to explain how, like a series of nesting dolls, figures of the non-citizen and forms of non-human life seem to shelter inside as sovereign a term as "beast"? Or, for that matter, "animal"? Derrida's lectures are emphatically not entitled *The Slave and the Sovereign, The Woman and the Sovereign, or The Child and the Sovereign*. How might Derrida's account of the "theo-anthropo-zoological" differ with each of these figures? Let us imagine, for a moment, a series of parallel universes, each in which Derrida would have chosen to complete one of many possible alternative studies, including those above, and let us insert just one more title: *The Bee and the Sovereign*.

To be sure, it is not the case that Derrida never mentions insects in his seminars. Ants crawl and bees buzz briefly through both volumes of *The Beast and the Sovereign*. Early on in the first lecture, it seems a hive is about to assemble when, to support the idea that not only "political man is still animal but that the animal is already political," he refers to "examples of what are called animal socie-
ties," which display "refined, complicated organizations, with hierarchical structures, attributes of authority and power, phenomena of symbolic credit, so many things that are so often attributed to and so naively reserved for so-called human culture, in opposition to nature." (15) But, soon after, Derrida explores neither social insects nor political entomology (of any era) but rather "modern primatology." For Renaissance Europe, and England especially, neither the allure of the ape nor the iconic foxes and wolves of Machiavelli, nor the bears and dogs of London's Bear Garden, nor nearly any other of the many potent figures in the political bestiary had such power to focus the entanglements of human and non-human creatures as the bee, which occasioned not only a series of reflections on sovereignty and the commonwealth but served as a kind of sovereign creature.11

What large claims for such small creatures! And so appears the problem of scale, one reason for what, in spite of a gradually expanding body of work on insects, appears to be a critical preference for the furrier of what Edward Topsell notably categorized as four-footed beasts. That is to say, in spite of a few notable exceptions, a certain neglect of insects, and more particularly bees, seems oddly characteristic of both early modern and posthuman approaches to the relationships between human and non-human, creature and sovereign.13 What I want to offer here is not merely yet another instance in the ever-expanding bestiary of early modern animal studies that proves ever-more tenuous the border between the human and the non-human. Rather, the properties and inclinations of and early modern attachments to insects, and particularly bees, require more expansive modes of thought precisely because they seem to suggest features and forms of life that render less important, if nonetheless still present, those frequently deployed "lacks" (or exclusions or diminished capacities) to distinguish animal from human (reason, language, affect, politics, world, etc.).14 One reason for this relative neglect, I have suggested, is the scale of these creatures, and I will further suggest that scale intersects with sovereignty in ways not necessarily revealed by the avalanche of recent work on sovereignty, by scholarship on insects as purely sovereign metaphors, or by the invigorating scholarship on the scientific cultures of the Renaissance. As we triangulate scale and sovereignty with proximity to the human, insect oddities importantly alter how we understand early modern forms of life.

My own interest in early modern insects began, perhaps not sur-
prisingly, with Milton's bees. Late in the first book of *Paradise Lost* appears one of the most famous epic similes in the literary tradition. Saul and his host conduct their first parliament in Pandemonium by shrinking down their massive celestial bodies: "Thus incorporeal Spirits to smallest forms / Reduc'd thir shapes immense, and were at large, /Though without number still amidst the Hall / Of that infernal Court" (1.789–92). They are, notably, "As Bees / In spring time, when the Sun with Taurus rides, / Pour forth their populous youth about the Hive / In clusters" (1.768–71). The enabling if contradictory conditions of this infernal convocation are two-fold. These once heavenly creatures are hailed by the force of sovereignty: "Of Sovran power, with awful Ceremony / And Trumpets sound throughout the Host proclaim / A solemn Councel forthwith to be held" (1.753–55). Yet the "conclave" requires diminution. The plasticity and substance of angelic bodies has raised fascinating questions for those interested in Miltonic materiality. Yet other questions arise: is sovereignty scalable if scalability does not result in magnitude, as contemporary information technology parlance deploys the term? Infernal shrinkage connotes debase­ment, and certainly bees had been, for decades prior to the compo­sition of *Paradise Lost*, associated with the Roman church in anti­Catholic polemic, a feature of bee-writing no doubt enhanced by the use of bees in the Barberini family coat of arms. But Milton's epic simile invokes a sovereign creature whose perfection and industry was exemplary and which admitted an astonishing range of metaphorical uses, from Catholic to Protestant and from Royalist to Republican. Apian metaphor is not reducible, then, to the particular political or religious positions in whose service bees were deployed. More fundamental is scale.

Scale was reason enough for a fascination exemplified by Pliny's great paean to the insect, whose diminutive proportions evokes a kind of negative sublimity, as Philemon Holland's 1601 translation, *The Historie of the World*, conveys:

In bodies of any bignesse, or at leastwise in those of the greater sort, Nature had no hard peece of worke to procreat, forme, and bring all parts to perfection; by reason that the matter whereof they be wrought, is pliable and will follow as she would have it. But in these so little bodies, (nay prickes and specks rather than bodies indeed) how can one comprehend the reason, the power, and the inexplicable perfection that Nature hath therein shewed? How hath she bestowed all five senses in a Gnat? And yet some there be, lesse creatures than they. But (I say)
The Bee and the Sovereign?

where have she made the seat of the eies to see before it? Where hath she set and disposts the tast? Where hath shee placed and inserted the instrument and organ of smelling? and above all, where hath she disposed that dreadfull and terrible noise that it maketh, that wonderfull great sound (I say) in proportion of so little a body?

Insects are nature’s overachievers, whose exquisite construction amazes and whose miniscule bodies belie grand effects. Thomas Moffett, the veritable father of English entomology, in that foundational entomological text of the English Renaissance, Insectorum sive minimorum animalium theatrum (1634), which was compiled in the 1590s, advanced by Moffett, completed after his death, and published in English as The Theater of Insects with Topsell”s History of Four-Footed Beasts and Serpents (1658), appreciated the potently diminutive nature of insects: “In these that are so small and despicable and almost nothing, what care? How great is the effect of it, how unspeakable is the perfection?” In Pliny’s celebration of diminutive proportion, Eric C. Brown finds an original defensiveness about the study of insects, one “variously but consistently refashioned by nearly every insect encyclopedist ever since” to reveal “a number of anxieties about the relationship between humans and insect,” and that renders the insect “a kind of Other not only for human beings but for animals and animal studies as well.”

“Other” may be simultaneously too severe a degree of distance, too exhausted a concept, and too contemporary a response to insects to describe the entanglements of human and bee in Renaissance England. Indeed, forbidding, threatening, and often alien specters of insect life seem more the terror and delight of later historical eras. More potently, this characterization of the insect as merely “other” obliterates scale. Take one of the most noted English bee texts of the era, Charles Butler”s Feminine Monarchie, or the Historie of Bees (1634), which familiarly celebrates industry as the perfection of the bee. God has made bees more than any other creature “for the Use and Service of Man, in respect of large Profit with small Cost or Trouble to us” and therefore “[t]he Industrious Bee ought to be of high Esteem, and held, even in admiration that such wonderful Knowledge should rest in so small an Animal, and therefore, since the keeping of Bees is of little or no Hindrance to other Business, and also a delightful Recreation to divert Men at leisure Times, bringing with it a Store of Delicate Sweets, wholsom
for both Food and Physick.” The bee provides great profit at small cost, is “little hindrance” to business, and deserves “great” esteem in spite of being a “small animal.”

As Butler’s panegyric continues, diminutive insect scale collides with the bee’s role as a measure of virtue for humans: “And moreover, the Labour and Industry of the Bee, at home and abroad, may be of Excellent Use, by not only setting a Pattern to Men in both kinds, but stir them up to an Emulation in imitating in their private and publick Affairs to thrive in the World, for unless the Inclementness of the Weather, their Weakness, or Want of Matter to work on hinder it, their Labour and Industry is incessant,” (2). But what is it, exactly, to “Emulate” an insect? Moreover, how do analogy, a comparative impulse, and emulation, a mirroring impulse, work in tandem or at cross-purposes with human-apian encounters that occur across such scale variance?

The wondrous nature of the insect, then, is not merely a matter of aesthetics. Pliny praises in tandem “the industriie and subtilltie of Nature” in creating insects and in so doing sutures two primary features in a veritable knot of exemplarity: productivity and scale. As such, nestled within the many invocations of exemplary apian industry is always a meditation on scale even as scale seems to recede within these descriptions. Take Virgil, for instance, for whom the bee is the ultimate figure of industry, industry in the form of agricultural productivity in the oft-cited fourth book of the Georgics or industry that, for the wandering Aeneas, accurately analogizes the efficient bustle of Carthage in the first book of the Aeneid. Here is Dryden’s rendering of Dido’s hard-working citizens, worthy of adulation and emulation:

Such is their toil, and such their busy pains,
As exercise the bees in flow’ry plains,
When winter past, and summer scarce begun,
Invites them forth to labor in the sun;
Some lead their youth abroad, while some condense
Their liquid store, and some in cells dispense;
Some at the gate stand ready to receive
The golden burthen, and their friends relieve;
All with united force, combine to drive
The lazy drones from the laborious hive:
With envy stung, they view each other’s deeds;
The fragrant work with diligence proceeds.

1.598-609
William Shakespeare's well-known passage from *Henry V* similarly deploys an insect analogy to detail a series of types of the human citizen:

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Therefore doth heaven divide
The state of man in divers functions,
Setting endeavour in continual motion;
To which is fixed, as an aim or butt,
Obedience: for so work the honey-bees,
Creatures that by a rule in nature teach
The act of order to a peopled kingdom.
They have a king and officers of sorts;
Where some, like magistrates, correct at home,
Others, like merchants, venture trade abroad,
Others, like soldiers, armed in their stings,
Make boot upon the summer's velvet buds,
Which pillage they with merry march bring home
To the tent-royal of their emperor;
Who, busied in his majesty, surveys
The singing masons building roofs of gold,
The civil citizens kneading up the honey,
The poor mechanic porters crowding in
Their heavy burdens at his narrow gate,
The sad-eyed justice, with his surly hum,
Delivering o'er to executors pale
The lazy yawning drone.
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*Henry V*, 1.2.183-204

Industry was not the only quality, of course, that tied human to bee; Spenser's Amazonian apian simile makes clear that gender and affect could play a defining role especially where sovereignty was at stake. In the “Legend of Justice,” as Arthegall encounters Radigund's Amazonian city,

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the people all to harnesse ran,
And like a sort of Bees in clusters swarmed:
Ere long their Queene her selfe, halfe like a man
Came forth into the rout, and them t'array began.
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*The Faerie Queene* 5.36

Apian virtues or vices aside, how quickly we can momentarily forget, in Virgil, Spenser, or Shakespeare's invocation of bees, the different scales at which human and bee operate. Yet when reminded
of the variance between these creatures, as in Milton's famous epic simile, an important kind of recalibration occurs. Suddenly, such exemplary moments accomplish not merely the anthropomorphizing of the bee but rather a reconsideration of the odd felt-proximities and senses of relative sovereignty across scale and what we now tend to call species difference.

It has not been hard for scholars to leap from the idea that creatures, bees for instance, might reveal types of the human, as in Virgil's catalogue of workers or Shakespeare's catalogue of citizens, to the conclusion that these are more instances of narcissistic anthropomorphism. In the introduction to *Perceiving Animals*, titled "The Dangers of Anthropocentrism," Erica Fudge takes as her subject "the ways in which humans define themselves as human in the face of animals" and argues that "To assert human supremacy writers turn to discuss animals, but in this turning they reveal the frailty of the supremacy which is being asserted. Paradoxically, humans need animals in order to be human. The human cannot be separated because in separation lies unprovability."26 And yet what of insects or more particularly bees, which were and were not (or not yet) part of the animal kingdom? Moffet associates insects with animals in his Latin title *Insectorum sive minimorum animalium theatrum*, but "animal" disappears in the translated title *Theater of Insects*. Were insects too small to be animals? If so, would that make them more or less susceptible to "the dangers of anthropomorphism"? And did early modern writers—literary, agricultural, scientific, or otherwise—want "separation"? That is, did they want to define themselves against or above these little, flying creatures? In spite of scalar differences that rendered insects both exquisitely tiny and despicably small, the bee evoked both comparative differentiation and imaginative identification. Bees may have been imagined in service to humans, which is why their great industry was so prized. Yet the modes anthropomorphism they seem to evoke reveal something stranger than merely anthropocentrism.29

Take, for instance, the images from Philip van Marnix van St. Aldegonde, *De Byencorf der H. Roomischer Kercke*, translated as *The Bee huiue of the Romische Church* (1579) (figure 1), and John Day's *The Parliament of Bees* (1641) (figure 2). In the first, decidedly human-headed (and sometimes limbed) bees go about the business of the "Roomish" hive, with a variety of functionaries of the papal commonwealth what look like pope, bishop, knight, messenger, and more. In the second figure, the bees have assembled, utterly
Figure 1: Philip van Marnix van St. Aldegonde, The Beehive of the Roman Church (1579)
The Parliament is held, Bils and Complaints
Heard and reform'd, with severall restraints
Of usurpt freedome; instituted Law
To keepe the Common Wealth of Bees in awe.

Figure 2: John Day, The Parliament of Bees (1641)

apian, in their parliament chamber, as if the bee has not necessarily assumed human characteristics but rather supplanted the human or borrowed its political technologies for its own purposes. Is it not the envious, fallen angels of Milton’s Pandemonium, not Day’s bees, who appear to be so desperately anthropomorphic?

Are bees, then, little humans or are humans over-sized bees? Are miniaturization and diminishment more accurate scalar correla-
tives of sovereignty’s power to shrink citizens down to bee-like proportions? Does the potency of small things contest or constitute sovereignty? Does sovereignty appear in maximal form—as supremacy, absolutism, the decision, etc.—or are there minimal forms of sovereignty comprehensible through scalar difference?

This last question seems of particular importance given the power of insects, bees specifically, to focus attention on how scale and sovereignty intersect with analogy and anthropomorphism and provide ways of understanding the dense tangle of forms of life in early modern England. We might glance at Theodore Mayerne’s “Epistle Dedicatory” to Moffett’s *The Theater of Insects*, which frames scale, sovereignty, and exemplarity by remembering Moffett’s original dedicatee:

Our countryman *Mouffet . . .* had formerly entituled this work of Insects to the ever famous *Elizabeth* (who was wise above her Sex, valiant, born to reign well, and ruled so many years by the Votes of her Subjects, and by her own undertakings and actions, that were so successful that they were envied at) . . . he thought it no indignity to Dedicate to the greatest Princess the miracles of Nature, which are most conspicuous in the smallest things; which testified to the infinite power of the supreme Creator of all things, and raise the mindes of Princes, who are the children of the most Highest. 30

Even royal sovereignty is small, dare we say child- or bee-sized, compared to the Creator. As such, the miraculous female sovereign seems to nestle inside the tiny body of the insect. To return to Derrida, we seem to have bee, woman, child, and sovereign nesting inside one another, as disparate forms of life become increasingly tangled in a webs of analogy and metaphor.

With respect to insect metaphor, Mary Baine Campbell argues that

the history of the natural history of bees is an especially interesting case of . . . the fears of epistemological reformers like Francis Bacon and Thomas Sprat about the deforming effects of metaphor on thinking were in fact substantially warranted. For as long as two hundred years, natural philosophers and even beekeepers were willing and even eager to distort their closely observed accounts of bee sociality in the service of maintaining the power of the bee ‘polity’ to analogize, and thereby to authorize, prevailing norms such as gender hierarchy in government, the superior usefulness of male labor, or the chastity and monogamy of women. 31
Campbell, in her extraordinary contribution to the intersections of early modern scientific practice, ideas of utopia, and the study of insects, is certainly right to worry about the naturalization of "gender and class hierarchies." And yet when one looks into what Donna Harraway famously called "the animal mirror" and one sees a diminutive insect staring back, distortions of scale provoked by analogical relationships between human and the sovereign bee force us to ask if we are encountering anthropocentrism or apian exceptionalism.

Let me emphasize some implications of potential magnitude and import for the study of humans and nonhumans and for humanists and posthumanists alike, implications still to be unpacked but that derive from diminutive bees and, more broadly, insect life in early modernity.

1. In spite of the widespread admission that "animal" is a problematically capacious term, some forms of early modern life still seem less interesting than others. One might refer to this as the problem of the charismatic megafauna, a contemporary term used to refer to those animals (pandas, dolphins, etc.) whose public appeal guarantees forms of attention and literally bankrolls environmental activism. How to resist the allure of wolves, dogs, bears, horses, and parrots? Derrida's feline encounter in The Animal That Therefore I Am focuses further still on the domesticated animals, on the pet, attention to which can be as easily critical as fetishistic. Insects are neither precisely charismatic megafauna nor domesticated animals, in spite of the fact that they had broad early modern appeal and were clearly kept, if not in the manner of a pet.

Still, the ideal consequence of greater attention to early modern bees and of a resistance to the assimilation of creatures under the rubric of animal or beast would not merely be the promulgation of "critical insect studies" as opposed to "critical animal studies." That is to say, the insect should not be merely another in a proliferation in the subset of "the animal" or "the beast." While the slow deconstruction of the border between beast and sovereign, insect and human, animal and insect, human and non-human may be a very good thing indeed, our attention might profitably turn to forms of life. What are the ways in which life was perceived, understood, and experienced in eras before genetics and evolution? Might those forms be understood not only in terms of just species difference, constitutive lack of capacities, hierarchical orders, but also by virtue of a play of perceived similitude and difference with scale and morphology?
Scale might not only help break a certain deadlock created by the overuse of the term “animal” while also proving more flexible and nuanced than a variety of ways scholars have begun to describe interactions between humans and other forms of life in early modernity. Indeed, in spite of an efflorescence of very fine work in early modern animal studies, we already approach the limit of the utility of those notions with which I began this essay: a) the oscillation between “a fundamental sense of difference and a fundamental sense of similarity between humans and animals”\textsuperscript{35} b) the idea of a border zone or zone of indeterminacy between human and non-human; c) species difference or a “philosophical crisis” that results in the development “of a means of manufacturing and perpetuating the distinction between people and animals”\textsuperscript{36} d) hierarchical arrangements of species or pluralistic accounts of interspecies continuum.

2. Bees may or may not be charismatic megafauna, but they were sovereign creatures in early modern England. This has implications for how we understand the web of analogy, identification, and emulation that links human and non-human life. Rather than dismiss attention to bees as merely metaphorical, we might realize that there are things to be learned in the strange proximity between human and non-human forms of life especially when that felt-proximity must bridge massive differences in size and scale, style and form of life. Similitude and proximity are never as simple as they seem; these notions provide more subtle calibrations than sameness or difference, and attention to insects demands such nuance. Metaphor, analogy, and allegory, all of which can too easily denude non-human life of its specificity and vitality in the interest of creating utility and significance, might provide more insight into the overlapping milieus of forms of life. Looking into the “animal mirror” might be more a twisted, fun-house affair than a hotbed of human exceptionalist narcissism. Attentive treatment of the charismatic megafauna or sovereign creatures of the Renaissance (furry and four-legged or not) is critical when unpacking the interpenetration of forms of life in early modernity.

3. Early modern bee texts indicate that sovereignty, to which so many scholars turn their attention of late, might be usefully understood through scale variance. This would not be limited to inquiries into the maximal subjectivity and power of the sovereign as largest power or as the top of a hierarchy (the absolute power and head of the state) but would also include questions about the mini-
mal degrees of sovereignty and subjectivity suggested by the diminutive forms of life like the bee. Minimal or micro-sovereignty would be the barest instance of sovereignty, related to but not reducible to either the capillary force Michel Foucault attributes to disciplinary mechanisms of power or the assertion of tiny instances of sovereign power and self-determination. Nor need microsovereignty be reducible to the all-or-nothing categories of bare, biological, or creaturely life so frequently deployed of late. Might scale variance inspire more subtle languages for the intimate interweaving of life and sovereignty? As Eric C. Brown reminds us, the etymology of “entoma” and “insect” lead back to divisibility, something segmented or cut into pieces, referring to the segmented insect carapace. Since Jean Bodin, an inviolable quality of sovereignty is its indivisibility, yet does the insect kingdom indicate a more mobile, divisible sovereignty, one that must also carefully consider hive collectivity?

4. Gradations of scale seem to be often in danger of obliteration because either a preference for notions of species difference or for the use of the human as the measure of all things is all-too persuasive. Paula Blank’s study *Shakespeare and the Renaissance Mis-measure of Man* opens with Protagoras’s famous dictum, that “man is the measure of all things.” In that work, Blank argues that “Shakespeare inherited the ancient idea of measurement as a way of representing human apprehension, and the terms of Renaissance measurement systems—scales and spans, squares and levels, ratings and rules—provide his plays and poems with key metaphors of knowing.” Blank beautifully limns the art of measurement to explore “the range and variety of rhetorical means available for setting up and solving the problem of human value.”

What happens, however, to such questions of value when the human intersects with other forms, measures, and scales of life? Early in the twentieth century, J. B. S. Haldane addressed the problem of calibrating scale in an essay called “On Being the Right Size,” where he argues,

The most obvious differences between different animals are differences of size, but for some reason the zoologists have paid singularly little attention to them. In a large textbook of zoology before me I find no indication that the eagle is larger than the sparrow, or the hippopotamus bigger than the hare, though some grudging admissions are made in the case of the mouse and the whale. But yet it is easy to show that a hare
could not be as large as a hippopotamus, or a whale as small as a herring. For every type of animal there is a most convenient size, and a large change in size inevitably carries with it a change of form.  

All creatures may have a measure, a size beyond which they can be neither magnified nor diminished without facing problems of structural integrity, but Haldane asks how we understand scales of creaturely life relative to one another. What might we learn from such differences?

In "The Entomic Age," Devin Fore similarly addresses the "measure of man" with respect to scales of technology. He compares Lewis Hine's 1921 photograph "Man at Dynamo," which features a repairman centered in and dwarfed by the massive circular sweep of a gear-shaped dynamo, to the image of a tiny spider mite, which looms over a nanogear chain in a manner oddly reminiscent of Hine's dynamo. In comparing the images, Fore suggests that while the insertion of organic life as a form of measure may be consistent, man is definitively no longer the measure of all things: "Like Hine's photograph, this image relies on a zoomorphic gauge to indicate the relative scale of the technological wonder. But here a spider mite stands in for the technician. Gone is the most intuitive and expressive of measures, the human body, replaced by the mute carapace that hovers to the right."  

If no longer the measure of all things, what is man next to a mite or nanogear? Early modernity didn't need nanotechnology to think about scale variance, sovereignty, and what we often call species-difference. After all, the bee was one of the first creatures examined under microscopes as Francesco Stelluti's 1625 Melissographia, an illustration in which anatomically correct renderings of three bees in the formation of the Barberini crest, attests. The scale of the insect, particularly the sovereign bee, requires that so-called human values and measures be tested with respect not merely to the obvious differences between human and non-human but with respect to the cohabitation of and perceived similitude between creatures of variant scale living in scalable degrees of proximity in the same environment.

Let me conclude with a question as deceptively small as an insect. What did the Renaissance witness? Was it the birth of the modern and the invention of the human? Was it the age of the individualistic human or the age of creaturely collectivities? Or, was it in some sense already an apian age, an age of little creatures, hive
minds, collective intelligence, and increasing reliance on technologies and sensibilities resonant with a diminutive world tantalizingly proximate, a world in which ideas of human scale, measure, and power had to increasingly adapt to the challenge of the micro-sovereignties and micro-sublimities of insects, of the invisible worlds that exist within and alongside—or, as John Donne might put it—before, behind, between, above, below—the milieu of the so-called human?

Notes

Thanks to “the hive,” Derek Woods and John Ellis-Etchison, for a semester of stimulating buzzing about bees.


2. Ibid., 474.


6. Andreas Höfele refers to Foucault’s idea of the “heterotopia” or “other space” in Stage, Stake, and Scaffold: Humans and Animals in Shakespeare’s Theatre (Oxford: Oxford University Press, 2011) describing the interpenetration of human and animal worlds around signature Renaissance locations of punitive force. Shannon imagines the “zootopian” space of early modernity: “not a utopia for animals, but a domain constituted by a more pervasive cognizance of them than our own” (“Eight Animals,” 472).

7. See Rebecca Ann Bach, “The Animal Continuum in A Midsummer Night’s Dream.” Textual Practice 24, no.1 (2010): 123–47, where she describes the animal continuum, which “refuses to categorize all humans as possessors of ‘human nature’, a category that most critical work insists on even when that work talks about how distinctions between humans and animals blur at times” (123).


10. Höfele explores Renaissance bear-baiting entertainments and their proximity to the Shakespearean stage and argues that “The bear would have been perceived as the more human-like creature” in the context of these early modern entertainments. See Höfele, 10.

11. Claire Preston, in her popular overview *Bee* (London: Reaktion Books, 2006), articulates this point of view: “Because of its immensely long history in association with man, the bee has been more carefully observed, more celebrated, more storied and mythologized, and latterly more feared than most other animals. Some of the first pictographic human records include business with bees, as do the earliest written ones. From the first Greek poetry to the latest Hollywood horror film, the bee stands as an emblem of man’s relation to nature and to himself. The mystery and the wonder of the bee prompted the seventeenth-century scientists who used the earliest, primitive microscopes to describe and draw the bee before all other creatures” (8).


13. In spite of frequent protestations about the inadequacy of the term “animal” as a term that collects most forms of non-human (and non-plant) life, Toppell’s “four-footed beast” seems to dominate. Insects appear sparsely in studies of animals and beasts by Erica Fudge, *Perceiving Animals*; Bruce Boehrer’s *Animal Characters: Non-Human Beings in Early Modern Literature* (Philadelphia: University of Pennsylvania Press, 2010) and *Shakespeare among the Animals: Nature and Society in the Drama of Early Modern England* (London: Palgrave, 2002); Andreas Höfele’s *Stage, Stake, and Scaffold*. Contemporary animal studies seems similarly to veer close to furrier, four-footed bests, with Juussi Parikka’s suggestive but very uneven *Insect Media: An Archaeology of Animals and Technology*, which focuses on the interconnections between Victorian and contemporary entomology, media, and information theory.


16. As Jonathan Wolfson argues in “The Renaissance of Bees,” Renaissance Studies 24, no. 2 (2009), “the emblem of Urban’s family, the Barberini, displayed three bees and his election as pope initiated the widespread appearance of apian metaphors and motifs in Rome and beyond,” (284–85).


18. For the complex history and construction of Moffett’s text, see Neri, “Cutting and Pasting Nature into Print: Ulisse Aldrovandi’s and Thomas Moffett’s Images of Insects.”


23. For an account of insects and imperialism, see André Stipanovic, “Bees and Ants: Perceptions of Imperialism in Vergil’s Aeneid and Georgics,” in Brown, Insect Poetics.

24. All references are to John Dryden, Virgil’s Aeneid, ed. Frederick M. Keener (New York: Penguin, 1997).

25. All references to act, scene, and line are to The Riverside Shakespeare, 2nd ed. (Boston: Houghton Mifflin, 1997).


28. Fudge, Perceiving Animals, 4.


33. See Gouwens and Shannon, “Poor, Bare, Forked” for uses of the term “Human Exceptionalism.”
34. Boehrner’s study *Animal Characters*, for instance, explains its selection of organizing animals (horse, parrot, cat, peacock, sheep) as follows: “I have chosen these in part because they represent each of the three principal uses to which early modern Europeans put the beasts in their lives: haulage, companionship, and food” (18).

35. Höfele, xi.

36. Boehrner, 5. Boehrner’s previous study, *Shakespeare Among the Animals*, similarly stresses distinction, difference, and identity when he lays out the book’s central questions: “How did citizens of early modern England understand the difference between people and animals? How did their understanding of this difference affect their understanding of themselves and their relations with one another? And how did the resulting formulations of biological and social identity operate within the popular dramatic entertainment of the day?” (2).


40. Ibid., 4.
