Forces of Nature

Forces of Nature
Natural(-izing) Gender and Gender(-ing) Nature in the Discourses of Western Culture

Edited by

Bernadette H. Hyner
and Precious McKenzie Stearns

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INTRODUCTION

BERNADETTE H. HYNER

The idea for *Forces of Nature* emerged in part from research presented under the topic of "Earth, Wind, Water and Fire: Representations of Gender and Natural Elements in Literature and Film." A number of presentations were part of a Women's Caucus seminar exploring the intersections of gender and natural forces for the 2006 conference of the Rocky Mountain Modern Language Association (RMMLA). The enthusiastic response to this panel led us to propose an anthology on the subject (and we found no shortage of willing participants).

As an expansion of the query initiated in 2006, this anthology explores the manner in which cultures of the Occident interlink natural land- and seascapes with gender and sexuality. The contributors of this project are particularly interested in the representation of these links in science, poetry, novels, drama, film, and even myths and fairy tales.

In its mission, *Forces of Nature* joins several academic fields: Philosophy, Gender, Literature, and Film Studies. The editors are convinced that such a joining is useful and, indeed, necessary when teaching literature and culture courses. As we immerse ourselves in the study of literatures and films from various cultures, we come to recognize that the land and seascapes conjured in such texts frequently utilize gender coding to construct distinct national, cultural, or individual identities.

If we are to accept in this context, as Judith Butler suggests, that identity-forming elements such as gender, sex, and sexuality are learned (as opposed to strictly biological), then we must also recognize the need for the strategies cultures employ to hold these artificial constructs in place.[1] The means to this end are compulsory performances, ritualized narratives, scripted and reiterated under and through constraint, under and through the cultural force of prohibition and taboo.

While the resulting gendered creations may seem persuasive and enduring, they, nevertheless, are constructs or myths, reactions to a given

[1] Judith Butler, Bodies that Matter: On the Discursive Limits of 'Sex' (New York: Routledge, 1990), 95.

code which tends to organize social land and seascapes according to basic gender categories. To be sure, the view of a world, in which a rational male principle, identified with the sun, is (counter-)posed to a passive, 'natural' female form, upon which the sun's light falls, only seems eternal.

Western understanding of nature resembling a creative birthing process may indeed be rooted in ancient ideas associated with the fruitful relationship between a celestial father and a mother earth. Much of ancient mythology identifies the extraterrestrial element as male and its earth-bound (counter-)part as female, who must be surmounted and made fruitful by him.[2] Best known from Hesiod's *Theogony* of the eighth century B.C., the golden age, and therewith the possibility of change (and perhaps progress), begins when Krónos (the Greek term for time) castrates his father, Uranós (sky), thereby severing the realm of the cosmos from Gaía, the earth.[3] According to Hesiod, time (Kronós), measured by the pendular ossilation between two distinct poles, and, therewith, change begins with the separation of the celestial Uranós from the terrestrial Gaía.

The authority of gendered creations such as the one conjured by Hesiod grows from their very conflation with ideas of the normal and the natural (world). The linkage between gender and nature gives birth to normative (naturalized) gender models as well as highly codified (gendered) landscapes.

With time, the normative hierarchies encoded in these links between gender and the environment have become unions to esteem or to vilify. Scholars such as Annette Kolodny reason that by equating gender with the natural world, (wo-)men are diminished to biological impulses and unalterable gender codings.[4] Conversely, by gendering landscape, the same arguments used to assign gender tend to be utilized to control and conquer nature. Andrea Blair in contrast argues that "the very descriptions used to subjugate […] can be reappropriated, creating a paradoxical space in which alternative re-interpretations of gender norms are possible."[5]

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[2] See Hans Peter Duerr's Dreamtime: Concerning the Boundaries between Wilderness and Civilization (Oxford: Basil Blackwell, 1985) and Kenneth Robert Olwig's "Sexual Cosmology: Nation and Landscape at the Conceptual Interstices of Nature and Culture, or: What Does Nature Really Mean," in Landscape: Politics and Perspectives (Oxford: Berg, 1993), 307- 43.

[3] Refer to Hesiod's Theogony (Cambridge, Mass.: Focus Information Group).

[4] Annette Kolodny, Land Before Her: Fantasy and Experience of the American Frontier, 1630-1860 (Chapel Hill: U. of North Carolina, 1984), 8.

[5] Andrea Blair, "Landscape in Drag: The Paradox of Feminine Space in Susan Warner's The Wide, Wide World," The Greening of Literary Scholarship (University of Iowa: Iowa City, 2002), 116.

In order to probe the wholesale conflation of gender, land- and seascape, this collection of essays specifically explores the myriad ways and reasons for which elements of the earth, wind, water, and fire serve to acknowledge and/or question our conceptions of naturalized gender or gendered nature. In its eclectic collection of approaches to the subject matter, *Forces of Nature* hopes to find a middle ground between the equation of gender with nature and its categorical dismissal. While the anthology blurs the margins between such terms as masculinity and femininity, the analyses, as a whole, expose our understandings of gender and the natural as artificial constructs that indeed are subject to change.

Forces of Nature features analyses authored by scholars whose studies of philosophy, literature, and film explore the human connection with the natural world at its most elementary level. While aspiring to make more complex the subjects of gender and nature by intertwining them, the contributions to this book, taken as a whole, do not present a united front about the topics at hand. They neither share common theoretical positions, nor do they propose the same opinions about gendered identity and nature.

Dennis Desroches' essay, the first in this collection, ponders the contemporary constructions of Francis Bacon's philosophic-scientific thought concerning nature. This analysis explores just a few of those contexts where Bacon's name is made to stand in for an entire history in which nature is made to move from a position of authority over humanity to one of subservience. Desroches steps outside of the critical purview of Bacon studies proper with his close reading of *Novum Organum.* He debunks ways of conceiving and treating nature that Bacon did not espouse and shows that they greatly misplace, and entirely misconstrue, an important part of Bacon's thoughts on nature.

While Desroches points out the manner in which an early theoretical text came to be linked with the subjugation of nature, Lila M. Harper and Bernadette H. Hyner turn our attention to the treatment of nature and gender in literature proper. Their analyses focus on texts that ascribe gender to the sea and, by extension, to the creatures that dwell below its surface. Harper traces descriptions of jellyfish and explores the means by which this invertebrate came to be linked with femininity and was associated with Modernist experiments in stream-of-consciousness narration. Her study of eighteenth and nineteenth–century references to the jellyfish shows that these creatures not only appear on the edges of literature to evoke the influence of natural history travel accounts, but that their role simultaneously supports and questions gendered views of nature.

As Harper ponders the evolution of gender and nature descriptions in historical accounts, Bernadette H. Hyner compares the literary treatment

of the sea and its creatures in nineteenth-century legends and fairytales. Hyner reads the mythical character of the mermaid, part animal, part human, as a vehicle for debates over gender and nature. She shows that in light of more common, misogynous mermaid depictions, women authors such as Marie Timme are players in an effort to revise literary gender and nature representations. Hyner proposes that in composing alternative mermaid tales, Timme awakens the next generation of nineteenth-century wo/men to the tragic mistreatment of her sex, while presenting the mythical character and the element assigned to be her home as less fearsome.

The link between the feminine and myth is also at the heart of Precious McKenzie's analysis of Sherwood Anderson's texts. Although much like the woman character at the center of Timme's text, Anderson's women are victimized, they are able to summon power and strength to combat the forces of industrialization. Anderson's texts address the physical and psychological struggle modern women face as they attempt to escape the isolation caused by the industrial revolution in order to recreate an America that reconciles the Virgin with the Dynamo. Anderson's reference to the mythical force of the Virgin, in McKenzie's judgment, comes across as an attempt to combat Puritanical conceptions of sexuality, elevate women's value and place in American society, and re-connect the disenchanted with a purer, more innocent time past. To this end, myth seems to provide a link in the chain between man and nature as it offers hope for a more joyous future.

Jill Anderson's reading of the woman character at the center of a text authored by William Faulkner, much like those figures under consideration by McKenzie, speaks to the tensions between the natural world and man's relationship to the Dynamo force. Anderson views *As I Lay Dying* as a paradoxical text, invested in and subverting human conventions. By necessity, Faulkner's protagonist is entangled with the natural world simply because she vehemently rejects human constructions, such as words and the roles she must fulfill, in favor of a return to the earth as a means of erasing such conventions. Faulkner's text emphasizes the fervor of resistance and disruption that endures beyond the protagonist's demise as even her remains work to become one with the earth.

The themes of disrupting ancient systems and reclaiming the feminine linger on in Mary K. Azcuy's reading of Louise Glück's postfeminist *Persephone, the Wanderer*. The author's return to Greek legend shows, much like the Anderson text, that the disruption to earth's balance is rooted in the rationalization of brutality and dominance encoded in

convention. Her rewriting of the ancient Persephone story suggests a need to go beyond the assumptions it originally employed to justify violence. In a restorative, poetic moment, Glück's re-appropriation not only questions the assignment of gender roles and the power of life and death, but also envisions solitude for the violated and a return to prosperity.

An end of exploitation seems inconceivable in Kristin E. Pitt's reading of Reinaldo Arena's short fiction because his narratives render no strategy of resistance ultimately able to dismantle oppression. Pitt establishes that the plantation system, a socially-constructed institution that deploys the language of nature, justifies sexual, social, political, economic, and environmental forms of control. Its logic of exploitation proves specifically resilient for it is capable of adapting to new institutions and contexts. At its worst, it conditions the oppressed to internalize such discourses even while they resist the given discourses of natural sexuality and productivity that sustain the plantation society. Pitt explores the tragic moments in which the subjugated defensively resort to the very language that oppresses them.

Jody R. Rosen also sees the conventions encoded in language as a basis that shapes our understanding of the human condition. In contrast to Pitt's analysis, Rosen's reading of Woolf suggests that a break with convention is possible. Rosen employs the Möbius model to explain Woolf's depiction of the bidirectional interaction between nature and culture which explode patriarchal binaries. In a virtuosic break with convention, Woolf infuses the concepts of gender and nature with multiplicity and fluidity as they not only interact and shape one another, but also propel the reader into fictional realms where conventional language strains to describe the scene.

While most contributors primarily focus on texts exploring cultured landscapes, John P. Bruni and Martin Mühlheim ponder the depiction of the American West in modern literature. The gender formations in London's dog novels, illuminated by biological systems theory, open up chances for reconstructing gender through the evolving relations between animals, humans, and their environment. Bruni, like Pitt, shows how the construction of supremacy designates those that become subjects to an order which conflates natural and discursive ecologies. He traces London's co-evolution of humans and dogs to the same evolutionary doctrine of the survival of the fittest as gender and race discourses that shaped the belief in white, male dominance and informed the biological politics of the frontier.

Martin Mühlheim, much like Bruni, explores formations of nature and gender in literature depicting the American frontier. While placing Annie

Proulx's "Broke Back Mountain" within the pastoral, a tradition that explores homoeroticism as part of its concern with natural settings, Mühlheim unveils a number of inconsistencies in placing the concept of nature in the service of a sexual culture that only sanctions heterosexuality. "Broke Back Mountain" provokes us to ponder nature as a necessary basis, but not a sufficient explanation of human sexuality, while its tragic conclusion suggests that sexuality only becomes human when it enters the social realm.

CHAPTER ONE

DENNIS DESROCHES

FIGURING SCIENCE: REVISITING NATURE IN BACON'S *NOVUM ORGANUM*

Nature, broadly construed as the representation of that to which the scientist is beholden for the production of knowledge, has shaped in profound ways not only the intellectual milieu of early modernity, but the intellectual milieu of our own modernity as well. Contemporary questions concerning the ecological, technological, and even social disposition of humanity inevitably come to depend on some understanding of the manner in which we manipulate nature. From the perspective of many intellectuals, such innocent-sounding "manipulation" has been replaced—and not without warrant—by the language of violence: nature, in the twentieth and twenty-first centuries, has become a victim.

The human sciences often trace the victimization of nature back to Francis Bacon, whose renovation of natural philosophy and the procedures of scientific method gave rise to his commonplace moniker as the "father" of modern science, a moniker from which has been inferred his "fathering" of the modern technological abuse of nature. It is this latter conception of Bacon's place in the history of ideas that I wish to examine here.

The question of nature has never been far from pointed consideration when it comes to the text of Francis Bacon's philosophico-scientific thought. It has become the case in this regard that nature—its meaning in, function for, and figural relation to Bacon's scientific program—has been received according to certain orthodoxies that do more to conceal the stakes with which it is invested by Bacon than to reveal them. What follows, then, is my attempt to offer a new and more suggestive reading of the place of nature in Bacon's thought, one that can simultaneously offer new ways to think about our relationship to nature today.

I want to point out, from the beginning, that what follows deliberately steps outside of the critical purview of Bacon studies proper. Part of what it means to understand contemporary constructions of Bacon's thought demands that we look to those places where Bacon has become a kind of place-holder for a particular ethos or way of thinking, where the understanding of Bacon's text itself seems so transparent as to no longer demand either critical scrutiny of it, or even the necessity to cite it. In our case, I seek to address just a few of those contexts where Bacon's name can, with great authority, be made to stand in for an entire history in which nature moves from a position of authority over humanity to a position of subservience, and ultimately slavery. Part of what I mean to show is that such a conflation greatly misplaces, and entirely misconstrues, an important part of Bacon's conception of nature. I have here chosen to dwell specifically on Francis Bacon's most important theoretical articulation of his project, Book I of his *Novum Organum*, precisely because this theoretical orientation too often goes ignored in treatments of his thought. In understanding the stakes of Bacon's configuration of nature, I hope to provide some insight into the ways that we might be able to re-evaluate the technocratic position that is generally, and mistakenly I think, attributed to him.

Part I: Nature and the Feminine

In *What is Nature?*, Kate Soper attempts to engage the politics of the idea of nature, the "social and cultural demarcations which have been drawn through the concept."[1] One facet of those demarcations involves a certain recourse to Bacon, seen most recently in authors such as Sandra Harding (1991), Evelyn Fox Keller (1985), and Carolyn Merchant (1980), in which the question of the feminization/sexualization of nature is taken up. Soper sees the devaluation of women through a process of naturalization to augur a reciprocal devaluation of nature because it is figured as female. Failing to realize how sinister her argument becomes the moment that it is forced to rely, for its critical force, on the *efficacy* of this reciprocity (an efficacy, that is to say, that one might rather seek to challenge at its very origin), Soper goes on to call upon a certain rhetorical thread in Bacon's thinking to bolster her claim:

> Nature is both the generative source, but also the potential spouse of science, to be wooed, won, and if necessary forced to submit to intercourse. The Aristotelian philosophy, claimed Bacon, in arguing for an

[1] Kate Soper, What is Nature?, 3.

> experimental science based on sensory observation, has left 'nature herself untouched and inviolate;' those working under its influence had done no more than 'catch and grasp' at her, when the point was 'to seize and detain her;' and the image of nature as the object of the eventually 'fully carnal' knowing of science is frequently encountered in Enlightenment thinking.[2]

Even if we should question Soper's strategy here, it would certainly be ill-advised to disagree with her characterization—the themes and figures she elicits are well known and obviously worthy of concerted critique. In this, it is not at all our intention to critique her project in general. It is, rather, to point out the way that Bacon gets used in projects like this as a result of what seems to be our self-evident knowledge of his thought. For upon closer examination, we see that Soper has unduly "re"contextualized phrases from disparate parts of Bacon's project that, while rhetorically amenable to her own argument, do not accurately capture his. We must put aside in the first instance, for example, her inaccurate characterization of Bacon's project as an "experimental science based on sensory observation"—its limits and its limitations—since it is well-known within the corpus of Bacon commentary that "sensory observation" is precisely the object of a rigorous critique by Bacon. Furthermore, Soper's emphasis on metaphors of rape/coercion, while certainly exposing a crucial point of inquiry for the question of the sexualization of knowledge vis à vis the feminine in general, conveniently ignores the twin rhetorical thread of submission and obeisance that is, for Bacon, just as crucial to the production of knowledge. We discover, for example, that if indeed nature is to be "seized and detained," we must also, according to Bacon, "wait upon nature instead of vainly affecting to overrule her."[3] The same feminization exists here, but the rhetorical dynamics of sexual aggression are significantly dissipated by a certain strategic patience. Bacon feels compelled, furthermore, to point out in both the "Preface" and the "Plan" of "The Great Instauration," that "Nature to be commanded must be obeyed," repeating this suggestion yet again in Book II; "man," ultimately, must be construed as the "servant and interpreter of nature."[4]

Thus nature may indeed be the "spouse" of science, but *which* spouse it is (this crude and questionable figuring being the result of, and sanctioned by, Soper's rhetoric) is not easily determined if we remain sensitive to the rhetorical dynamics of Bacon's thought. We certainly are not saying that Bacon is some kind of feminist, and there is no question

[2] Ibid., 103.
[3] Francis Bacon, Novum, 3.
[4] Ibid., 29, 39, 118, 29 (respectively).

that Soper's isolation of a certain violence in Bacon's rhetoric deserves attention. But it cannot be attended to properly, I think, without due consideration of the entire context, both "ends," of that particular rhetorical thread. One might consider, for example, one of the most fraught of rhetorical moments concerning nature in Bacon's text, from Aphorism 117: "For I do not run off like a child after golden apples, but stake all on the victory of art over nature in the race. Nor do I make haste to mow down the moss or the corn in blade, but wait for the harvest in its due season."[5] What is given with one (rhetorical) hand is taken back by the other: if Bacon figures the interrogation of nature as a race to be won, it can only be won by being lost; as a thing to be chased, it can only be caught by waiting patiently for it. Perhaps most important here, however, is the degree to which the second statement does not simply counter the first, but also functions entirely *otherwise* to it—to juxtapose the figure of a race, and the victory it implies, with the figure of the harvest, where the stakes have changed entirely, is to render deeply ambivalent the very rhetoric of victory, violence, etc., that scholars almost exclusively dwell upon when discussing Bacon's conception of the relation between nature and science. This kind of doubleness of rhetorical strategy, persistent throughout Bacon's oeuvre, is routinely disregarded by scholars both within and beyond the confines of Bacon commentary.

Part II: Nature and Utility

We turn now to a substantially different context. Alfred Schmidt offers us a traditional conception of Bacon's relation to nature in order to dialectically stage what Schmidt sees to be the originality of Marx's conception of nature. Schmidt emphasizes, in this regard, Marx's use of the concept of "metabolism," by which Marx meant to comprehend the social as well as "cosmic" significance of revolutionary material practices vis à vis nature. As Schmidt puts it, "by releasing the 'slumbering powers' of the material of nature, men 'redeem' it." [6] The result of Marx's "metabolic" position is that now "nature is humanized while men are naturalized."[7]What is important to us about Marx's metabolic thematic here is that Schmidt represents it to be a departure from Marx's originally *Baconian* conception of nature: "With the concept of 'metabolism' Marx introduced a completely new understanding of man's relation to nature. At first he shared Bacon's view, which was inherited and developed by the

[5] Ibid., Novum, 107.
[6] Alfred Schmidt, Marx, 77.
[7] Ibid., Marx, 78.

Enlightenment, that nature should be seen essentially from the point of view of its usefulness to man."[8] Since a claim like this concerning Bacon's project can almost go without saying, it is no surprise here that it also goes without *citing*, which is to say that there seems to be no need to justify such a claim by recourse to Bacon's text. Again, it is not our point to critique, or even engage, Schmidt's project as a whole. But we might take into account the point made by Laudis K. D. Kristof and G. L. Ulmen, that while Marx does indeed establish a direct link with Bacon on the question of materialism, we should not lose sight of the fact that "the more distant and relative the affinity to dialectical materialism, the more uncritical the eulogy tends to be [. . .]."[9] In other words, Bacon's name becomes the place-holder for a philosophical project that has been greatly reduced and misread. If, for example, there can be no question that, as Bacon says, (scientific) knowledge of nature is meant for "the benefit and use of life," there is also a very clear sense in which his project must never be hypostatized as such.[10] This point is worth dwelling on in some detail, perhaps most importantly because of a blatant (precisely because so innocuous) misprision of Bacon's thought here. Despite Schmidt's suggestion, the utility of *nature* has never been at stake for Bacon; rather, only the utility of the *knowledge* produced by a very specific and densely theorized method of inquiry *about* nature has ever been at issue. Bacon himself makes this crucial, but usually ignored distinction in a rather remarkable way:

> And if men have thought so much of some one particular discovery as to regard him as more than man who has been able by some benefit to make the whole human race his debtor, how much higher a thing to discover that by means of which all things else shall be discovered with ease![11]

Coming as this does at the end of the purely theoretical Book I of the *Novum*, (and it is important to consider the fact that Book I and Book II of the *Novum* are about completely different tasks), and marking one of the rarest of occurrences in Bacon's philosophical writings—the use of the exclamatory—it remains something of a wonder to me that Bacon's project still continues to be conceived in predominantly practical or utilitarian terms. For Bacon speaks here of a purely and fundamentally

[8] Ibid., Marx, 78.
[9] Laudis K. D. Kristof and G. L. Ulmen, "Francis Bacon" in Society and History, 234.
[10] Bacon, Novum, 15.
[11] Ibid., 119.

reflexive moment in the constitution of scientific inquiry—the discovery of discovery—that has possessed his project since the *Advancement of Learning* 20 years earlier: ". . .it cannot be found strange if sciences be no farther discovered, if the art itself of invention and discovery hath been passed over."[12] As he will go on to say in the *Novum*, (again repeating a fundamental point of the *Advancement*, 129), "I regard that the mind, not only in its own faculties, but in its connection with things, must needs hold that the art of discovery may advance as discoveries advance." [13]

It is, then, this intensely reflexive question concerning utility that Bacon privileges above all else in the desire to disclose the secrets of nature, and not simply the question of the *mere* utility of things. What is at stake here is precisely the question of how, and to what degree, Bacon theorized *utility itself*. This extended passage from the *Novum* clarifies further Bacon's position:

> Again, it will be thought, no doubt, that the goal and mark of knowledge which I myself set up (the very point which I object to in others) is not the true or the best, for that the contemplation of truth is a thing worthier and loftier than all utility and magnitude of works; and that this long and anxious dwelling with experience and matter and the fluctuations of individual things, drags down the mind to earth, or rather sinks it to a very Tartarus of turmoil and confusion, removing and withdrawing it from the serene tranquility of abstract wisdom, a condition far more heavenly. Now to this I readily assent, and indeed this which they point at as so much to be preferred *is the very thing of all others which I am about.* For I am building in the human understanding a true model of the world, such as it is in fact, not such as man's own reason would have it be. . . *Truth, therefore, and utility are here the very same things; and works themselves are of greater value as pledges of truth than as contributing to the comforts of life.* [14]

Bacon's words here belie an entire critical history that, like Schmidt, sees Bacon's major contribution to the history of ideas to be the rhetoric of utilitarianism. This passage, especially Bacon's words concerning the construction of a "true model of the world," are regularly cited without acknowledging their relationship to Bacon's conception of the "discovery of discovery." Citing only the final sentence of the above passage, for example, Timothy J. Reiss suggests that we should not, here, allow ourselves to believe that Bacon is changing his emphasis, or downgrading

[12] Bacon, Advancement, 122.
[13] Bacon, Novum, 120.
[14] Ibid., 113-114, my emphasis.

"the improvement of men's lot."[15] Given what I have emphasized above, this is precisely what we *should* be doing. Or rather, we should be downgrading our emphasis on an interpretation of Bacon's text that, in the first instance, fails to read what is in the text to be read—it is not Bacon who is changing his emphasis, but rather modern critics and their readings who have failed to accurately assess that emphasis in the first instance. For here, as in our first example, there is a doubleness to Bacon's conception of utility—if "truth" and "utility" are "the very same things," Bacon nevertheless emphasizes that "works," the *raison d'être* of utility, must also speak back to their theoretical provenance. In this sense, utility cannot blithely be used to figure Bacon's project without first thinking carefully about how it functions. We have shown here that it remains a far more complex conception than received wisdom would have us believe, such that one of the very foundations of Bacon's thought concerning experimental method depends, precisely, on the production of *useless* knowledge. Bacon will later write:

> But if objection be taken to speculative subtleties, what is to be said of the schoolmen, who have indulged in subtleties to such excess—in subtleties, too, that were spent on words, or at any rate on popular notions (which is much the same thing), not on facts or nature; and such as were useless not only in their origin but also in their consequences; *and not like those I speak of, useless indeed for the present, but promising infinite utility hereafter*. [16]

"Useless," in this instance, really implies "theoretical" knowledge, knowledge that announces the grounding conditions for utility itself. It is the manner in which scholars ignore or downplay the theoretical implications of Bacon's project—like Salim Rashid, who suggests that "the most important aspect of Bacon's message was his proclamation that utility was the best guide to truth"—I would suggest, that allows the rubric of a pure and "untheorized" utilitarianism to take hold over it.[17]

Schmidt's characterization of Bacon is useful in this regard, because it demonstrates precisely the manner in which Bacon's conception of utilitarianism comes to be "de-theorized." Schmidt makes the point, to begin, that Marx "never tired of emphasizing that men must remain in a continuous process of exchange with nature."[18] Yet this exchange is

[15] Timothy J. Reiss, Discourse, 211.
[16] Bacon, Novum, 110-111, my emphasis.
[17] Salim Rashid, "Methodology" in Journal of the History of Ideas, 245
[18] Schmidt, Marx, 78.

conceived in purely pragmatic terms, and Schmidt uses Bacon, once again, to bolster the pragmatism of this point: "The idea that men can only control nature by themselves submitting to nature's laws is characteristic of the scientific outlook of the early bourgeois epoch. As Francis Bacon wrote in his *Novum Organum*, 'nature is only subdued by submission,' and theoretically recognized causes are converted into rules of practical behaviour."[19] Little recognition is given to the importance, rhetorical and otherwise, of Bacon's "subdued by submission" ethos—we noticed during our discussion of Soper's work, for example, how important a concept it is in offering us a different reading of Bacon's project. Here, Schmidt is able to subdue its radicality himself by claiming that it represents, or recurs to, a template of practical (scientific) behavior—this ethos becomes, not a mark of the suggestiveness of Bacon's thinking, but, at best, a figure of and for scientific technique. As such, a concept that should force us to pause over received readings of Bacon's utilitarianism is instead marshaled in its service and forced to serve as the dialectical counter against which Marx's concept of nature can be elucidated. This elucidation can only come, however, at great cost to an understanding of Bacon's project. If Schmidt acknowledges a more complexly constituted concept of nature for Bacon than did Soper, it is nevertheless "dumbed down," as it were, by means of an interpretive maneuver meant to erase the theoretical stakes of Bacon's thinking.

Part III: Nature, Utility, Theory

Louis Dupré's recent book *Passage To Modernity*, written some thirty years after Schmidt's study, persists in both the association of Bacon's conception of nature with a utilitarianism, and in the concerted attempt to "de-theorize" Bacon's thought. Dupré contextualizes his discussion of Bacon in terms of the "emergence of objectivity" in the history of ideas, suggesting that it was Baconian utilitarianism (among other things), combined with a sort of divinely inspired ethos of mastery over nature (closely related to Soper's interpretation), that laid the grounds for later conceptions of objectivity, objectivity being conceived here in terms of the objectifying force of scientific inquiry. Dupré begins by suggesting, quite rightly perhaps, that "if the alleged modesty of Bacon's observational method is somewhat deceptive, so is his submissiveness to a divinely established order."[20] Yet Dupré has little understanding of the function of

[19] Ibid., 95.
[20] Louis Dupré, Passage, 71.

religion in Bacon's text, and in this conceives Bacon's "voluntary submission to the divine oracles" to actually mark the deeper, more sinister purpose of "acquiring control of nature."[21] In Dupré's words, "Now the moment has arrived to recover that right [i.e., the divine right to know and thereby conquer] and to exercise the full power over nature granted us by divine bequest."[22] Indeed, Dupré goes so far along these lines as to suggest that Bacon implied we "avoid pursuing knowledge for any but practical reasons."[23] We have, by this point, left the realm of anything that Bacon's text might offer for our reading in this regard, as our earlier discussion of the theoretical implications of Bacon's project demonstrates, yet Dupré's thinking is still accepted as a legitimate interpretation of Bacon's thought precisely because it is the logical extension of received conceptions of it. So obvious do such conclusions seem, in fact, that it becomes quite easy to ignore Dupré's complete avoidance (like Schmidt's above) of direct engagement with Bacon's text. When Dupré goes on to suggest that Bacon called for the "unlimited control over nature," predicated on the belief in "unrestricted human power over nature," he does so without offering us the crucial "other half" of Bacon's argument (i.e. that "nature, to be commanded, must be obeyed."). [24] In avoiding the complexity of the question of nature, Dupré comes to explicitly de-theorize Bacon's project in general: "Bacon tends to transfer the theoretical question: In what does a thing's nature consist? to the functional one: How does it work? and ultimately to the one: What human purpose does it serve?"[25] Given Bacon's insistence that new discoveries be able, above all, to enhance the "art of discovery" itself, and given the structure of his method in which the iterative movements between experiment and axiom contribute directly to this reflexive stipulation, the "ultimate" question for Dupré, sanctioned as it may be by an entire history of Bacon commentary, ultimately misrecognizes the theoretical importance of Bacon's interrogative strategy. Yet what is strange about Dupré's argument here is that even in the light of this de-theorization, he can at the same time suggest that Bacon "remains more devoted to the traditional ideal of *theoria* than his later followers."[26] Dupré does not seem to grasp the significance of this claim which, I say, is precisely what is most important about Bacon's thought *and* the history

[21] Ibid., 71.
[22] Ibid., 71.
[23] Ibid., 71.
[24] Ibid., 72.
[25] Ibid., 72.
[26] Ibid., 72.

that has tried to reify it. Despite his own critical instincts, even contrary to what he has read in the text, Dupré is still compelled by the very history of Baconianism to sustain an interpretation that is clearly inadequate to the text he interprets. The lack of reading here is *unknowingly deliberate*: how, we must ask ourselves, can Dupré make two largely incommensurate claims concerning Bacon's project—Bacon's thought resists theory even as it depends upon and embraces it—and yet unproblematically side with just one interpretation—Bacon avoids the theoretical in favor of the practical—when both interpretations are conditioned more by the text's received history than what the text itself offers?

We can conclude that Dupré has inadvertently reversed the interrogative movements of Bacon's project that he describes above. Recalling that Bacon thought "works" to be more valuable as "pledges of truth" than as figures of their potential utility to humanity, we can say with some confidence that the "ultimate" question regarding scientific inquiry for Bacon was decisively *not* "What human purpose does it serve?" Part of the problem for Dupré may be that he does not isolate the right question to begin with, for if the question "In what does a thing's nature consist?" is a theoretical question, it is nevertheless not the theoretical question that drove Bacon's thinking. Rather, Bacon might be better understood to have asked "*How do we go about disclosing, discovering*, that in which a thing's nature consists?" Dupré's question, which, to be fair, reproduces the assumptions of an entire critical tradition, completely ignores the centrality to Bacon's thinking of the ability of humanity, given the right methodological conditions, not simply to discover phenomena, but to pose the very questions necessary for discovery itself to obtain in the discoveries one makes—that is, for "discovery to enhance the art of discovery." Bacon has never been conceived as being "capable" of this kind of self-reflection in his thought. Yet in fact, he is largely responsible for its existence as a philosophical possibility (let us not, for example, forget that Immanuel Kant, perhaps the one thinker with whom questions of self-reflection and representation are most at home, dedicated his *Critique of Pure Reason* to Bacon). Reading Bacon's conception of nature against commonplace interpretations of it, like Soper's, Schmidt's, and Dupré's, makes this abundantly clear.

Part IV: Landing Place: The Command-Obey Imperative

What we should emphasize in our discussion of nature above, then, is Bacon's insistence on a sort of "double" relation to nature. It is not incorrect to suggest that Bacon's utilitarianism emerges out of, and

reciprocally implies, a conception of nature in relation to which "man" can be conceived as a sort of invader, indeed, a "conquering general" as he himself sometimes put it. Yet at the same time, to dwell exclusively on this interpretation alone (sometimes for propagandist, sometimes for pejorative reasons) conceals every bit as much as it reveals about Bacon's thinking. For as we noted, and to reiterate, Bacon's text also offers a certain obeisance for, submission to, and patience with nature.

This point has not been altogether forgotten, and Michel Serres offers us crucial insight into the nature of this forgetting, as well as the stakes that this command-obedience dyad represents for Bacon's project:

> If we define nature as the set of objects with which the exact sciences are concerned at a given moment in history, viewed synchronically, (which is a restrictive but operational definition), the emergence of physics, in particular, can be thought of only in the global framework of our relations to nature. Now, ever since Francis Bacon's work, these relations have been described, from the heights of his social situation, by the command-obedience couplet. One commands nature only by obeying it. This is probably a political ideology—betrayed by the prosopopeia—which implies practices of ruse and subtlety: *in short, a whole strategy*.[27]

Bacon does not offer this dyad lightly, as "mere" rhetoric. What Serres isolates here are not only the political implications of this relationship, but the theoretical implications as well: Bacon's complications of the power relations between nature and the investigator—undertaken precisely by personifying nature (i.e. as something that can be either commanded or obeyed), the "prosopopeia" above—offers not simply a rhetorical flourish, but a fundamental constituent of his scientific program. In other words, Bacon explicitly acknowledges the necessity, when trying to disclose the secrets of nature, for a certain playful subtlety, or put otherwise, a kind of "give and take." We need only recall Bacon's famous analogy between scientific inquiry and "hide-and seek" with God to be reminded that play and subtlety have always been at the heart of his thinking.

There is an absolutely crucial reason why Bacon would need to finesse in this manner the relationship between humanity and nature, and Serres recognizes it:

> Descartes, after Bacon, picks up the precept: he calls for us to become the masters and possessors of nature. *The impulse to obey has just disappeared*. Baconian physics made science into a duel, a combat, a struggle, for domination; it gave it an agonistic model, proposing a form of

[27] Michel Serres, Hermes, 21, my emphasis.

> ruse for it so that the *weak party* would triumph. It transformed science into a game of strategy, with its rules and its moves. [28]

For Bacon, the rhetoric with which so many contemporary critics and thinkers remain outraged is in fact marshaled as a strategy by which to engage a force—nature—that, precisely because of its clear superiority over humanity, *could not otherwise be engaged*. Bacon reminds his readers, in Book II of the *Novum* that the importance of the work he sets for himself is not its attempt to master nature, but rather simply to make the human intellect capable of engaging it in a scientific way. The "greatness" of the work he composes is precisely located, as he clearly states, in "rendering the human understanding *a match* for things and nature."[29] To ignore or forget the concept of obedience in Bacon's program is to elide a fundamental, if nevertheless figurative, constituent of the enterprise he augurs. And to attribute to Bacon an ethos of domination over nature is to occlude a rather significant grounding strategy for him, one that depends on conceiving nature not as an entity to be forced to disclose its secrets, but as an entity capable of resisting our attempts to understand it unless we take to covert tactics. In other words, nature, for the first time, becomes "studiable;" in this regard, we might remember that part of Bacon's problem with the scientific inquiry of his day was the tendency to give up if the problem seemed unsolvable: "But by far the greatest obstacle to the progress of science and to the undertaking of new tasks and provinces therein is found in this—that men despair and think things impossible."[30] And foremost among the "impossible" subjects of inquiry was precisely the "obscurity of nature."[31]

We see, then, that characterizations of Bacon's thought outside of Bacon studies speak more of a desire to justify a distaste—well intentioned, and completely understandable—for a certain ethos of knowledge production contemporary today, than to what Bacon's own ethos might have been. It is the widespread reproduction of these and similar conceptions of Bacon's understanding of nature that we have tried to redress, not only because they obscure Bacon's thinking, but also because, in figuring Bacon's thought as a kind of precursor to contemporary abuses of nature, they come to obscure the stakes of our own relation to nature as well. When we come to understand the double nature of Bacon's conception of nature, and the crucial place that nature

[28] Ibid., 21, original emphasis.
[29] Bacon, Novum, 155, my emphasis.
[30] Ibid., 90.
[31] Ibid., 90.

holds in his scientific program, new alternatives for conceiving nature emerge alongside contemporary technocratic knowledge practices. Above all, however, we might also learn something about the putative transparency of historical ideas that often come to us from specialized fields of inquiry. For Bacon continues to serve as a place-holder for a way of conceiving and treating nature that he did not espouse. Our task then, in re-reading Bacon's text with specific interest in his conception of nature as it pertains to his scientific program, is not only to make the point that it is possible for nature to be the subject of inquiry without its being subjected by that inquiry; it also becomes clear that the very modes of critical analysis we use to determine the history of an idea must also be susceptible of similar strategies of analysis. Bacon's theoretical sophistication in precisely this regard continues to teach.

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CHAPTER TWO

LILA M. HARPER

"THE STARFISH THAT BURNS": GENDERING THE JELLYFISH

Beginning in 1926, the Modernist novelist and critic Wyndham Lewis repeatedly surveyed his fellow writers with expressions of disgust, finding the works of such authors as James Joyce and Virginia Woolf filled with "dreamy and disordered naturalism,"[1] full of "jellyfish attributes,"[2] symptoms of an overly feminized and psychoanalyzed age. Jellyfish, for Lewis, symbolized and characterized women's influence on British modern culture, the rejection of the masculine, and pretty much all that was wrong with his age. The choice of metaphor is an interesting one. How did the jellyfish become linked to femininity and become associated with Modernist experiments in stream-of-consciousness narration? How did this invertebrate become feminized?

It has been noted by scholars such as Londa Schiebinger that natural descriptions often include gender traits and those traits that are ascribed to the natural world shift with changes in ideas of masculinity and femininity.[3] Scholars have explored the gendering of plants by Carl Linnaeus (1707-1778) and Erasmus Darwin (1731-1802), then quickly moved into the manner in which such genderings have been used to describe the vertebrates, especially the primates, which, after all, are closest to humans. However, historically, one of the most conflicted areas in biological taxonomies centered on those creatures that are the *least* like us: the invertebrates, particularly those creatures commonly called jellyfish.

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[1] Wyndham Lewis, Men Without Art. 1934. Ed. Seamus Cooney (Santa Rosa, CA: Black Sparrow, 1987), 99.

[2] Wyndham Lewis, Tarr (New York: Jubilee, 1973), 334.

[3] Londa Schiebiner, Nature's Body: Gender in the Making of Modern Science (Boston: Beacon, 1993).

Existing on the edge of the definition of the animal kingdom, the jellyfish has long puzzled observers. It is translucent and protean in nature, appearing as a mass of life that is so elemental in nature as to blur the divide between the animate and the inanimate world. Operating without a central nervous system, they are alien animals that defy our understanding of animal behavior. The jellyfish today are still very mysterious creatures as evidenced by the inability to explain two recent "blooms" of Mauve Stingers (*Pelagia notiluca)*, a small red jellyfish, that covered an area of about ten square miles and a depth of thirty-five feet; the jellyfish moved in and stung over 100,000 salmon, destroying Northern Ireland's only salmon farm and leaving observers unsure as to how to describe what happened—observers pondered whether this event was caused by wind shifts or purposeful "invasion."[4] Reporters were unclear whether they were observing animal or plant behavior.

Although taxonomy is generally overlooked in cultural studies, the history of how the jellyfish came to be classified, the determination of which species was to be the emblematic model of the class, and its separation from the starfish mark a change in the manner life is organized and, thus viewed. As Mary P. Winsor's landmark study in the history of science, *Starfish, Jellyfish, and the Order of Life*, has shown, between the eighteenth and nineteenth century, pre-Darwinian naturalists attempted to determine if taxonomic relationships were convenient human-imposed organizational categories or whether these similarities among life forms indicated something inherent in the natural order.[5] Additionally, there was a strong desire among nineteenth-century scientists to show that nature was both ordered and moral.[6] This desire and search for order led to an intellectual struggle that particularly focused on the marine invertebrates and many prominent evolutionary scientists directed their attention to this area of the animal kingdom that appeared to be the most disordered. For example, Charles Darwin (1809-1882) worked on worms and barnacles; Thomas Henry Huxley (1825-1895) on jellyfish and aphids. Up until the nineteenth century, taxonomy followed Pliny the Elder's (29 AD -79 AD) basic ordering of life, one that describes starfish and jellyfish as essentially single creatures.

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[4] "Jellyfish Attack Destroys Salmon," BBC News, 21 Nov. 2007. Available at http://news.bbc.co.uk/2/hi/uk_news/northern_ireland/7106631.stm.

[5] Mary P. Winsor, Starfish, Jellyfish, and the Order of Life: Issues in Nineteenth-Century Science (New Haven: Yale University Press, 1976).

[6] George L. Levine, "Once More, with Feeling: From Science to Value" (paper presented at the annual Modern Language Association meeting, Chicago, 29 December 2007).