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The Hand: Grasping Embodiment in British Literature 1690-1746

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Publication Date
2018

Peer reviewed|Thesis/dissertation
The Hand: Grasping Embodiment in British Literature 1690-1746

DISSERTATION

submitted in partial satisfaction of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

in English

by

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2018
DEDICATION

To

Tim
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ACKNOWLEDGMENTS

While many hands did not, in this case, make for light work, exactly, this work is immeasurably richer thanks to the gentle pressure of many expert and loving hands.

I am indebted to Jayne Lewis for her astute readings and always timely support. Her vision for my work and myself has repeatedly challenged and expanded my own. I thank too Daniel Gross who similarly pushed me in directions I needed to travel and helped articulate how my work is an intervention in my immediate discipline and beyond. Ann Van Sant’s work on the hand is the inspiration to my own. I thank her for that inspiration and careful readings of my work. All three of these professors have been a part of my education since my first years in my program and have influenced and supported me far beyond these pages—my thanks. I have benefited immeasurably from the rich intellectual world of the UCI English Department and would like to thank as well other professors who have engaged with my work over the years, including particularly Andrea Henderson, Oren Izenberg, Ted Martin, Jerry Christensen, Julia Lupton, Victoria Silver, and Jonathan Alexander. Instrumental in my development as a teacher were Elizabeth Allen, Rebecca Davis, Hugh Roberts, and the excellent faculty and staff of the composition program.

In a paragraph and league of their own, my fellow graduate students deserve thanks for their intellectual generosity and emotional support, particularly Elizabeth Mathews, Sharon Kunde, Jens Lloyd, Maureen Fitzsimmons, Jasmine Lee, Chris Dearner, Jared McCoy, Margaret Speer, and Austin Carter.

My thanks as well to Matthew Wickman and Nick Mason of Brigham Young University who started me on this path many years ago and whose thoughts on James Thomson are still very present in this work.

Financial support was provided by the University of California, Irvine, and I particularly wish to thank the Donald and Dorothy Strauss Foundation for the Dorothy and Donald Strauss Endowed Dissertation and Thesis Fellowship which gave me confidence in my work and made a huge impact in this work’s completion.

Finally, I thank those closest to me who in a very real way made this work possible. My thanks to my parents who gave me so much and never questioned my path. Thanks as well to my in-laws who provided a harbor from which to finish this work. Immense emotional support came from my sister, Leslie. My darling son, Arthur, brought much needed balance, perspective, and joy to my life. My thanks cannot even begin to address the many ways in which Tim lightened my load so as to make this work possible. He is a fabulous partner, and in countless ways his hands have lifted mine. And a final thanks to another father who told me in my formative years to study what I desired. I am glad I did.
CURRICULUM VITAE

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“The Hand: Grasping Embodiment in British Literature 1690-1746” challenges the narrative that dualism is the totalizing account of thought in the Restoration and eighteenth century via a discussion of the hand in works of literature and philosophy from the period. The central question, then, of my dissertation is what and how can the hand “grasp” in this period. The double sense in “grasp” captures the interrelated components of mental comprehension and manual action. I argue that the hand allows us to see ways in which thought and action are essentially embodied in literature and philosophy of the Restoration and first half of the eighteenth century. My concerns are ultimately phenomenological and epistemological, which, I argue, amount to much the same thing in the eighteenth century: bodily experience and knowledge are intrinsically linked. To pursue these linkages, I study appearances of the hand in literature and philosophy beginning in 1690, the year in which Locke published An Essay Concerning Human Understanding, and ending in 1746, the year James Thomson published his revised and expanded The Seasons. In addition to these texts, I analyze the hands of Daniel Defoe’s 1722 texts Moll Flanders and A Journal of the Plague Year. These observations allow me to speak
to the nature of eighteenth-century modernity, the vexing question of the relationship between subjects and objects, and the nature of thought and action.
INTRODUCTION

I have put into thy hands what has been the diversion of some of my idle and heavy hours.
—John Locke, *An Essay Concerning Human Understanding* (1690)

We live in an age of ocular domination. Ours is said to be a visual culture, and researchers who study perception focus overwhelmingly on vision. But this ocularcentric view casts a shadow on an equally important organ: the hand. . . Hands sense, like eyes, but they also speak, sculpt, spar, and shape our world.

I begin with the two epigraphs above to introduce, and eventually challenge, a certain narrative. The first epigraph consists of the lines which begin John Locke’s *An Essay Concerning Human Understanding*, and I present them here because where we might expect Locke’s account of reading to describe the eye, he instead invokes the hand, calling up the embodied practice of reading and foreshadowing the importance of the hand in the gaining of knowledge. Furthermore, the description of a book, an object to be handled, raises the question of the relationship between the thinking subject and the objects the thinking subject handles. Locke’s philosophy, the story goes, upholds an insurmountable distance between the mind and the objects that the body encounters. More than three hundred years later, philosopher Zdravko Radman’s collection *The Hand, an Organ of the Mind: What the Manual Tells the Mental* dismantles a dualism that would locate cognition solely in the mind, separate from manual action of the body, a dualism that Locke is supposed to have developed and bolstered. In contrast, Radman’s collection argues that the hand has capacities such as perception, know-how, cognition, social interaction, and communication.

The hand, as we are now coming to realize based upon the research presented in Radman’s collection, is a very talented organ. Jesse J. Prinz’s “Hand Manifesto” outlines just
how fabulous the hand is. First, the hand is perhaps unmatched in its ability to sense objects. Not only can the tactile transducers of the hand sense texture, temperature, and pain—the fingertips each have “3,000 receptors, comparable to the number of receptors in the trunk of the body” (Radman ix)—the proprioceptive abilities of the hand, the ability to sense where the hand is based on sensory information from hand and wrist, extends vital information about the objects we handle. Prinz explains that “the haptic senses may also play a role in giving the world a sense of objectivity” (xi). Prinz elaborates,

Sight and sound are spatial senses in that they can be used to located objects along spatial dimensions, but it is not clear phenomenology [sic] that these senses alone give us the impression of objects existing in a space that is external to the mind. Haptic sense, because they often exploit bodily movement, may present space in a way that is more decidedly external. When we see an object and imagine reaching for it or exploring it with our hands, we convert the visual information into an action that is quite literally extended in the world. This may contribute to our impression that things are out there: They are there to be touched. (xi)

Because the hand can extend into the work in a way that the other major sense organs cannot, the hand is the “primary instrument” (xii) of human interaction with the world, including human labor. Evolutionarily speaking, the opposable thumb, along with being bipedal, has spurred humans’ ability to use tools. Though humans are not unique in regard to using tools, we are uniquely able to use the hands while walking and therefore in many different positions. Since much of what other animals do with the mouth, humans do with the hands, the theory goes that our mouths are freed up for communication purposes. Not only is the hand remarkable for its ability to sense and manipulate the world, it is adept at thinking and problem solving. Prinz suggests that calculating with the fingers is the obvious example, but this extends to more complex domains as well. “Hands also allow us to measure spatial extent and to pinpoint targets (think of the use of hand positions when
playing billiards). These are examples of extended cognition: We can perform operations with our hands that are akin to those we perform in our heads” (xii). Furthermore, we “grasp (literally) abstract ideas by grounding them in bodily movements” (xiii).

As we can see from the above examples, advances in cognitive science are attempting to reformulate how we think about the body’s—and specifically the hand’s—role in cognition and embodied action. Eighteenth-century thinkers (and their predecessors) often play a role in the accounts of what these new models of cognition break free from. Locke, the subject of the above epigraph and my first chapter, famously repudiates the doctrine of innate knowledge, arguing that all knowledge comes from experience. In Locke’s system, all ideas enter the mind through two types of experience: first, sensation channeled through the body’s senses, and second, reflection upon mental operations. The ideas generated by sensation and reflection are stored up in the mind which Locke variously figures as a cabinet, a camera obscura, a room, etc. These stored ideas serve as the building blocks of knowledge and can be compounded and associated in myriad ways. This fairly standard summary of Locke’s theory of the acquisition of knowledge demonstrates how Locke’s theory of knowledge hangs somewhat uncomfortably between the embodied and the mental; or, put another way, for Locke, gaining knowledge is an intrinsically embodied act, while the knowledge or ideas that are gained belong to the mental realm. Knowledge is gained by being in the world, touching, seeing, tasting, interacting. At the same time, knowledge is a mental artifact: ideas are stored in a mind like a cabinet, carefully filed for future recall, and fundamentally separate from the objects that elicited them. For many, probably most proponents of embodied cognition who read Locke, the tension between embodied learning and mental knowledge
is hardly a tension at all. Locke is a representationalist; he is routinely mentioned amongst those in the tradition of representationalist thought which “runs from Augustine through Descartes to today’s computational cognitive scientists” (Chemero 43). Daniel Hutto and Erik Myin mention Locke specifically in *Radicalizing Enactivism*, writing that the idea that cognition necessarily involves content (a hallmark of representationalist thought) “has dominated mainstream philosophical and scientific thinking, in one way or another, since the days of Descartes, Hobbes, and Locke” (xviii).

Hutto and Myin—one example among many—look back and see a tradition of representational thought they want to break with; part of my argument is that that tradition may not be as totalizing as they and others present it, particularly in the long eighteenth century and that the hand can give us a fuller picture of what can be “grasped” in the Restoration and eighteenth century. However, critics of eighteenth-century literature have placed Locke in the representationalist camp as well. Jonathan Kramnick places Locke solidly within the representationalist tradition, sandwiched between Thomas Hobbes (1588-1679) and David Hume (1711-1776). Hume summarizes the popular representationalist ideas of his day when he writes in the 1739 *A Treatise on Human Nature*, “‘tis universally allow’d by philosophers, and besides is pretty obvious of itself that nothing is really ever present with the mind but its perceptions or impressions and ideas, and that external objects become known to us only by those perceptions they occasion’” (qtd. in Kramnick 316). Hobbes and Locke contribute to this “universal” notion, Kramnick argues, as they both “oscilat[e] between worldly engagement and perceptual seclusion” (316).
One of the goals of this study is to challenge this narrative—that dualism is the totalizing account of thought in the period—via a discussion of the hand in Restoration and eighteenth-century works of literature and philosophy. The central question, then, of my dissertation is what and how can the hand “grasp” in this period. The double sense in “grasp” captures the interrelated components of mental comprehension and manual action. I argue that the hand allows us to see ways in which thought and action are essentially embodied in literature and philosophy of the Restoration and first half of the eighteenth century. My concerns are ultimately phenomenological and epistemological, which, I argue, amount to much the same thing in the eighteenth century: bodily experience and knowledge are intrinsically linked. To pursue these linkages, I study appearances of the hand in the literature of the Restoration and eighteenth century, beginning in 1690, the year in which Locke published his Essay, and ending in 1746, the year James Thomson published his revised and expanded The Seasons. I investigate the hands and the work they do in Enlightenment empiricist philosophy (especially that of John Locke), scientific communities, and in the works of Daniel Defoe and James Thomson. I hope to document what hands afford each of these writers and the models of interaction between subjects and objects these texts propose. These observations will, in turn, allow me to speak to the nature of eighteenth-century modernity, and particularly that vexing question of the relationship between subjects and objects.

Why the hand? Perhaps because the hand is so closely associated with the agent subject but can also be alienated from that subject as a kind of tool, the hand often figures in texts that seek to tease out the relationships between subjects and objects—or collapse that distinction all together. Heidegger’s Being and Time presents the hand as a topos
around which to describe engagement with things in the world. Heidegger makes a distinction between the present-at-hand and the ready-to-hand in *Being and Time*. For Heidegger, this distinction locates Being in interaction with the environment and makes body essential to that interaction while it makes the hand specifically the literal and metaphorical center of that interaction, ultimately dismantling those very distinctions and starting his analysis from a completely different place. For Raymond Tallis, the hand is, perhaps above all else, interactive. It functions, both in life and in language, as a focal point for interaction between self and environment. Through this interaction, the hand is, in Raymond Tallis’s words, “multi-talented”: it “acts, knows, and speaks” (22). The hand, then, is the instrument through which these categories—especially action and knowledge—both come into focus and become blurred. As the tool of tools, the hand both engages with and shapes reality and functions as a locus through which writers think through and describe the mechanisms contributing to experience, knowledge and action. As Gayle Salamon explains, drawing on Maurice Merleau-Ponty, “Grip is both a thing and a metaphor, both a bodily action and a description of a style of being in the world” (247). This is born out not only in the work actual hands do in texts philosophical, scientific, and literary but also in the plethora of metonymical uses of the hand: the figure of the hand suggests action, labor, ownership, and agency. In its propensity to be used metonymically, the hand also reveals its propensity for alienation from the subject that controls it. “Dead hands,” as Katherine Rowe calls them, from dismembered hands to ghostly hands, emphasize the “fraught ties

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* Aristotle describes the hand as the instrument of instruments in *On the Parts of Animals*. In this work, Aristotle argues that hands are the consequence rather than the cause of human intelligence because “the invariable plan of nature in distributing the organs is to give each to such animal as can make use of it” (Book IV, section 10). Humans have the intelligence to make use of their versatile hands; thus, they have the most versatile tools and handicrafts.
between spirit and body. . . and between persons and things that constitute agency relations” (3). Alienated hands appear in literature; they are also “behind” literature. Texts are the products of many hands that are, eventually, hidden from view in the finished product. This state of affairs can create a certain amount of anxiety. Helen Williams argues that Laurence Sterne re-inserts the hand back into Tristram Shandy through the manicule to re-assert his authorial ownership over the text. Finally, the hand, and the skin that covers it, is also the most active locus of the sense of touch. The hand, then, both locates and theorizes my investigation of sensory experience: what can the hand touch and what might it mean to touch? If the eye can “touch diffusely,” to borrow from Addison’s description in The Spectator, can the hand see without distance? Is the hand any better equipped than the eye to sense the insensible qualities Locke describes in the Essay?

The relationship between the modern thinking subject and the world outside it, as the standard story goes, is not an easy one: modern capitalism, natural science, and empiricist philosophy helped to shape a modernity in which subjects and objects are deeply alienated from one another. Raymond Tallis sees the hand as a fundamental player in the creation of this divide: In The Hand: A Philosophical Inquiry into Human Being, Tallis writes, “If the eye has come to be seen as the quintessential appurtenance of the subject, and the gaze has come to be seen as the subject’s archetypal power, this has, I shall argue, been established on the back of the subject-object divide opened up by the cognitive hand” (37). Of course, many scholars from Bruno Latour to Bill Brown have argued that this

* Though the eye’s linkage with subjectivity can be historicized (and has been), Tallis’s account of the cognitive hand is based in the difference betweenprehension and apprehension. This distinction separates human apprehension from animalistic prehension: “Manipulative knowledge—which perceives the object, reaches for it, grasps it, lifts or holds it, shapes it or uses it to act on something else in the world, or place, replaces it—is the distance between the genius of prehension reaches (shared with other animals) and the different mysteries of apprehension and comprehension, unique to humans” (36). Tallis’s cognitive hand is ahistorical.
“modern constitution” (Latour 13) need not be the totalizing framework through which we make sense of the past or present. Neil Chudgar has argued that touch plays an important role in understanding how eighteenth-century writers resisted the alienation of modernity:

Touch resolves epistemological skepticism into ontological certainty; it reduces things and people from their mutual alienation by bringing them into literal contact, as embodied subjects and tangible objects; it returns subjectivity itself to its source in embodied creatures, whose tangible particular makes them at once resistant to abstract classification and vulnerable to physical injury. (3)

Not all of the texts I will consider find the kind of certainty Chudgar describes by engaging the world through the hand or a totalizing skepticism. In Locke, the hand brings a kind of certainty about specific qualities of objects but also embodies our lack of knowledge about the sources of willed motion. A major motif of Defoe’s A Journal of the Plague Year is that in the world of disease and contagion, you never quite know what you’re touching. In Thomson’s poetry, the hand has a way of making the most abstract—in this case, infinity—concrete.

In focusing on the hand, my focus differs from that of several recent books in that my focus is not limited to mind but expanded to embodiment more generally. Two recent works, Brad Pasanek’s Metaphors of Mind (2015) and Sean Silver’s The Mind Is a Collection (2015), make the point that one must understand the mental through the physical. In Metaphors of Mind, a dictionary of eighteenth-century metaphors for the mind, Brad Pasanek explains that, especially within empiricist schools, where sensation is privileged over the purely rational, the mental is depicted in terms of the physical: “our ideas, derived from the world, make of the mind ‘a little world’ governed by the general analogy of language. The inward is ordered in terms of the outward, and the mind must declare what it is by saying it is something else” (21). Annette Baier has called this impulse to compare
metal processes to sensuous experiences figurative empiricism. Pasanek seeks to understand the eighteenth-century mind through metaphor: “Metaphor is a trope of relation, and metaphors of mind figure the immaterial self in material terms” (3). I find that Pasanek’s meditations on metaphor, however, often glide past the implications of body, focusing primarily on the objects handled or encountered by bodies rather than the bodies themselves.

Sean Silver writes in *The Mind Is a Collection* that we should endeavor to understand the conceptions of the mind as developed by thinkers in the eighteenth century via the cognitive ecologies by which they worked in haptic, embodied action. The underlying conceptual framework of these ecologies is that of the collection. For example, Locke provides a case study as Silver draws the parallels between Locke’s practices as a book collector and librarian to his personal collection of books and the central metaphor of mind in the *Essay*, where Locke compares the mind to a cabinet. Suggestively, Silver elucidates a paradox that stems from Locke’s use of metaphor. Locke is commonly held up as an enforcer of an empiricist principle that the mind is separated from that which is experiences through the senses—the mind is fundamentally different from the objects the senses encounter. Silver summarizes, “Locke advances, in this sense, philosophy as the mirror of nature, reproducing nature while nevertheless fundamentally unlike it” (25). However, Silver turns our reading of Locke in a different direction arguing that “a return to his [Locke’s] own habits tends to paint a much more complicated picture” (25):

So does Locke represent the genesis of the empiricist dualism, as it is commonly argued, or a more profound embeddedness in the materials of thinking, as his own language insists? The paradox, felt even here, is that Locke’s figure of the mind as collection develops a distinction between the mind and its materials, even while itself resting on a complex set of entanglements with the environment through which that mind moves. (25)
Silver’s take on Locke’s dualism and his use of the “cognitive ecology” informs my own work; however, as with Pasanek, I believe that closer attention can be paid to the body itself, the vehicle “through which the mind moves.”

The Invisible Hand

One body part has captivated accounts of the eighteenth century: the eye.* It has become a commonplace to think of the eighteenth century as the era of the eye, of the visual. Locke uses the eye as a central metaphor for the understanding in *An Essay Concerning Human Understanding.* Joseph Addison—who praised sight as “the most delightful of all our Senses”—also privileged the visual in his choice of title, *The Spectator.* With this title, Addison described his own observant and detached authorial ethos: “I live in the World, rather as a Spectator of Mankind, than as one of the Species” (#1 Thursday, March 1, 1711). In doing so, Addison also aligns himself with the most privileged of the senses: Martin Jay writes that “The dawn of the modern era was accompanied by the vigorous privileging of vision” (69). The privileging of sight has a long, if not totally consistent, history: since Aristotle, sight has been valorized over other senses. As Constance Classen writes in her cultural history of touch, *The Deepest Sense,* “Societies that touched much, it was said, did not think much and did not bear thinking much about—

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except perhaps by anthropologists. To achieve respectability, societies needed to be seen to have risen above the ‘animal’ life of the body” (xii). This long history of a hierarchy of senses helps to explain why experiences of touch have been “downplayed and disregarded even within such fields as the history of the body or the history of medicine” (Classen xi); Classen hypothesizes that across the humanities and social sciences, “we have so often been Warned not to touch that we are reluctant to probe the tactile world even with our minds” (xi). Though literary studies have demonstrated a sustained interest in material culture* and the things one might find in a hand, hands themselves, have remained understudied.

Furthermore, interest in tactile culture in the eighteenth century often focuses on haptic experience, experience having to do with touch, rather than the hand per se. The hand, not the only bodily structure that can touch, is nearly invisible, that is, overlooked and understudied. Kristin M. Girten is one of a handful of scholars who have recently pursued an interest in haptic culture in the eighteenth century, along with Jonathan Kramnick and Neil Chudgar, and scholars with a broader interest in the history of senses such as the before mentioned Constance Classen. Girten writes about natural philosophy and the importance of sight and touch in the period with which this present study is concerned, “Scholars regularly acknowledge the importance of visual perception in the early days of the Enlightenment. The microscope, the telescope, and the air pump—all apparatuses primarily dependent on the experimenter’s sense of sight—undoubtedly enabled some of the greatest philosophical discoveries in seventeenth- and eighteenth-

* For examples of work in this vein in eighteenth-century studies, consult the works of Mark Blackwell, Deidre Lynch, Liz Bellamy, Laura Brown, and Aileen Douglass.
century Britain” (499). She continues, “However, with our emphasis on Enlightenment vision we have nearly blinded ourselves to the intermodal dimension of the new philosophy, which most often manifest as an interrelationship between sight and touch” (499). Girten draws on Ann Jessie Van Sant’s *Eighteenth-Century Sensibility and the Novel* in which Van Sant argues for “the centrality of touch” (83) in the eighteenth century. This mini-turn to the haptic is provocative and needed; however, it is burgeoning and has not yet set its focus on the hand itself.

There are some exceptions. Bruce Robbins’ *The Servant’s Hand* (1986) is exemplary in that the hand—the pressure exerted by working hands in fiction especially—is an entry point to discussing the narrative role of servants in English fiction. However, the hand is more of an entry point than the object of study. Though Robbins considers eighteenth-century writers such as Defoe and Richardson, *The Servant’s Hand* is also wide-ranging in terms of the texts and authors it considers, leaving more work to be done in the eighteenth century. Katherine Rowe’s *Dead Hands: Fictions of Agency, Renaissance to Modern* (1999) considers the trope of the disembodied hand and its attendant implications for agency and subjectivity; however, it spends relatively little time in the eighteenth century even in its discussion of the disembodied hand in gothic literature, opting instead to consider nineteenth-century appearances of the trope. Both of these works, while providing examples of what dividends paying attention to hands pays, gloss over the hands of the eighteenth century.

In an issue of 19 dedicated to “The Tactile Imagination,” the authors repeatedly reference eighteenth-century literature as a kind of desert devoid of hands. However, Constance Classen argues that “There can be no straightforward narrative of a decline in
the cultural importance of touch accompanied by a corresponding rise in the cultural importance of sight. The sensory patterns of history are too complex. Older tactile practices long coexisted with the new emphasis on more disembodied modes of social interaction and religious practice” (159). As a handful of articles published in the past decade or so suggest, the hand is gaining some traction in accounts of eighteenth-century works, and scholars are resisting these narratives of decline and absence. According to these scholars, the hand in eighteenth century literature is, first and foremost, connected to work. In *Robinson Crusoe*, Crusoe frequently reflects on the extra time his manual labor takes because he lacks proper tools. In this sense, Crusoe’s labor is even more manual. Ann Van Sant has argued that Crusoe redeems labor from its punitive sense and rejects the hierarchy of head over hand, or work of the mind over manual labor. Because the hand is the instrument of manual labor, it is also a key signifier of class. Richardson’s novels provide one focal point for discussions of hands, work, and class. Pamela’s inability to scrub a pan without injuring her hand in two places suggests that she is truly above the work of a scullery maid. Julian Jimenez Heffernan argues that the hand is the central symbol of *Pamela*, one which emphasizes Pamela's struggle for agency, self-governance, and the triumph of manners which domesticate the barbarous Mr. B. In *Sir Charles Grandison*, James Robert Woods argues, we see Richardson’s expansion of the category of manual labor, suggesting that the genteel engage in a certain kind of manual labor when they maintain social bonds, often with their hands. While the work hands do in the literature of the period tends to reflect on class, it also reflects on experience, agency, action, and intention signaling the range and depth of the hand’s associations and importance in the period.
One vein in which historians and literary critics of the eighteenth century have discussed the hand in the Restoration and eighteenth century is the relationship between head and hand in which the head metonymically stands for metal work which is superior to the manual labor associated with the hand. In “Head and Hand: Rhetorical Resources in British Pedagogical Writing, 1770-1850,” Steven Shapin and Barry Barnes describe the rhetorical moves by which pedagogical writers in the period classify the people of the upper orders as “heads” and those of the lower orders as “hands” with accompanying mental capacities and aptitudes. They identify three central dichotomies between the genteel person’s mind and the working person’s mind that were regularly employed to justify educational programs. The first is contrast between the “sensual and concrete” (232) thought of the lower orders versus the “intellectual, verbal, and abstract qualities of the thinking” (232) of the upper orders. The second contrast covers the “simplicity” (233) of thought of the mechanic versus the “complexity” (233) of the thought of the mechanic’s betters. The final dichotomy “concerns the active use of knowledge and experience by the higher orders, contrasted with the passive and automatic way in which the lower ranks were assumed to react to experience” (234). These dichotomies allow Shapin and Barnes to write that “In society, as in the body, the head was reflective, manipulative and controlling; the hand, unreflective, mechanical, determined by instructions” (235).

Drawing on and responding in part to Shapin and Barnes, Ann Jessie Van Sant’s account of this cultural valuing of head over hand in “Crusoe’s Hands” begins with Aristotelian tradition which describes manual labor as servile because “the manual laborer works without knowing why he works” (Van Sant 121). However, Van Sant helpfully acknowledges that “The bias against manual labor was never either simple or monolithic”
though she also points out that “despite various kinds of modifications, it can be seen as a recurring cultural prejudice” (121). Van Sant will go on to argue that various cultural movements including the experimental practice of the Royal Society and the valuation of the georgic form worked in the period to challenge the hierarchy of the head and hand. These cultural movements influence Daniel Defoe’s *Robinson Crusoe*, Van Sant argues, which will also rework the head/hand hierarchy.

Van Sant’s work shows the dichotomy between head and hand to be alive and well in the late-seventeenth and early-eighteenth centuries on which I am focused. Furthermore, I am indebted to this work for the way it prompts us to look at how the hierarchy between head and hand is complicated. This is one through line of my own work: in *An Essay Concerning Human Understanding*, when Locke describes the mind as a piece of paper to be written on, Locke metaphorizes the functions of the mind as a writing hand. In this instance, the hand does not shed light on how the mind is different than the hand; instead, it suggests ways in which the organs are similar, destabilizing the hierarchy. In Defoe’s *Moll Flanders*, Moll’s dexterity as a thief is grounded in a welding between manual and mental excellence. Moll must be able to carefully weigh and measure the social situations in which she steals and move her hands just so. True dexterity demands both abilities. Neither head or hand alone will do. In James Thomson’s *The Seasons*, the embodied experience gained through the hands is essential to understanding the most abstract of entities: infinity. It is because humans have ten fingers that they can make sense of numbers, quantities, and, eventually, huge, seemingly unimaginable quantities. In Thomson there is no dichotomy between the sensual and the abstract; instead, they are intrinsically interlinked.
Chapter Summaries

I begin this argument with a discussion of John Locke’s influential *An Essay Concerning Human Understanding*. As I have noted, I draw on Sean Silver’s notion of the cognitive ecology to frame my discussion of the *Essay* via Locke’s early career in medicine. In order to put into relief Locke’s break with conventional views of the hand and its uses, I begin by tracing the associations of the hand as developed by Aristotle, Galen, and anatomist Andreas Vesalius. These thinkers see the hand as evidence of benevolent design of the creator, Vesalius going so far as to link the work of the anatomist to that of the creator. In this way, the hand is understood analogically. Locke, in his writings on anatomy, rejects this analogical thinking, arguing instead that anatomy (e.g. knowledge of the hand’s structures) only provides superficial knowledge and not knowledge of the causes of movement and action—things that would actually unlock the secrets of health and well-being. Locke’s writing on anatomy underscores his phenomenological understanding of health, i.e. that health is bound up not only in the structures of the body but in the contexts and environments in which the body is enmeshed. Locke’s observations of hands found in his journals further emphasize the environments in which the hands exist.

I then turn to Locke’s *Essay* where we see that the hand is crucial to Locke’s arguments about how knowledge is created and the nature of embodied action. In the case of knowledge creation, the *Essay* suggests that knowledge resides in the hand because sensation and ideas are coeval. In discussing actions of the body, Locke again enmeshes the acting subject within the environment, complicating the sense of possessive individualism—that one is essentially in control of one’s body—that is often attributed to Locke. Thus, we see how Locke’s understanding of the body’s inherent interconnection
with the environment informs his medical ideas and the ideas found in the Essay, ultimately suggesting that body and mind are intrinsically connected than the accounts of Locke’s dualism would lead us to believe.

In my second chapter I turn to two works of the early 1720s written by Daniel Defoe, *Moll Flanders* (1722) and *A Journal of the Plague Year* (1722). This chapter focuses most broadly on what hands can make from character to written narratives. What the hand can make is related to questions of labor, and I am indebted to and build upon Ann Van Sant’s discussion of the head/hand hierarchy in the eighteenth century to explore these questions. Van Sant argues that Robinson Crusoe upends the head/hand hierarchy through embracing what Van Sant calls the “mechanic georgic” (129). What upending the head/hand hierarchy might look like in the urban spaces of novels like *Moll Flanders* and *A Journal of the Plague Year* is what this chapter considers.

I begin by looking at *Moll Flanders* and the surprising fluidity of the category of “gentlewoman” the text offers. From the very beginning of the novel, Moll contradictorily works herself into a gentlewoman with her own hands as do other women in the narrative despite their ungenteel backgrounds. Moll’s appearance as a gentlewoman is essential to her most handy of careers, that of thief. Within this context, Moll’s hands not only make herself into a successful thief, the hands of the narrative also forge or make visible the communities that share responsibility for Moll’s thieving. These communities—for example, the influence of Moll’s school mistress who teaches Moll to steal—bring to the forefront the nature of their thieving “art”: Moll is described as dexterous, a category that melds manual dexterity with mental dexterity in the art of thieving.
If *Moll Flanders* is a portrait of a woman making and remaking herself and her society, *A Journal of the Plague Year* shows a society under extreme distress and the efforts hands go through to hold up that society whether that support comes from restrictions on what hands can do in plague-time London to the narrative that H.F. creates by his own hand. Perhaps what hands most importantly make is the narratives of *Moll Flanders* and *A Journal*. The hands which physically construct the narrative are present in both texts in many layers from H.F. and Moll to Defoe’s involvement. This is perhaps the most dexterous act of all—the making of the narrative—and it relies on both the hands that write it and the hands of the reader that hold the book as it is read.

The final chapter considers handed embodiment via counting in the poetry of James Thomson’s *The Seasons* (1726-1730, 1746). I focus particularly on *Spring* and *Summer*, poems in which Thomson is nearly constantly cataloging the bounties of nature. While these lists or enumerations do not count objects one, two, three, they do enumerate individuals or classes of natural features until the lists culminate in expressions of infinity. For this reason, I suggest that these passages “count,” (certainly in both senses of the word) often all the way to infinity.

To better understand what Thomson’s lists have to say about what it means to count in the eighteenth century, I first consider modern definitions of number stemming from the nineteenth century which view numbers as purely abstract signs and accounts that challenge that definition such as the work of Ernst Cassirer who argues that number is tied to language and ultimately to the body through “mimetic hand concepts” (229). This embodied sense of number is reminiscent of definitions in eighteenth-century math textbooks which define number as quantity, not sign. Furthermore, in *An Essay Upon*
Daniel Defoe writes at length on the relationship between the ten fingers and the ten-base number system. We can make sense of large numbers, he argues, because large numbers are only multiplications of something imminently knowable—our ten fingers. For most of history leading up to the eighteenth century, numbers and computation, in fact, are closely related to manual action in the form of counting tables, manual calculation, abaci, and the like.

This brings us back to *The Seasons* and the ways in which Thomson firmly roots the experience of infinity via the catalogs of nature’s bounty in embodied experience of numbers. Many critics, from John Barrell to Kevis Goodman, have argued that Thomson’s poems are repositories of abstractions, ultimately uninterested in specific landscapes or laborers. I read Thomson contra these claims by focusing on how Thomson moves his reader through the landscape not just through the eye (as many critics have noted), but through movement of the whole body. Even as the world and what it contains expands exponentially during the eighteenth-century, keeping a hand on what is “at hand” supports a sense of being that is in turn supported by embodied experience.
CHAPTER 1

“My Right Hand Writes, Whilst My Left Hand Is Still”:

The Power of John Locke’s Hands

My right Hand writes, whilst my left Hand is still: What causes rest in one, and motion in the other? Nothing but my Will, a Thought of my Mind; my Thought only changing, the right Hand rests, and the left Hand moves. This is matter of fact, which cannot be denied: Explain this, and make it intelligible, and then the next step will be to understand Creation. (4.10.19)
—John Locke, An Essay Concerning Human Understanding (1690)

The hands in the above epigraph serve up an enticing paradox of the hand: at once eminently familiar, controllable, and knowable, the hand is also inscrutable. Locke's hand moves or rests simply because he wills it to—that's the simple, “factual,” explanation of why Locke’s hand writes or rests. However, the “causes” of the movement of the hand, the mechanisms that translate a thought in the mind into a contraction or releasing of muscle and tendon remain outside the realm of human understanding. This example gestures to a whole system of causes that remain out of reach in the Essay. The underlying mechanisms of action are inaccessible; so too are “the peculiar Constitution of Bodies, and the Configuration of Parts, whereby they have the power to produce in us the Ideas of their sensible Qualities” (2.21.73). So, while the body is the essential tool for gaining the sensation that results in ideas, the source of the body’s power—hidden in its composition, both in terms of substance and relational configuration—remains obscured. This chapter will consider the powers of the hand—the hand’s adeptness for doing and meaning—to tease out the relationship between the body and the understanding, the body and the self,
and the body and the world. To do so I will consider the hand’s various valences and
associations through a history informed by Locke’s interest in medicine.

Within the western philosophical tradition, voluntary motions of hands—things like
deliberate gestures, signing one’s name, switching on a light, or more holistically, raising
one’s arm—are favorite topoi for making distinctions between action and movement, doing
and suffering. As Katherine Rowe writes in *Dead Hands*, which is the primary discussion of
hands in Anglo-American literature, writers are drawn to the figure of the hand because of
its suitability for “exploring and defining meaningful human action” (2). Rowe is
particularly interested in narratives containing severed or disembodied hands and though
Rowe’s book is subtitled “Fictions of Agency, Renaissance to Modern,” it focuses on dead
hands in renaissance literature preceding Hobbes and Locke and then dead hand narratives
from the nineteenth century, largely brushing past the late seventeenth and eighteenth
century. One of the reasons for this is that Rowe argues that Hobbes and Locke lock down a
“proverbial” conception of the body as property which the dead hand works against. Rowe
uses political scientist C.B. Macpherson’s concept of possessive individualism where the
individual is “essentially the proprietor of his own person or capacities” (12) to emphasize
that the person is ostensibly in control of his or her body. This proprietary formulation of
the body is one dead and disembodied but autonomous hands work against, alienating the
body from the self. While this sense of ownership and control of the body is one of Locke’s
contributions to modern conceptions of the body, I think it is a selective reading that
doesn’t account for Locke’s own wrestling with the complicated forces that move the
bodies and shape our experience of our bodies. In considering the hands in Locke’s writing,
we discover what we are talking about when we talk about hands—the views of body, mind, and world that make talking about the hand possible.

Locke is an imposing figure in the intellectual and literary history of the long eighteenth century. As such, Locke has figured prominently in two recent studies of conceptions the mind in the eighteenth century, Brad Pasanek’s *Metaphors of Mind* (2015) and Sean Silver’s *The Mind Is a Collection* (2015). Silver considers Locke’s comparison of the mind to a cabinet, while Pasanek homes in on the blank page metaphor for mind, both metaphors found in Locke’s *An Essay Concerning Human Understanding* (1690). Both works emphasize that eighteenth-century thinkers make sense of the mental through engagements with the embodied. However, Pasanek takes little notice of the hand even as he discusses tablet, paper, pen, and ink. Silver comes closer to the hand as he argues that we should endeavor to understand the conceptions of the mind as developed by thinkers in the eighteenth century via the cognitive ecologies by which they worked in *haptic* (relating to the sense of touch, especially in the case of handling objects), embodied action. The underlying conceptual framework of these ecologies for Silver is that of the collection. Silver draws the parallels between Locke’s practices as a book collector and librarian to his personal collection of books and the central metaphor of mind in the *Essay*, where Locke compares the mind to a cabinet.

I break with Pasanek and Silver in that I believe the hand rather than the mind is a more fruitful locus of study to understand cognitive ecologies of the period—in this chapter focused on the cognitive of Locke. I borrow from Silver, though, the term and methodology suggested by the “cognitive ecology”: “Thinking ecologically means taking the whole network in view; it means thinking of models of mind evolving along with the
environments in which they are entangled and embedded. Person and space co-respond; this is a cognitive ecology” (Silver 17). What better way to understand a cognitive ecology than to focus on the hand which so often brings mind and environment together.

The cognitive ecology I will first explore and then use to inform my reading of the Essay is Locke’s medical practice. Locke’s medical practice first, informs his commitment to empirical practices; and secondly, explains his break with the anatomical tradition and the surface knowledge it provides. To explore these first two points, I present the historical and intellectual precedents to which Locke responds in his feelings about anatomy via an account of Aristotle and (via Galen) anatomist Andreas Vesalius’s (1514-1564) views of the hand. This history helps us better appreciate the break with precedent Locke undertakes when he rejects the hand as an analogy to divine creation and pursues an understanding of the hand as an important agent in the pursuit of empirical knowledge. To this end, I consider Locke’s Essay and primarily the hands that help Locke think through the problems of action, agency, and liberty. Hands have three potential relationships to the problem of action: 1) they affect action, 2) they complicate action, and 3) they figure action analogically. These complications largely arise from hands’ shifting status between subject and object: hands have long been associated with action, standing in for the thinking/willing/acting subject of which they are a part; alternatively, hands can become an object, alienated from the subject, seemingly autonomous or controlled by some other power. In the Essay, hands often function as the reliable tool of the human subject for gaining knowledge, the sensations of the hand delivering ideas to the mind. Though in these instances the hand could be described as an objectified tool, the hand is closely aligned with the mind, the sensation and the idea existing coevally (2.1.23). However, this
relationship is troubled as the hand’s status shifts between subject and object, destabilizing a sense of reliable transference of information from object to subject on the one hand and the transference of motion (or action) from subject to object on the other. The hands in the essay redefine the subject, enabling Locke to trace a much wider set of influences and structures in which the body experiences and acts.

What the Hand Means

Hands might arguably be the human body part with the most and most varied symbolic associations; a consideration of these varied associations provides a catalog of the powers of the human and the powers associated with being human. Aristotle inaugurated a philosophical tradition centered on the beauty and function of the hand, marking the hand as essentially human. In *De Partibus Animalium*, Aristotle considers the hands as a part and in context of a whole. Aristotle argues that “Standing thus erect, man has no need of legs in front, and in their stead has been endowed by nature with arms and hands” (IV.10). However, Aristotle clarifies that humans have hands not because they are erect but because of their intellect: “For the hands are instruments, and the invariable plan of nature in distributing the organs it to give each to such animal as can make use of it; nature acting in this matter as any prudent man would do. . . .we must conclude that man does not owe his superior intelligence to his hands, but his hands to his superior intelligence” (IV.10).

To counter the argument that humans are the worst constructed of all animals because they have little to protect them from the elements (such as fur) or from predators (such as claws), Aristotle points out “but to man numerous modes of defence are open, and these, moreover, he may change at will. . . . For the hand is talon, hoof, and horn, at will. So too it is spear, and sword, and whatsoever other weapon or instrument you please; for all
these can it be from its power of grasping and holding them all” (IV.10). This ability to grip is what gives the hand its utility and the ingenious design of the hand enables it to be the tool of tools. The first aspect of the hand’s noteworthy design is its disunity—that it has separate fingers and a thumb—which allows it to grasp: “In harmony with this varied office [the ability to seize and grasp tools] is the form which nature has contrived for it. For it is split into several divisions” (IV.10). The separate fingers and their separate joints allow for grasping, but especially important is the thumb and its contrasting orientation and shape: “One of these [digits] also, short and thick but not long, is placed laterally. For were it not so placed allprehension would be as impossible, as were there no hand at all” (IV.10).

It is partly because of the hand’s “varied office” that Aristotle famously calls the hand the tool of tools. That designation has much to do with the hand’s potentiality, something the hand shares with the soul. In De Anima, Aristotle famously analogizes the hand to the soul, calling the hand the “tool of tools”: “It follows that the soul is analogous to the hand; for as the hand is a tool of tools, so thought is the form of forms and sense the form of sensible things” (III.8). As Locke will do centuries later, Aristotle uses the physical hand as a reference point for understanding something about the human that is not strictly physical. As the hand is versatile and adaptable in the use of tools, the soul is a system of abilities that ensure the essential functions appropriate to an organism are carried out.

These Aristotelian texts articulate associations for the hand that persist in Galen and, via Galen, into the seventeenth century: 1) the instrumental aspect of the hand and its grip, 2) the hand’s analogous relationship to the rational soul and reason, 3) the hand’s uniqueness to man—the wisest animal, and, therefore, 4) the hand as the instrument of human civilization (Schupbach 57-8), 5) and a “mark of God’s (or Nature’s) artistry, [and]
goodness to man” (57). In this tradition, the hand represents the remarkable tool with which civilization is built: the hand first apprehends the world—grasps it—and then acts upon it.

Art historian William Schupbach writes about how these associations coalesce in the iconography of the dissected hand in Rembrandt’s “The Anatomy Lesson of Nicolaes Tulp” completed in 1632, nearly fifty years before Locke would publish his Essay. We can appreciate the iconographic significance of the hand in Rembrandt’s painting, and in the early seventeenth century, when we understand that the scene in the painting is an amalgam of different scenes and even bodies; its subject is fabricated and deliberately composed. While text-based discussions of the human body, such as Galen’s De Usu Partium Corporis Humani, begin with the hand, imbuing the hand with a special analogical significance for the rest of the body, a dissection such as the one pictured in Rembrandt’s painting would never have begun with a hand. So, the cadaver in the painting would never have appeared as it does: arm dissected but with the rest of the body intact. Dissections started with the viscera—the parts of the body that would smell the worst soonest. Once dissected, the viscera would be taken away and the dissection would proceed to the limbs. It is possible that Rembrandt painted the dissected arm from a different model, perhaps one of the “four flayed arm and legs anatomized by Vesalius” (Schupbach 6) Rembrandt owned. Furthermore, the man being dissected is Adriaen Adriaenszoon, who was hanged in January 1632 for stealing a man’s cape. X-ray studies of the painting show Adriaenszoon was initially painted with a stump on his right arm: he may have lost a hand as a punishment for a previous theft (6). So, Adriaenszoon’s dissection is idealized in two ways which involve his hand: first, one of Adriaenszoon’s hands is restored and so, consequently,
is the ideal form of the body. That restoration allows the focus to be on the anatomized hand which carries symbolic weight, conveying Tulp’s skill in carrying out the dissection and in demonstrating the inner workings of the body. Hugh Aldersey-Williams, a cultural historian, writes, “with Rembrandt as his interpreter, Tulp is revealing metaphysical as well as scientific truth. The two men’s choice of the hand as the focus of the anatomy demonstrates their true intent. [Man] can show all his dexterity and skill and invention and sleight—as a surgeon, as a painter, as a light-fingers—and then he dies. Man is both vital and mortal; he creates, but he is God’s creation” (8). Aldersey-Williams emphasizes the hand’s utility for creation, and therefore, its link to the divine—a nearly ubiquitous association with the hand as it is discussed in anatomical literature.

The Vesalian Hand

The anatomical writings of anatomist Andreas Vesalius (1514-1564), widely regarded as the father of modern anatomy, is a worthwhile stopping point on this brief tour of the history and associations of the hand because of the deliberate iconography of the hand Vesalius cultivated in his work. The hand is afforded a special place in anatomical texts and iconography dating back to Galen; however, Vesalius' treatment of the hand in De Humani Corporis Fabrica (1543)—a classic work of anatomy—emphasizes the vitality of the hand both as an indispensable tool with which to gain medical knowledge and as an object of study itself as Vesalius champions handling actual human bodies. Physicians must carry out the handiwork of their profession, learning anatomy by actually handing human specimens and practicing the art of medicine by getting their hands dirty in the care of their patients. As Vesalius will show, revealing the hand’s structures yields insight into the creation of the human body and links the anatomist with the creator.
Handling actual bodies equipped Vesalius to challenge Galen, the prevailing authority on human anatomy for some fourteen hundred years, and revolutionize how dissections were carried out. Vesalius reminded his contemporaries that Galen’s works were based largely on observations of animal (largely dogs and apes) anatomy. Except for a brief period in Alexandria during the days of Herophilus, the first known dissector of human subjects, and Erasistratus, cultural taboos and laws prevented the dissection of human bodies until the early fourteenth century. Because Vesalius dissected human bodies, he found discrepancies between Galen’s descriptions of animal anatomy and Vesalius’ human specimens. Vesalius pointed out these discrepancies in his public dissections, challenging Galen and practicing a new, very hands-on, model for dissection. Proceeding Vesalius, dissections involved multiple players: a professor, often seated above the proceedings, read from Galen while a barber-surgeon carried out the dissection. Sometimes a third person, “the ostensor,” pointed out the structures described in the reading from Galen (Kusukawa 202). Vesalius acting as the sole dissector—both professor and surgeon—is proudly depicted in the frontispiece to the Fabrica. Vesalius describes this configuration for dissection as a departure from “the ridiculous system of the schools” in the preface to the Fabrica where he outlines the “detestable ritual” whereby one group performs the actual dissection of a human body and the other gives an account of the parts: the latter aloft on their chairs croak away with consummate arrogance like jackdaws about things that they have never done themselves but which they commit to memory from the books of others or which they expound to us from written descriptions, and the former are so unskilled in languages that they cannot explain to the spectators what they have dissected but hack things up for display following the instruction of a physician who has never set his hand to the dissection of a body but has the cheek to play the sailor from a textbook. So the teaching in our college is all wrong, and days are frittered away in ridiculous inquiries; a butcher in a shambles could teach a practitioner more than the spectators are shown amidst all this racket. (vol 1, li)
In contrast, Vesalius has “given both the demonstration and the accompanying commentary myself, while seeking to insure that all the knowledge that has come down to us from the ancient world is made available and that there is no part of the body whose construction is still to seek” (liii). One of the powers of the hand, then, is the power to challenge the accepted wisdom of scholastic tradition via with the methods of empiricism, something Locke will adopt in his own work.

Elevating the handiwork of anatomy and surgery were important goals for Vesalius’s Fabrica. In the preface to the Fabrica, Vesalius decries the growing compartmentalization of medical practice, calling forth and rejecting distinctions between theoretical and practical knowledge, between the work of the head and the hand. Medical practice has been segmented (departing from the practice of the ancients) so that apothecaries prepare medicinal treatments, servants or other caregivers control and administer diet, barber-surgeons operate, and physicians, loathe to get their hands dirty and without any lessening of status or pay, “began to stand aloof from the less pleasant parts” (vol 1, xlviii) of medicine. Vesalius calls medicine “the most laborious of all the arts” (xlvii), and insists that hand-work is part of the art, truly practiced. The surgeons, known as “Chirurgians,”—literally from the Greek “hand workers”—are regarded, Vesalius says “as less than their own servants” (xlviii-xlix). To counteract this division of labor, “a deplorable and most disastrous shipwreck upon the study of anatomy” (l) as Vesalius terms it, “beginners in the art must be urged in every way to take no notice of the whispering of the physicians (if I may use that word) but to use their hands as well in treating, as the Greeks did and as the essence of the art demands, lest they convert a crippled system of treating into a curse on the whole of human life” (l). The class ramifications of working with one’s
hands clearly show through in these descriptions; so too, however, does Vesalius’ insistence that hand-work in medicine is vital to its success. In Vesalius’ view, snobbishness in regard to “the less pleasant parts” motivates physicians to distance themselves from manual work in it is likely that long-held prejudices favoring mental work over manual work* reinforces the status and pay of the physician while lowering that of the practitioners that work with their hands. Vesalius is at pains to show that the prejudice against working with one’s hands is, in fact, a prejudice and a departure from ancient Greek medical practice. Pointing out that refusal to use one’s hands threatens to cripple medical practice with dire costs for humanity, Vesalius champions the work that hands can do, minimizing the objectionable nature of working with one’s hands (within the field of medicine) and emphasizing the importance of the hand in both in treating patients and furthering medical knowledge.

Vesalius appears with a dissected arm and hand in his portrait that accompanies his classic anatomical text. His left hand cups the top of the cadaver’s forearm, near the elbow, while the right hand grasps the tendons of the arm and hand. C.D. O’Malley has shown that the page on the table is the beginning of the Book II, chapter 43 of the Fabrica which explains the muscles moving the fingers (Kusukawa 203). O’Malley argues that in the portrait Vesalius is demonstrating manually what is described in the visible text, the ingenuity of the Creator: “So the only remaining possibility was that the almighty Creator of everything should, with astounding ingenuity, make a long incision splitting in two the

* Though never universal or unchanging, the privileging of mental work over manual work has precedents in classical thought and persists today. See Elspeth Whitney’s “Paradise Restored. The Mechanical Arts from Antiquity through the Thirteenth Century.” For a discussion of this dynamic in early English novels, see Ann Van Sant’s “Defoe’s Hands.”
upper tendon (which is an offshoot of the first muscle) and that the tendon of the second muscle should pass through this incision and so reach to the third bone” (Vesalius, vol. 2, 331). Here, the hand is a worthy object of study because it reveals mysteries of creation. What is more is that those revelations are brought about by the work of the hand. As Katherine Rowe has argued, the anatomized hand emphasizes various roles of the hand: object of study, instrument of study, and, therefore, instrument of rational design: “The hand that actually cuts and orders embodies the rational design it produces” (33). Vesalius’s portrait emphasizes the connection between the anatomist and the divine in that the anatomist steps in to explain creation and the wisdom of the creator, reenacting the moment of creation itself, a rather audacious connection given the low regard that would have been given to the anatomist’s work, dealing as it does with dead bodies. Vesalius’s portrait is also a monument to Vesalius’ own facility with the dissection of the hand: Vesalius was the first to successfully dissect the muscles of the hand (Persaud 73), something Vesalius asserts in the preface to the Fabrica he attempted to do in the second dissection he ever attempted and the fourth he ever attended (vol 1, lii). From Vesalius on, then, the hand in the anatomical tradition conveys the manual expertise of the dissector, the ingenuity of the creator’s design, and the act of creation re-enacted as the anatomist reveals the structures and functions of the human body. For Vesalius, the knowledge and understanding anatomy yields comes about because Vesalius has used his own hands. Rowe has argued how “the charged metonymies of touch and grasp represented in medical anatomies [think of Vesalius grasping the tendons in his portrait] . . . [attempt to] explain the roles of principal, agent, instrument, and patient” (50). However, anatomical texts often complicate these roles as much as they explain and delineate them.
Locke, like seventeenth century anatomists, uses hands and their functions to think through fraught instances of agency. However, instead of embracing the anatomy of the hand as an analogical tool to think through issues like action, Locke rejects the anatomical analogies. Locke finds anatomy, and the structures of the body it exposes, insufficient for understanding things like health or actions.

Locke and Medicine

John Locke’s training and work as a physician informs a growing body of scholarship detailing Locke’s place in medical history and the influence of Locke’s medical training on his philosophy (see the work of Kenneth Dewhurst, Patrick Romanell, Peter Anstey). Locke’s interest in medicine intensified during his years in Oxford from 1652-1667; he maintained a medical notebook from beginning of his studies there (Dewhurst 5). Roger Woolhouse, Locke’s most recent biographer, explains, “there could hardly have been a better place than Oxford for Locke to pursue his interest in medicine. . . . It was an extraordinarily thriving centre of scientific activity of many kinds, in particular those kinds which related to medicine, such as anatomy, chemistry, and physiology” (34). Between 1658 and 1667, while Locke held a series of positions at Christ Church including senior studentships, the office of Praelector Rhetoricus, and the Censor of Moral Philosophy, and, in 1665-6, served as a secretary to Sir Walter Vane in Brandenburg, “well over a half of [Locke’s] reading was in the area of medicine and natural science” (Woolhouse 31), and at his death Locke’s library of over 3500 books contained 402 medical texts, constituting roughly eleven percent of his library (Woolhouse 461). Though Locke had administrative and teaching responsibilities in these positions, he continued his medical studies, reading Vesalius’ *De Humani Corporis Fabrica* in 1659 and taking a course from Peter Stahl, who
gave Oxford’s first public lecture in Chemistry, and Thomas Willis, an experienced physician and Sedleian Professor of Natural Philosophy.

Locke’s interest in medicine was not purely academic; he trained as a physician and in experimental procedure. Locke’s interest in medicine put him in contact with important figures dedicated to empiricist experimental methods at Oxford—men like William Lower, Robert Hooke, and Robert Boyle. Inspired by Lower and Boyle’s experiments on respiration, Locke hypothesized about the cleansing relationship between respiration and blood, theorizing that “another use of respiration seems to be, to mix some particles of air with the blood and so to volatilize it” (quoted in Woolhouse 59). Based on observations about the color of blood made by Lower, Locke also distilled venous and arterial blood to see if these different types of blood contained different amounts of nitrous salt; the experiment produced no salt in either sample (59). Locke’s influential relationship with Boyle is well-documented; both shared an interest in iatrochemistry and Boyle later published Locke’s weather register of June 1666-March 1667 in his General History of the Air (1692) (Dewhurst 19).

Locke moved from Oxford in 1667 to Exeter House to become physician to Lord Ashley. This move, Dewhurst argues, shifted Locke’s medical interests from the “laboratory” to the “bedside” (32). This shift is primarily thanks to the influence of Thomas Sydenham, who is known for his work with infectious fevers. Sydenham believed in careful observation of the symptoms and courses of disease, acknowledging that causes of disease were beyond human observation and understanding. Sydenham also believed that physicians achieve the best results with their patients when treatments support nature in her natural course of healing. Sydenham wrote to Boyle that Locke “visit[ed] with me very
many of my variouls patients” (quoted in Dewhurst 35); Locke joined Sydenham on his
visits so he could observe Sydenham’s cooling treatments, treatments that cooled smallpox
patients rather than heating them up. Sydenham’s clinical methods—including an emphasis
on observation and supporting, not impeding, the body’s natural responses to sickness—
influenced Locke’s own practices as a physician as well as his writings on medical practice
and his philosophy: In the “Epistle to the Reader” which begins Locke’s Essay Concerning
Human Understanding, Locke calls Sydenham and Boyle “Master-Builders” of “The
Commonwealth of Learning” (9). I want to turn now to one of Locke’s pieces of medical
writing, an essay titled “Anatomia” Locke probably wrote between December 1668 and
February 1689 because it dramatizes Locke’s disenchantment with anatomy and lays the
foundation of Locke’s interest in the complex network of causes that underlie medical
conditions and embodied experience more generally.

Locke’s Distaste for Anatomy

By the seventeenth century, the collective sights of the medical community were
beginning to turn from anatomy to pathology. The greatest anatomical (and physiological)
discovery of the seventeenth century was William Harvey’s description of the circulation of
blood in a closed system. Though Harvey’s experimental methods were influential, many
medical practitioners wished to pursue less mechanistic approaches to understanding the
human body. One alternative option was iatrochemistry—a mixture of alchemy, medicine,
and chemistry—as developed by Paracelsus and Jan Baptista van Helmont. Though Locke
worked with confirmed mechanists such as Robert Boyle, much of his medical thought is
clearly Helmontian. Locke’s essay “Anatomia,” demonstrates some of the reasons why Locke may have found a mechanistic approach to medicine inadequate: the mechanisms of the body provide no clue to what actually powers them. Locke wants a path to the fundamental causes and powers of life. Only that kind of knowledge can ultimately help to cure disease.

While a knowledge of the structures of the body may help the physician place an incision or a topical remedy, or form a hypothesis about the nature of a disease, anatomy falls short in illuminating the causes of disease and therefore, can help little in curing them: “If therefor anatomie shew us neither the causes nor cures of of most diseases, I thynke it is not very likely to bring any great advantages for re moveing the pains & maladys of mankind. Tis true it pretends to teach us the use of the parts, but this if it doth at all it doth imperfectly & after a grosse manner” (Walmsey). The study of anatomy potentially provides knowledge about the parts of the body and their individual and relational uses; however, as Locke argues, anatomy only “pretends” to do so, instructing the anatomist only “imperfectly” and “grossely,” suggesting perhaps that anatomy’s study of structures promises more knowledge about the body and how its parts function than it can deliver. Part of the problem seems to be that “pains” and “maladys” are not simply matters of the uses of the parts of the body. In a similar vein, Locke continues by explaining that anatomy provides only “superficial” knowledge precisely because anatomy does not illuminate causes. Though the body’s surfaces are literally opened up in a dissection, doing so only provides new surfaces to “stare at”: “he may perhaps be the better anatomist by multiplyd

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* That the first line of this manuscript is written in Sydenham’s hand has contributed to disputes about the authorship of “Anatomia”; however, Anstey and Burrows (2009) provide definitive arguments for Locke’s authorship in “John Locke, Thomas Sydenham, and the Authorship of Two Medical Essays.”
dissections but not a better physitian, for poreing & gazeing on the parts wch we dissect without perceiveing the very precise way of their workeing is but still a superficial knowledge, & though we cut into the inside we see but the outside of things & make but a new superficies for our selves to stare at” (Walmsey). Locke quips that studying a dissected body is as useful to the physician as looking at a painting is to a lady who wishes to be rid of her freckles. In these passages, Locke undercuts the traditional analogical logic of the body. To an anatomist like Vesalius, the structure of the hand does signal something about its causes: remember that the intersecting tendons of the hand mentioned earlier are a sign of divine design and benevolence. In response, I imagine Locke would say that the interlocking structure of the tendons of the hand shows how, physically, certain movements of the hand are possible, but not how the hand is willed to move, or, perhaps more immediate to the concerns of “Anatomia,” how to cure or even treat a malady.

The first problem with causes—and looking for them in superficial structures—is that they seem to be insensible and therefore inaccessible. They are beyond our senses’ ability to perceive, even with the help of instruments such as the microscope. Locke demonstrates this conundrum through the smallest organisms. If a microscope cannot reveal the internal structures of the smallest bug, how can it reveal the causes shared by bug and human alike? However, Locke considers a second problem with identifying causes of disease and pain in the body: there seems to be a vast complex of environmental factors outside the body that can affect the causes occurring inside the body. In this vein, Locke considers disagreement over the contents of the stomach as further evidence of anatomy’s shortcomings: discussions about the actual contents of the stomach distract anatomists from more important issues (such as causes) and other factors that affect health. Speaking
of the stomach’s contents, “be it... acid or salin or of what other sensible quality it will,”

Locke continues,

the appetite... nor digestion seems not to depend upon the sensible constitution of that menstruum, when it often happens that one who sits downe to table with a good stomach looses it utterly upon the receit of... suddain bad news or any thing that violently stirs up al{...} any passion, & has noe longer any appetite though noe body can thinke that the juice in the stomach is by such... an accident made lesse acid then it was before. Ther is some thing therefor in the body & the juices too... curious &... fine for us to discerne wch performes the offices in the severall parts governs the health & produces the various motions in the body. (Walmsey)

Whatever the stomach fluid consists of, that fluid alone cannot account for a change in appetite in the face of surprise and excited passion. Similarly, surprise alone will not change the essence of stomach fluid itself, but there is something in the body at large “too curious and fine for us to discerne” which causes “the various motions in the body.” One of the most important things about this example is the clear connection it makes between the body and the world at large: the workings of the body are too complex—caught up as they are not only in body, but in mind, passions, and a complex world of social relations—to be reducible to the body’s structures. Cases like the aforementioned, Locke argues, “twould puzzle the quickest sighted anatomist assisted too by the best microscope to find any sensible alteration made either in the juices or solid parts of the body” (Walmsey). If the changes to the body are fundamentally insensible, Locke is left to consider what is sensible, recalling Sydenham’s dedication to observing symptoms and simply not worrying about causes. Perhaps we might call Locke’s approach to medicine described here holistic, maybe even phenomenological, caught up as it is with experience. If one fault of anatomy is that it is ultimately concerned with surfaces, Locke’s case of the bad digestion dramatically exposes the superficiality of any approach to medicine that only takes into account the
body’s structures and not larger forces of lived experience including the passions and the things that evoke them.

If Locke questions the uses of anatomy and rejects the power of analogy for understanding the workings of the human body, what do hands offer Locke in a medical context? To answer this question, I’ll turn to his medical journals.

The Hand Bone is Connected to the Stomach Bone

Locke’s medical interests were extremely varied; this wide-ranging interest is demonstrated in Locke’s medical journals where Locke recorded recipes, theories (his own and those of others), as well as descriptions and observations. Amidst all this variety there is a collection of descriptions of hands recorded in the journal Locke kept while traveling in France in 1678. In 1675 after working for Lord Ashley and holding government posts, his employment was insecure—Ashley was out of favor—and Locke returned to Oxford for a couple of months before going to France ostensibly for his health but also probably for political reasons. Locke became tutor to Caleb Banks, the son of a prosperous merchant, and it was with his pupil Locke traveled through provincial France in 1678 before returning to England in 1679. Historians are also fairly certain that substantial portions of the Essay were written while Locke was in France, though it is impossible to pinpoint which ones.

I want to start with the final entry concerning hands in Locke’s journal in 1678 on Saturday, July 16 when Locke records the theory of one Dr. Godfroy about a connection between the convulsions of the hand and the stomach:

Dr. Godfroy told me that in Epilepsies, convulsions and vertigos, he has found the cause often to be in the stomach, and that in such cases convulsions of the hands, especially the right hand, with pain in the fingers commonly accompanies. This, he says, happened to him self who with a vertigo that
lasted him 6 months, when he looked up or downe or lay downe in his bed, which he cured at last with a vomit of gummi goti. He had accompanying it a flatulent tumor of his right hand, and great pain in his fingers, and after that numbnesse in his fingers. The like happened to a woman who having convulsiv fits but without seiseing on her senses, soe that she knew all was done to her in her fits, but had violent convulsions in her hands was curd at last by vomiting up an impostume which broke in her stomach. For he says he has often observed great sympathy betwixt the stomach and the hands, especially the right hand, which he imagins to communicate by the great musculus adducans which draws in the arme and extends it self over the breast quite downe to the region of the stomach. (Dewhurst 131-2)

This theory seems to have made an impression on Locke because when Locke himself is sick in September of 1679, and an irregular pulse in Locke’s hand stops once “my stomach and strength came to me” (Dewhurst 173), he questions in the journal “whether this be from that sympathy between the hand and the stomach mention’d by Dr. Godfrey” (173). Though Godfrey makes sense of the connection between the hand and the stomach via the physical connection between the body parts, Locke’s language of sympathy and communication suggests a connection modeled on social models rather than mechanistic parts. The sympathy between the stomach and hand personifies the parts, turning them into feeling agents. That Dr. Godfrey imagines the connection suggests the tenuousness of the connection but also the complexity of factors that must be actively organized by the people experiencing the pain.

About two months earlier, in May 1678, Locke recorded the first ever clinical description of onychogryphosis (Dewhurst 304) which was published nearly twenty years later in the Philosophical Transactions of the Royal Society as “An Account of One Who Had Horny Excrescencies or Extraordinary Large Nails on His Fingers and Toes.” Locke provides a detailed description of the nails on a young man’s hands and feet, including slightly more information on the pain the condition causes the man and the way the large
nails obstruct the function of the hand. Locke’s piece describes “a young Lad of between Nineteen and Twenty years old, who had upon the ends of all his Fingers, as it were Horns grew out” (594). Locke describes the number, size, and shape of the unusual nails, noting that they occur on all of the man’s fingers and toes, though not at the moment Locke sees him, some of them having fallen or broken off or been removed in the hospital. This description emphasizes the history of the condition before Locke has seen it himself, making the hand a point on which change over time can be plotted. The largest nail Locke observes is on the middle finger of the man’s right hand, though the man reports there used to be a nail “much bigger and longer than this of the middle Finger” (594) on his thumb. This remaining nail, Locke reports, “was 310 grys [a little more than four inches] long, and 130 grys circumference, of which a good piece was broke off in my presence of above 150 grys long” (594). After noting the shape, produced by the thickening of the nail—“like a Bird’s Claw, but that it was not taper and sharp, like that, but blunt at the end, and almost of the same bigness all along” (595)—Locke notes the pain the thickened nails cause the young man:

This horny substance grew not out of the end of the Fingers, but was as it were a thickening of the Nail. . . . He had no sense in the horny part itself, for I saw the pieces before-mentioned broken off by wrestling several ways; but he complained of pain when bending the upper part, the part that joyned on to his Finger was not held very firm and steady, and those of his feet were so tender, that he complained upon very gentle touching of them: but the sensibility was not in the horny excrescencies, but in the part where it joyns on to the Flesh, i.e. where the Nail did formerly grow. (595)

The question of pain allows Locke to make a judgment of the substance of the excrescencies; that they have no sensation in themselves suggests that they are composed of nail, not flesh, the pain resulting from the excess pressure on the place where nail and finger meet. In the last part of the above passage, starting with “but the sensibility was not
in the horny excrescencies,” the sensibility has a location, but not a defined agent; it is almost as it Locke, the describer, feels where the sensibility registers. In addition to the nails, Locke notes “several “horny excrescencies” on the back of the man’s hands that look like warts “but to the touch they feel much harder” (595). Locke ends the account with other aspects of the young man’s health that may be germane: “This Disease began upon this Lad about three years since, after having had the Small Pox, which is the only thing to which he imputes it” (596). The young man is from Brie and “his Food was the usual of the Country” (596). Locke makes no comment on these points, but their inclusion suggests that the context for the hand matters. Structure alone is not enough to understand the condition; context must inform his understanding.

*An Essay Concerning Human Understanding*

The hand is not a direct object of study in *An Essay Concerning Human Understanding*. Introducing his project, Locke compares the understanding to the eye: “The Understanding, like the Eye, whilst it makes us see, and perceive all other Things, takes no notice of it self: And it requires Art and Pains to set it at a distance and make it its own Object” (1.1.1). Something similar might be said of a healthy, working hand. And while it may not take quite as much “art” and as many “pains” as the eye to set the hand at a distance, the “Art and Pains” of the Essay allows us to consider the hand as an object, illuminating the conventions, beliefs, and theories that make speaking about, or even with, the hand possible.

The hand makes its appearance in the very first sentence of *An Essay Concerning Human Understanding*. Locke begins “The Epistle to the Reader” with a direct address to the reader: “Reader, I Here put into thy Hands, what has been the diversion of some of my
idle and heavy Hours” (3). This opening emphasizes the Essay’s status as object, a book with covers and pages the reader’s hands will manipulate. By emphasizing the Essay’s objectness, Locke also forecasts the importance of manipulating objects to the acquiring of knowledge. The goal of Locke’s Essay, as stated in this first chapter is “to enquire into the Original, Certainty, and Extent of humane Knowledge” (1.1.2). Locke sidesteps questions about the substance and essence of the mind and the material mechanisms, “the motions of our Spirits, or Alternations of our Bodies” (1.1.2), and instead focuses on “the discerning Faculties of a Man, as they are employ’d about the Objects, which they have to do with” (1.1.2). The discerning faculties—sensation and reflection—lead to ideas based on experience with objects in the world. Ideas of qualities such as solidity or softness come from holding objects in hand. Many steps down the road to knowledge, a book in hand—such as the Essay—continues this process of gaining knowledge through the embodied experience of reading. The power of the hand comes from being at the mid point of the acquisition of knowledge—between objects in the world and ideas in the mind. Knowledge must be touched, tasted, seen into existence.

The essentially experiential nature of knowledge in Locke’s philosophy is even underscored in Locke’s account in Book I of the Essay of how knowledge is not acquired as that account evokes hands as powerful agents in knowledge formation. Locke rejects the theory of innate ideas, that there are “in the Understanding, certain innate Principles; some primary Notions… Characters, as it were stamped upon the Mind of Man, which the soul receives in its very first Being; and brings into the World with it” (1.2.1). This figuration emphasizes what knowledge is not: it is not a stamp—stable and unchanging, the character made by the stamp reproducible—and it does not exist independent of the mind it is
stamped on, shaping that mind before it experiences the world. The power carrying out the “stamping” Locke later figures as an imprinting and then a writing God when he describes innate ideas as “practical Principles . . . imprinted in our Minds immediately by the Hand of God” (1.3.6) and “those common Notions writ on our Minds by the finger of God” (1.3.16). Though Locke rejects the theory of innate ideas, the processes he uses to figure knowledge acquisition—stamping, imprinting, writing—have manual elements. And the hands in these quotes are powerful ones: they make the transfer of knowledge from God to human possible, while making the unembodied power of God graspable.

When Locke invokes God’s hands in the Essay, he concretizes God, giving him a body—at least eyes and hands—which familiarizes the powers and judgments of God and reinforces the association between hands and power. In one of his refutations of innate ideas, Locke maintains “… the true ground of Morality; [. . . ] can only be the Will and Law of a God, who sees Men in the dark, has in his Hand Rewards and Punishments, and Power enough to call to account the Proudest Offender” (1.3.6). Though God’s ability to see in the dark and call to account the “proudest offender” are exceptional abilities, they are expressed to humans with eyes and hands in a non-exceptional way. God’s hands are associated first and foremost with power, manifested as God metes out rewards and punishments. In this passage, the un-embodied God has hands because he has power, and hands are needed, at least conceptually, to make use of that power. As hands bestow rewards or punishments, they shape reality, molding desires, actions, and actual physical states. This shaping can also occur just by virtue of the hands being visible and conveying the latent possibility of power in the hand, its incredible potentiality. Locke evokes the
punishing hand of God again to argue that laws of God are not imprinted on the mind prior to birth; if they were, people would not break them:

but let any one see [...] a pleasure tempting, and the hand of the Almighty visibly held up, and prepared to take vengeance (for this must be the case, where any duty is imprinted on the mind) and then tell me, whether it be possible for people with such a prospect, such a certain knowledge as this, wantonly, and without scruple, to offend against a law, which they carry about them in indelible characters, and that stares them in the face, whilst they are breaking it? (1.4.12)

Here the hand is a compelling symbol of power—vengeance about to be enacted—and potential power. Even the image of a hand and its reminder of potential power can, in this example, shape the course of someone bent on pleasure.

Most of the hands that appear in Book I of the Essay belong to God. However, when Locke writes about human hands, they demonstrate many of the same powers with an emphasis on the power of hands to shape physical reality. Locke is refuting the idea of innate ideas when he writes, “God having endued Man with those Faculties of knowing which he hath, was no more obliged by his Goodness, to implant those innate Notions in his Mind, than that having given him Reason, Hands, and Materials, he would build him Bridges, or Houses” (1.4.12). Like humans have both the physical and mental wherewithal to construct structures such as bridges and houses out of the available materials, humans have the requisite mental faculties to process experience into knowledge. This list—reason, hands, materials—defines what makes humans capable actors in the world. In Locke’s configuration, hands connect reason to materials. Hands are the body parts that do, manipulating the physical world until it is shaped into things like homes and bridges under the direction of reason and the will. Pairing reason and hands explains how humans use the available materials. Perhaps reason and hands are the first two items in the list because
they are flexible, adaptable to different tasks (which recalls Aristotle's comparison of the soul and hands as well as the designation of the hand as the “tool of tools”). Humans need body parts other than hands to create structures, so here the hand stands in for the capacity of the body to do in many different ways. This power to change physical reality is embodied in the symbol of the hand. In summarizing humans’ resources with “Reason, Hands and Materials” the hands become synonymous with humans’ power to exert energy on the landscape and change it in as many ways as reason can devise given the available materials.

Locke’s philosophy also emphasizes, however, the role the hand (and the body at large) in connecting materials to reason. Before reason can select stone as a suitable material for building a structure, the hand has to experience it—communicate the mind the stone’s solidity, strength, and its malleability. The ideas and chains of cause and effect that constitute reason are dependent on hands for their existence. We’ll see more about that as Locke draws his mind to questions of the acquisition of ideas in Book II.

Following Book I’s rejection of inborn knowledge, Book II of the Essay explains how knowledge is gained through sensation and reflection. Locke connects even the discerning faculty of reflection to embodied experience; the mind will never have much to reflect on if the body experiences nothing and there are no ideas pre-loaded in the mind. Locke often figures that experience and the ideas that come from it as things that can be handled, such as objects which furnish a cabinet: Locke describes the mind as “the yet empty Cabinet” before “the Senses at first let in particular Ideas” to “furnish” (1.2.15) it. The mind is figured as an empty space to be filled, such as when Locke calls the brain “the mind’s Presence-room” (2.3.1), or a blank paper to be written upon. Locke writes, “Let us then suppose the
Mind to be, as we say, white Paper, void of all Characters, without any Ideas” (2.1.2). Locke then questions, “How comes it to be furnished?” (2.1.2). In this case, sensation populates the mind with ideas like a writing hand fills a paper with characters. The figure of the writing hand here encompasses many functions: perceiving, ordering, composing, recording. It also helps to make the mind available to the senses. In Metaphors of Mind, a dictionary of eighteenth-century metaphors for the mind, Brad Pasanek makes the point that, especially within empiricist schools, where sensation is privileged over the purely rational, the mental is depicted in terms of the physical: “our ideas, derived from the world, make of the mind ‘a little world’ governed by the general analogy of language. The inward is ordered in terms of the outward, and the mind must declare what it is by saying it is something else” (21). Annette Baier has called this impulse to compare metal processes to sensuous experiences figurative empiricism. In Locke’s Essay, figurative empiricism abounds, and the hand often stands in for the powers (such as sensation and reflection) that populate the mind with ideas—remember the hand that moves supplies into the cabinet or fills a blank page with characters—because the hand embodies both sensual experience and active power.

I want to turn now to sensation, one of the avenues by which the mind arrives at ideas. In discussions of sensation, hands come into play as Locke considers the objects humans perceive through the discerning faculties of the body: sight, touch, taste, etc. The hand—and the sense associated with it, touch—contribute, along with the other senses, to the creation of simple ideas. A hand touching a piece of wax, Locke writes, “feels softness and warmth” (2.2.1); a hand touching a piece of ice feels “coldness and hardness” (2.2.1). Though a person registers many sensations at once, each sensation produces an “unmixed”
idea in the mind. Though there is physical distance between hand and mind, Locke writes that “Ideas in the Understanding, are coeval with Sensation; which is such an Impression or Motion, made in some part of the Body, as produces some Perception in the Understanding” (2.1.23). In this configuration, the hand is not merely an organ of sensation, it is also an organ of perception, tying ideas in the mind closely to the body parts that engender them.

The hand’s role in receiving sensation is emphasized in Locke’s description of solidity which he argues is the most persistent sensation: “There is no Idea which we receive more constantly from Sensation, than Solidity” (2.4.1). Locke continues to explain that solidity is felt by the whole body, and in fact, helps us to understand the idea of body. Furthermore, we understand solidity through the “handling” of bodies: “Whether we move, or rest, in what Posture soever we are, we always feel something under us, that supports us and hinders our father sinking downwards; and the Bodies which we daily handle, make us perceive that whilst they remain between them, they do by an insurmountable Force, hinder the approach of the parts of our Hands that press them” (2.4.1). Though the whole body feels solidity, Locke attributes the perception of solidity to the handling of objects, placing an active understanding of the quality of solidity in the hands. Towards the end of the chapter on solidity, Locke explains, “If anyone asks me what solidity is, I send him to his senses to be informed. Let him put a flint or a football between his hands and then try to make the palms meet, and he’ll know” (2.4.6). This brief example emphasizes the instantaneous relationship between sensing and knowing, or rather that there is no relationship between sensing and knowing—they are one and the same: holding a flint between your hands is experiencing, and hence knowing, solidity. The hand, then, is an
instantaneous and reliable tool for gathering knowledge. That is because hands themselves know things. Locke further underscores the hand’s reliability when he explains that hands are not mistaken in judging figure, an object “never producing the Idea of a square by one Hand,” if it “has produced the Idea of a Globe by another” (2.8.21). These thought experiments handily conflate the hand with the subject that controls it and complicates the idea that there is a smooth path of information from the sensation in the hand to the idea in the mind.

Locke is later able to play against the reliability of sensation/knowledge gained through the hand when he uses the thought experiment of a hand feeling the temperature of water to explain secondary qualities. Secondary qualities of objects are called up through a relational encounter. Locke explains that secondary qualities “are in truth nothing in the Objects themselves, but Powers to produce various Sensations in us” (2.8.14). These powers arise from the “Bulk, Figure, Texture, and Motion of parts” (2.8.17) which constitute the object’s primary qualities. Secondary qualities, therefore, are both in, and not in, the object itself. Locke explains the relationship when he writes:

The particular Bulk, Number, Figure and Motion of the parts of Fire, or Snow, are really in them, whether any ones Senses perceive them or no: and therefore they may be called real Qualities, because they really exist in those Bodies . . . . Take away the Sensation of them [Light, Heat, Whiteness, or Coldness]; let not the Eyes see Light, or Colours, nor the Ears hear sounds; let the Palate not Taste, nor the Nose Smell, and all Colours, Tastes, Odors, and Sounds, as they are such particular Ideas, vanish and cease, and are reduced to their Causes, i.e. Bulk, Figure, and Motion of Parts. (2.8.17)

Qualities like light, heat, and color—secondary qualities are caused by the primary qualities of the object—bulk, figure, etc. Those primary qualities exist in the object whether they are sensed by someone or not. The secondary qualities “vanish and cease” if they are not perceived by an observer. So, secondary qualities might be said to have a tenuous
relationship to the object itself. Their causes inhere in the object, but the secondary qualities do not exist without someone to experience them: secondary qualities are “no where when we feel them not” (2.8.18). Locke describes secondary qualities as a change that arises in the sensing subject him or herself: Speaking of the sun, Locke explains, its “primary Qualities” are able to “alter the Bulk, Figure, Texture, or Motion of some of the insensible parts of my Eyes, or Hands, as thereby to produce in me the Idea of Light or Heat” (2.8.24). This is an expanded sense of how a hand (or the body at large) interacts with objects. Where Locke argues that man has reason, hands, and materials, the emphasis is on hands obtaining ideas through sensation and then molding the materials available for human use. In the discussion of secondary qualities, we see that one of the capabilities of the hand (or one of its powers Locke might say—something with passive power is “able to receive any change” (2.21.2)) is that it changes when it comes into contact with an object. The body not only ascertains the bulk, figure, texture or motion of objects they handle, it is materially “altered” by the objects it encounters.

The sensations that arise based on these changes also depend on the state of the hand before it encounters the object. This point is made by considering a particular conundrum: with an understanding of secondary qualities in place, Locke writes, “we may be able to give an Account how the same Water, at the same time, may produce the Idea of Cold by one Hand and of Heat by the other: Whereas it is impossible, that the same Water, if those Ideas were really in it, should at the same time be both Hot and Cold” (2.8.21). In this regard, temperature is a different quality than figure which “never produc[es] the Idea of a square by one Hand which has produced the Idea of a Globe by another” (2.8.21). Locke explains,
For if we imagine *Warmth*, as it is *in our Hands*, to be *nothing but a certain sort and degree of Motion in the minute Particles of our Nerves or animal Spirits*, we may understand, how it is possible, that the same *Water* may at the same time produce the Sensation of *Heat* in one Hand and *Cold* in the other... But if the Sensation of *Heat* and *Cold*, be nothing but the increase or diminution of the motion of the minute Parts of our Bodies, caused by the Corpuscles of any other Body, it is easy to be understood, That if that motion be greater in one Hand, than in the other; if a Body be applied to the two Hands, which has in its minute Particles a greater motion, than in those of one of the Hands, and a less, than in those of the other, it will increase the motion of the one Hand and lessen it in the other; and so cause the different Sensations of *Heat* and *Cold* that depend thereon. (2.8.21)

One thing this passage does is name additional parts (beyond fingers, palms, etc.) of hands. This description looks beyond the visible structures of the hand and looks to the interior of the hand which is composed at least in part of “*Nerves*” and “*animal Spirits*” which are, in turn, composed of moving “*minute Particles.*” The question of how the same water can feel cold to one hand and warm to another is resolved by the state, or rather, the motion of the particles of the hand going into the water. While the case of the water bath resolves the question of whether the water can be both cold and hot, it raises the question of the reliability of the hand and its sensations. The hand seems to be a reliable tool for sensation: certainly, what is felt in the hand is registered in the mind whether it feels solidity or a cool water bath. However, the hand’s experiences of secondary qualities also underline the mutability of sensuous experience itself. An object’s bulk and figure may feel the same from hand to hand (as in the instance of the sphere and cube), but the nature of other sensuous experiences will depend on each hand and minute differences in its components that experiences it.

Now that’s we’ve considered sensation, we can explore how the hand serves as a microcosm of the self in the *Essay* because of its ability to sense *and* its ability to carry out actions. This brings us back to the senses of the hand found in Book I: the hand puts the
mind into the world in two ways—it allows the person to sense the world, and to modify it. These abilities and their connection to a sense of self are explored in Locke’s discussion of personal identity. Locke uses the hand as a test case when he considers the question of whether changing the physical substance of a person changes his or her personal identity. Body is a part of the conscious self: “Bodies,” Locke argues, “all whose Particles, whilst vitally united to this same thinking conscious self, so that we feel when they are touch’d, and are affected by, and conscious of good or harm that happens to them, are a part of our selves: i.e. of our thinking conscious self” (2.27.11). By this logic, Locke argues that “the Limbs of his Body is to every one a part of himself: He sympathizes and is concerned for them” (2.27.11). Locke employs a manual metaphor when he describes the particles of the body being “touch’d.” These touches—from quotidian sensation to the “good or harm that happens to them”—tie the body to the sense of self, especially as those touches evoke sympathy and concern in the person.

Though the body is a vital part of a sense of self, Locke argues that identity is located in more than just physical substance by using the example of a severed hand: “Cut off an hand, and thereby separate it from that consciousness, we had of its Heat, Cold, and other Affections; and it is then no longer a part of that which is himself, any more than the remotest part of Matter” (2.27.11). Describing just before this passage the sympathy and concern a person feels for her limbs, Locke perhaps chooses the hand for its ability to evoke sympathy and concern as the hand allows the self to interface with the world in a particular way. The versatility of the hand as interface is suggested in the large placeholder, “other Affections,” which evokes not only the sensory affects registered in the hand, but also the affects the hand can impose on other bodies; the hand both feels and acts. The affective
power that makes the hand an important contributor to and symbol of personal identity is also evoked in Locke’s famous account of property in *The Second Treatise of Government*. There Locke writes “every Man has a *Property* in his own *Person*” (5.27), but that property can be extended outside the person as the person interacts with objects outside the self. Locke explains the mechanisms of this transfer when he states that one’s “own person” includes “the *Labour* of his Body, and the *Work* of his Hands” (5.27). Locke continues to explain, when a person works on something with his hands, “he hath mixed his *Labour* with, and joined to it something that is his own, and thereby makes it his *Property*” (5.27).

The working hand affects objects with which they labor, transferring proprietary ownership through the labor. Hands are essential to identity because they can expand property. On a more conceptual level, they mix the person with their possessions, expanding themselves outward.

Of course, the severed hand in the *Essay* also emphasizes the tenuousness of the connection between the self and the body and between the body and any of its parts: when the hand, or any other particle loses is proximity to the rest of the body, it loses its connection. Locke’s brusque account of the severed hand ignores the profound strangeness of one’s severed hand being “then no longer a part of that which is *himself*, any more than the remotest part of Matter” (2.27.11).

The strangeness of being separated from the hand, it being out of the self’s control continues as a theme in Locke’s descriptions of action in the chapter of Book II “Of Power.” The hand appears repeatedly in this chapter as a test case of when action, liberty, or freedom breakdown, marking the hand as *the* tool of bodily action and, therefore, a fundamental tool/vehicle for understanding ideas such as liberty. The hands in question
open a gulf between the acting subject and his autonomous hands which helps to define a lack of liberty. Liberty requires control over one’s own actions: “Every one, I think, finds in himself a Power to begin or forbear, continue or put an end to several Actions in himself. From the consideration of the extent of this power of the mind over the actions of the Man, which every one finds in himself, arise the Ideas of Liberty and Necessity” (2.21.7).

In Locke’s explanation of actions, Locke argues that the (perceived) good determines desire or preference. Preference molds the will which brings about actions, “the very end of our Freedom being,” Locke writes, “that we might attain the good we chuse” (2.21.28). One of the first impediments to freedom Locke describes via uncooperative hands has to do with indifferency and, hence, liberty. But first, some definitions: liberty is found in

indifferency not of the Man, (for after he has once judg’d which is best, viz. to do, or forbear, he is no longer indifferent,) but an indifferency of the operative Powers of the Man, which remaining equally able to operate, or to forbear operating after, as before the decree of the Will, are in a state, which, if one pleases, may be called indifferency; and as far as this indifferency reaches, a Man is free, and no farther. (2.21.71)

For a person to be free, her “operative powers” must remain in her control, able to act or not act according to her will. Notice that indifferency—the key indicator of freely-willed action—is figured as having “reach,” a thing that puts freedom in one’s grasp. Locke uses the hand to demonstrate that when the ability to move or not move the hand according the wishes of the will is maintained, a person is free—this is the indifferency of the operative powers: “I have the Ability to move my Hand, or let it rest, that operative Power is indifferent to move or not to move my Hand: I am then in that respect perfectly free. My Will determines that operative Power to rest, I am yet free, because the indifferency of that my operative Power to act, or not to act, still remains” (2.21.71). Freedom exists where and
when the will can be executed. Locke explains, however, that freedom is not maintained if he is not able to control his hand:

But if during the rest of my Hand, it be seized by a sudden Palsy, the *indifference* of that operative Power is gone, and with it my Liberty: I have no longer Freedom in that respect, but am under a Necessity of letting my Hand rest. On the other side, if my Hand be put into motion by a Convulsion, the *indifference* of that operative Faculty is taken away by that motion, and my Liberty in that case is lost: For I am under a Necessity of having my Hand move. (2.21.71)

The “sudden Palsy” and “Convulsion” erase the liberty of the person who usually controls the hand, and these disruptions emphasize just what is included when the hand’s power of action is highlighted: operative powers, indifferency of the operative powers, the will. When we talk about the hand as an actor, we talk about all of these things, though not all are the realm of the hand per se. One of the powers of the hand is to provide a kind of short-hand for the interaction of these components of action.

The troubling autonomous hands featured in Locke’s discussion of power also point to the power of social structures in determining the interaction between the hand and the will. Take for instance, the striking man: “So a Man striking himself, or his Friend, by a Convulsive motion of his Arm, which it is not in his Power, by Volition or the direction of his Mind to stop, or forbear; no Body thinks he has in this Liberty; every one pities him, as acting by Necessity and Constraint” (2.21.9). The man does not want to hit himself or his friend, but his mind cannot stop his body. The body, in this case is autonomous—out of the mind’s control—which results in a lack of liberty for the man. The man is not free to move his arm or not move his arm as he wishes to. Notice that the result of this loss of liberty is pity.
So, there are clearly moments when a person is not in control of his or her body; one of the more far-reaching claims of this chapter though is that we are not perhaps fully in control of what prompts us to act because we are conditioned by large social forces. Locke develops this point when he speaks to the problem of why people act to serve more immediate but less important concerns rather than “remoter absent good.” The answer begins with the idea that our days are simply full of uneasinesses that must be resolved:

The ordinary necessities of our lives, fill a great part of them with the uneasiness of Hunger, Thirst, Heat, Cold, Weariness with labour, and Sleepiness in their constant returns, etc. To which, if besides accidental harms, we add the fantastical uneasiness, (as itch after Honour, Power, or Riches, etc.) which acquired habits by Fashion, Example, and Education have settled in us, and a thousand other irregular desires, which custom has made natural to us, we shall find, that a very little part of our life is so vacant from these uneasinesses, as to leave us free to the attraction of remoter absent good. (2.21.45)

Locke’s answer though goes on to make a distinction between real uneasiness and fantastical uneasiness. Humans’ actions are molded by the urge to resolve uneasiness; however, many of those uneasinesses are fantastical—which for Locke means are molded by fashion, Example, and education, and made natural and regular by custom.

The implication of this passage trouble what it means to own one’s body and its actions. I think the implicit question is how different really is a palsied hand from the hand Locke wills to write. The difference perhaps lies in the fact that Locke is more comfortable tracing out the social causes that shape things like the will. While the anatomist purports to reveal or uncover what is there, in eschewing the surfaces of anatomy, Locke redefines the boundaries of the hand. If the Aristotelian hand is the tool that brings about human civilization, the Lockean hand emphasizes the forces that contribute to actions hands take, blurring the borders or where actions begin and end.
CHAPTER 2

"I Had Now a New Scene of Life upon My Hands": Making and Unmaking Self, Society, and Narrative in Defoe’s Moll Flanders and A Journal of the Plague Year

Near the beginning of Moll Flanders, in a wonderfully ironic scene, a young Moll turns herself into a gentlewoman using her own hands. Moll presents her early employment as genteel work—an oxymoron. One of the first conflicts of the text revolves around Moll’s dislike of going into service. Moll despairs of going into service and begs her nurse to keep Moll with her. In response to Moll’s desperate pleas not to be sent away the nurse asks “is the Girl mad? what, would you be a Gentlewoman?” (10). “Yes” (10), says Moll. It is clear that young Moll does not fully understand what a gentlewoman is because it is lost on Moll that gentlewomen do not work, and gentlewomen do not will themselves, via work or otherwise, into being. When the nurse asks Moll how she will become a Gentlewoman, “what, will you do it by your Fingers Ends?” (10), Moll replies “yes” “very innocently” (10). Moll has her own definition of what it would mean to be a gentlewoman: “all I understood by being a Gentlewoman, was to be able to Work for myself, and get enough to keep me without that terrible Bug-bear going to Service, whereas they meant to live Great, Rich, and High, and I know not what” (12). Though Moll is clearly out of step with the rest of society on this point, here the narrative opens to entertain an alternate kind of gentility. And, indeed, Moll is counted a gentlewoman on two counts thanks to her hands: first, the Mayoress, hearing the story of Moll’s wish to be a gentlewoman, comes to see Moll and inspects her hands: “she took my Work out of my Hand, look’d on it, and said it was very well; then she took up one of my Hands, nay, says she, the Child may come to be a
Gentlewoman for ought any body knows, she has a Gentlewoman’s Hand” (11-2). Curiously, though Moll’s hands speak to Moll’s gentle status, the Mayoress examines and approves Moll’s needlework. On the one hand, this work (“plain Work” (11) as opposed to fine embroidery) emphasizes that Moll is emphatically not a gentlewoman; on the other, it suggests that Moll’s work should be a part of the Mayoress’ evaluation of Moll’s gentle qualities. Secondly and relatedly, Moll is eventually able to work to support herself, so that she can claim, “now I was a Gentlewoman indeed, as I understood that Word” (14). Moll is referred to in her community as “the little gentlewoman”—everyone is in on the joke it would seem. The narrative, however, is equally split, acknowledging the joke at one turn and supporting Moll’s assertions to gentle status at another. Moll’s hands embody two contradictory potentialities—she both is and isn’t a gentlewoman.

Ultimately, though, the joke is on everyone else. Though there is truly little that is traditionally genteel about Moll, she makes herself into a gentlewoman over and over again in the text, duping potential husbands, lovers, and marks. Moll makes and unmakes and then makes herself again throughout *Moll Flanders*. And she does it with her hands from the handiwork that, ironically, makes her an unconventional gentlewoman to the thieving that gains her a fortune in her later years. Hands emphatically display the arbitrariness of the designation “gentlewoman” and suggest that the world’s realities can originate from within and through the individual. Through these hand-wrought transformations, *Moll Flanders* emphasizes the malleability of individual character and of society at large. I argue that the hands of the text—working hands, responsible hands, dexterous hands—figure prominently and essentially in this dynamic: hands make and unmake. While Moll makes and remakes herself and the society she moves in with her hands, *A Journal of the Plague*
Year shows sweaty, plague-ridden hands unmaking society even as HF/Defoe creates a society again through the narrative the writing hand creates. Making with the hand is reinforced in both Moll Flanders and A Journal of the Plague Year through the figure of the writing hand—both Moll’s and HF’s and ultimately Defoe’s—which creates the narratives themselves.

My thinking about what the hand can do and mean is indebted to Ann Van Sant’s work on the head/hand hierarchy in eighteenth-century literature and culture which emphasizes Defoe’s work, and Robinson Crusoe in particular, as the locus classicus for thinking about hands in the eighteenth century. In “Crusoe’s Hands,” Ann Van Sant argues, “His [Crusoe’s] hands are not the low partners to his mind: the manual event is the significant event” (120). As we entertain Defoe’s rejection of the head/hand hierarchy, Van Sant argues, we also see how Defoe’s novel offers an example of a path the novel could have taken but didn’t: the georgic mode. The hierarchical relationship between head and hand lauds mental occupations over mechanical—a word Van Sant connects directly to manual labor or occupations. This hierarchy has origins in classical tradition and persists to today. The head/hand hierarchy had ramifications for social status in the eighteenth century: “As historians point out, the separation of the gentleman from the non-gentleman was said to rest on the distinction between those who did, and those who did not, have to work with their hands” (Van Sant 121). However, Van Sant distinguishes two intellectual veins by which the hierarchy of head and hand is questioned via Robinson Crusoe: “the new science and the georgic ‘revolution’” (121). Who better than a lone man in uncharted territory to question the hierarchy of the head over hand. As Van Sant points out, this hierarchy doesn’t make much sense in Crusoe’s situation.
Instead of a “pastoralized model of relations” (132), Robinson Crusoe is what Van Sant calls “a mechanic georgic” (129). “Defoe has what we might call a georgic sensibility,” Van Sant writes, “engaged with nation building, with scientific improvements, with productivity” (130). She follows Anthony Low who writes that the georgic is a “mode that stresses the value of intensive and persistent labor against hardships and difficulties. . . . It is preeminently the mode suited to the establishment of civilization and the founding of nations” (quoted in Van Sant 125-6). The designation of mechanic georgic emphasizes the labor that Crusoe performs with his own hands which is integral to what some might consider his higher-order accomplishments. Crusoe does, makes, experiments, labors, survives, and eventually establishes his own colony. The whole point of Van Sant’s reading is that Robinson Crusoe discourages a distinction between lower- and higher-order labor. Van Sant productively suggests that “in situating Defoe in the novel’s history, we should, perhaps, not emphasize the ways in which his fictions are less sophisticated than the later novel, but instead consider asking what the novel as a genre lost in turning away from the georgic processes of survival toward a pastoralized model of relations” (132).

What do Defoe’s other novels offer his discourse on the importance of the hand? Ann Van Sant writes “we can see the georgic possibilities in Robinson Crusoe and to a certain extent in Defoe’s other hardworking, enterprising characters who attend to right methods even in their criminal attempts at survival” (130-1). In turning to Moll Flanders and A Journal, this chapter shifts the focus from the mechanic georgic of Crusoe’s (mostly) lonely island to the modes of relations made possible in the urban spaces of England, especially London.
Moll Flanders and A Journal of the Plague Year, both published in 1722, just a few short years following Robinson Crusoe (1719), appear at a key midpoint in the modern or perhaps modernizing history of the hand in literature and philosophy of the long eighteenth century. I might take a stab at summarizing this history in this way: in the seventeenth and eighteenth centuries we see a shift from the hand being treated as an object of study in and of itself, to a figure that helps make sense of complex forces and relationships. In the anatomical tradition of the sixteenth century, the physical hand and its structures are essential to understanding not just the hand but also the self as agent. Insofar as the hand is the body part associated most strongly with willed motion, the hand serves as a bridge between material and spiritual motion, the space in which the willing of motion and the contraction of muscles comes together (Rowe). This is why the hand is the embodied symbol, locus even, of self and autonomy. However, in the seventeenth century, the anatomical hand’s embodiment of the material and spiritual starts to lose traction, the hand’s fortunes metonymically expressing those of anatomy itself. In “Anatomia” an essay written in 1670, John Locke expresses his frustrations with anatomy, claiming that the study of anatomy is the study of surfaces, surfaces that yield few insights into the causes of, say, willed motion or—if even more interest to Locke in this particular essay—pathology. In John Locke’s 1690 An Essay Concerning Human Understanding, the hand is a player in the gaining of knowledge, a tool to think with, and also an embodied reminder of what can’t be known, specifically in book IV, the causes behind the willed movement of John Locke’s own hands. Perhaps because the hand cannot reveal these fundamental causes and mechanisms, it slips out of the focus of study, often re-emerging as a figural power-house for thinking through concepts or complex relationships in Locke and elsewhere. For example, eighty-
seven years later, in Adam Smith’s 1776 *The Wealth of Nations*—home to Smith’s most famous iteration of the invisible hand—the hand functions as a figural abstraction, standing in for complex social and economic forces that cannot be known.

Before Smith, or perhaps before modern secularizing readings of Smith,* the invisible hand most commonly stands in metonymically for providence—the power of God. Millard J. Erickson writes that providence means that “we are able to live in the assurance that God is present and active in our lives. We are in his care and can therefore face the future confidently, knowing that things are not happening merely by chance” (quoted in Neff 104). This bit of metonymy—the tie between providence and the figure of the invisible hand of God—has been a persistent presence in Western Christian culture, from Augustine to today (Neff 104). However, the very idea of providence was under some strain in the eighteenth century. Michael McKeon has described the destabilization of a sense of providence in early modern history and the history of the novel due to the “‘secularization crisis’” (quoted in Richetti 63). John Richetti, quoting McKeon, writes, “‘the polemical urgency and extremity’ of providential argument ‘signifies not faith but a crisis of faith. . . an acknowledgment of God’s unknowable power; the doctrine of providence also expresses the will to accommodate divinity to a plan more accessible to human rationality’” (Richetti 63). Providential and secular accounts of Crusoe’s experiences are in dialogue in Richetti’s reading of Defoe’s *Robinson Crusoe*: “Defoe’s attempts to turn his survivor’s tale toward the theological and supernatural meanings actually undermine them and even trivialize them and expose the fragility of religious ideology” (63). These dialogs ultimately narratively

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* The nature of the relationship between Smith’s invisible hand and the theological concept of God’s providence has been heavily debated. For an overview of this debate and an argument for the influence of theology on Smith’s invisible hand, see Lisa Hill’s “The Hidden Theology of Adam Smith.”
create Crusoe’s identity, and, I would argue, the hand of God becomes a figure not simply of providence, but of human’s efforts to create narratives that make sense. This making work of hands is something that I’ll consider in both Moll Flanders and A Journal of the Plague Year.

The overarching question this chapter seeks to answer is how do the work hands do create the self and society. In what follows, I will define work broadly, as questions of work, in Moll Flanders especially, often dovetail with issues of class, agency, and responsibility. I begin with a reading of Moll Flanders in which I argue that Moll’s narrative works to build a relationship between gentle status and work for women. However, the bulk of my reading considers Moll’s time as a thief—a key component of which is that she appear as a gentlewoman—where Moll eschews a law-abiding place in society. Within this context, Moll’s work calls up questions of agency and responsibility and I argue that hands are essential figures in depicting shared responsibility. Through Moll’s handiwork as a thief Defoe also creates a sense of “dexterity” that weds both mental and manual labor and destabilizes the hierarchy between head/hand Ann Van Sant describes.

As a companion piece to Moll Flanders, A Journal of the Plague Year functions as a clear contrast in that A Journal portrays a society in which work is severely disrupted. If Moll is on the fringes of society during her thieving years, H.F. is inhabiting a society that is totally transformed by the plague. For this reason, as I evaluate work in the Journal both in terms of the work that characters perform as well as the work that hands do in the narrative to uphold the social body through narrative. Finally, I turn to the work hands do in both narratives to create character, society, and narrative.
Moll Flanders: Working Hands

Manual labor does not belong in the job description of a gentleman. Long before the eighteenth century, William Harrison, in *Description of England* (1586-87), describes one of gentle status as one who can “live without manuell labour, and thereto is able and will bear the port, charge, and countenance of a gentleman” (qtd. in Van Sant n. 7). According to this logic, Ann Van Sant can claim, following historians Keith Wrightson and Jonathan Glickstein, that “in the eighteenth century, as earlier, the distinction between mental and manual labor constitutes almost as sharp a division as that between the gentleman and those below him in the English social system. In fact, the ‘gentility divide’ and the mental/manual divide are often parts of the same system” (121).

However, hierarchies beg to be challenged. One arena in which the hierarchy between head and hand was challenged was early scientific practice, especially through the hands-on experimental practices of many of the members of the Royal Society (Van Sant 122-5). Though status limited who was accepted into the society and the perceived credibility of the members of the society, essential experimental methods required a kind of manual labor: “To the extent that the new science was committed to an empirical and experimental approach to knowledge, its procedures moved away from the cultural bias against hands” (Van Sant 123). The practices of the Royal Society challenge the head/hand hierarchy in the late seventeenth century and beyond; this challenge is joined by a challenge to long-held conceptions of the value of work prompted by vastly changing economic forces in the eighteenth century. James Robert Wood argues, “the advent of a commercial society led to a new valuation of work and a new pressure on the gentry and the aristocracy to define their contribution to national prosperity” (335). For Wood,
understanding these pressures illuminates Samuel Richardson’s efforts to build connections between the upper class and conceptions of labor in *Sir Charles Grandison*. According to Wood, “the problem for Richardson is not how to exclude the subject of manual labour; rather, it is how to establish continuities between the decorous work of high life and the hard work of the hand” (332). Richardson does so, Wood contends, as “[Richardson] expand[s] labour to include the social interactions of high life” (334); this kind of labor Wood calls “genteel work” (334). Richardson’s work postdates that of Defoe by some thirty years, and we see impulses to similar ends in *Moll Flanders*.

We’ve already seen how Moll’s early work made her into a special kind of gentlewoman, one who supports herself. In addition to supporting herself, Moll eventually attains the accomplishments of the more traditional gentlewoman and a taste for the finer things. After her nurse dies and Moll goes to live with a well-off family, Moll learns to speak French, dance, and sing through “Imitation and enquiry” (16). “By this Means I had, as I have said above, all the Advantages of Education that I could have had if I had, If I had been as much a Gentlewoman as they were with whom I liv’d; and in some things I had the Advantage of my Ladies, tho’ they were my Superiors; but they were all the Gifts of Nature, and which all their Fortunes could not furnish” (16). Again, Defoe makes Moll a gentlewoman in one respect, in her accomplishments, and a servant—Mrs. Betty—in the words of the family. Additionally, Moll lacks the money to secure a gentleman for a husband though this does not remain a problem as she gains money from the older brother with whom she has an affair and marries the younger brother. At this point in the narrative, the references to Moll as a gentlewoman drop off. However, it is of interest to note that besides secondary characters, especially women that Moll steals from, the appellation of
“gentlewoman” is given to Moll’s mother and her governess, two women who are clearly not gentlewomen in the traditional sense. Moll’s mother is a former felon. She is “burnt in the Hand” (73) as are many of the prominent men in their society such as the mayor and a justice. Moll’s mother reveals her hand to Moll: “look ye here, says she, turning up the Palm of her Hand, and shewed me a very fine white Arm and Hand, but branded in the inside of the Hand, as in such cases it must be” (73). Like Moll’s own hand which is fine like a gentlewoman’s, Moll’s mother’s hand is branded by still fine and white—marks of gentility. Like Moll, she holds multiple potentialities in her hands, as do many of the people in that colonial society. The second questionable gentlewoman is Moll’s governess, a consummate businesswoman with fingers in multiple pies, most of them decidedly ungenteel. Finally, it is Moll’s guise of a gentlewoman that helps her to attract husbands and sponsors and successfully steal. Moll’s entire narrative arc suggests the slipperiness of the category of gentlewoman, emphasizing what Moll can achieve through the work of her hands or despite the work of her hands. In either case, Moll creates and recreates herself and the category of gentlewoman in the novel as do her main female role models through the work of their hands.

Moll Becomes a Thief but Not on Her Own

Perhaps Moll’s handiest work is thieving and because of that I will give Moll’s career as a thief quite a bit of attention. We have already seen how Moll transforms herself into a genteel woman of various guises to further her work. Moll’s thieving sheds light not only on this personal transformation, but also on social transformations in the novel. Two particular aspects of social transformation interest me: 1) the question of whether Moll builds and values social networks or is essentially a solitary figure (I tend to side with the
former), and 2) how questions of shared responsibility create and sustain those social networks.

As Moll becomes a thief, we can turn our attention to the social relations that imbue her story. Moll’s handiwork places her within a social system—one that she is both defined by and works to re-define. Her guise as a gentlewoman as society would define the word is part of what makes her a successful thief. In other words, Moll’s attention to the social and her place within society contributes to her success as a thief. For some though, Moll’s social savviness contributes to her monetary success, but not to the successful development of relationships. Ian Watt has famously argued—and many critics have followed in this vein—that as an example of economic individualism, Moll eschews relationships. One of the consequences of economic individualism is the “devaluation of other modes of thought, feeling and action: the various forms of traditional group relationship, the family, the guild, the village, the sense of nationality—all are weakened, and so, too, are the competing claims of non-economic individual achievement and enjoyment, ranging from spiritual salvation to the pleasures of recreation” (Watt 64). While this is true (to an extent) of all of Defoe’s heroes, Watt argues it is perhaps especially true of Moll Flanders:

... the criminal individualism which Moll pursues in her later days tends to minimise the importance of personal relationships. Like the other inhabitants of the criminal milieu, she has to assume false names and false identities, and much of her life is devoted to maintaining these these pretences. Nearly all of her personal contacts, therefore, are coloured by this role; they can never be deep or unreserved, and they are necessarily transitory in a sense, therefore Defoe is being realistic when he portrays the personal relationships of Moll Flanders as a series of essentially casual encounters. ... (Watt 111)
As we shall see, I disagree fundamentally with Watt’s characterization of Moll’s relationships as essentially casual encounters. In fact, even Moll’s “casual” encounters with those she steals from I would argue are anything but.

I am certainly not the first to note Watt’s reading of Moll Flanders, nor the first to take issue with it. Ann Campbell has argued that the surrogate families Moll is a part of in *Moll Flanders* are often overlooked because Moll participates in them because of the financial rewards they provide: “However,” as Campbell argues, “just because Moll’s relationships are formed for financial rather than emotional enrichment does not make them any less meaningful to her, or less significant to the trajectory of the narrative itself… Despite her atomistic impulses, Moll must seek through ties to others the means of making, growing, and safeguarding a fortune” (52-3). This is absolutely the case, and though Moll’s fortune-making is compelling to Defoe, Defoe places that enterprise firmly within a social context rife with relationships, relationships that help Moll make money and relationships that allow her to share the blame. In the social body, Moll is clearly the hands: to quote Paul, “But now are they many members, yet but one body” (I Corinthians 12:20, KJV). Moll’s thievery enmeshes Moll into the social body more than it isolates her.

One way in which Moll’s thieving enmeshes her in a social network is through Moll’s argument that she is not alone to blame for that thieving. Throughout Moll’s description of her career in thievery, the narrative oscillates between two accounts: Moll is avaricious and bold and prefers to steal on her own, or Moll is compelled to steal and needs a network of accomplices to be successful. I argue that the hands in Moll’s narrative push us to give more credence to the second account. After the death of Moll’s banker husband, three years passes before Moll turns to thievery to support herself. This time is full of anxiety and fear.
for Moll as she cannot see a way to improve her fortunes. Her impending poverty is continually before her: “I saw nothing before me but the utmost distress; and this represented itself so lively to my thoughts, that it seemed as if it was come, before it was really very near; also my very apprehensions doubled the misery, for I fancied every sixpence that I paid for a loaf of bread was the last that I had in the world, and that tomorrow I was to fast, and be starved to death” (159). Moll downsizes, allowing her resources to last for another year; however, she still feels the approach of poverty: “but still when I looked before me, my very heart would sink within me at the inevitable approach of misery and want” (159). Moll continues, “Oh let none read this part without seriously reflecting on the circumstances of a desolate state, and how they would grapple with mere want of friends and want of bread; it will certainly make them think not of sparing what they have only, but of looking up to heaven for support, and of the wise man’s prayer, ’Give me not poverty, lest I steal’” (159-60). Notice Defoe’s use of the word “grapple.” I call our attention to it for the way it evokes the reader’s own hands and how those hands would adjust to circumstances of want and should, as the passage suggests, in comfortable circumstances, do acts of charity. The referenced hands in this passage emphasize the network of people things in which hands and their actions—from grappling for bread to saying a prayer—exist and interact.

This passage serves to set up and begin to justify Moll’s first theft which seems to almost happen to Moll as it happens to the maid whose bundle Moll steals. Moll gives the story of her first theft the following preamble: “Let them remember that a time of distress is a time of dreadful temptation, and all the strength to resist is taken away; poverty presses, the soul is made desperate by distress, and what can be done?” (160). What
indeed? Moll prepares to leave her house under the control of a spirit or the devil. She is at “the last gasp” (160) and she portrays her actions as clearly out of her control:

I think I may truly say I was distracted and raving, when prompted by I know not what spirit, and, as it were, doing I did not know what or why, I dressed me (for I had still pretty good clothes) and went out. I am very sure I had no manner of design in my head when I went out; I neither knew nor considered where to go, or on what business; but as the devil carried me out and laid his bait for me, so he brought me, to be sure, to the place, for I knew not whither I was going or what I did. (160)

Note that Moll dresses herself in “good clothes,” dressing as a gentlewoman. However, this choice is presented as hardly a choice at all. This sense of a lack of control over her own body continues into the very act of stealing itself:

the devil, who I said laid the snare, as readily prompted me as if he had spoke, for I remember, and shall never forget it, ’twas like a voice spoken to me over my shoulder, 'Take the bundle; be quick; do it this moment.' It was no sooner said but I stepped into the shop, and with my back to the wench, as if I had stood up for a cart that was going by, I put my hand behind me and took the bundle, and went off with it, the maid or the fellow not perceiving me, or any one else. (160)

Should we think Moll happily complies with the devil’s prompting, she assures us “It is impossible to express the Horror of my Soul all the while I did it” (160). As Moll escapes rather aimlessly she relates, “my blood was all in a fire; my heart beat as if I was in a sudden fright. In short, I was under such a surprise that I still knew not wither I was going, or what to do” (161). Moll’s lack of control is contrasted with the complete engagement of the maid and the apothecary’s apprentice: “beyond [the bundle] stood a maid-servant with her back to it, looking towards the top of the shop, where the apothecary’s apprentice, as I suppose, was standing upon the counter, with his back also to the door, and a candle in his hand, looking and reaching up to the upper shelf for something he wanted, so that both were engaged mighty earnestly” (160). The maid and the apprentice’s engagement in the
task at hand makes the theft possible, but the attention to what the apprentice’s hands are earnestly doing gives a decided contrast to Moll’s autonomous hands.

What do we make of Moll’s thieving hands and those of the “mighty earnestly” engaged maid and apprentice? For one, the close proximity of all of these hands, some performing under their own will and some performing ostensibly outside of their will suggests that both types of action are possibilities in *Moll Flanders*. Even if we read Moll’s account of her own passivity in the matter as merely an excuse or a performance, there is the sense that her circumstances are communally arrived at. First of all, the banker husband’s death is brought about after one of his “Fellow Clarks” loses “a Sum of Money too much for our Fortunes to bear the Loss of” (158). Moll refers to this reversal of fortunes as “a sudden Blow from an almost invisible Hand” (158). This “invisible hand” evokes the hand of providence, but the “*almost* invisible hand” directs us back to things Moll can see or else experience more directly such as the actual hand of the clerk as well as the larger social forces—such as Moll’s few ways of earning money—that result in Moll’s impending poverty. Primary among these forces are the limited opportunities available to Moll for making a living. Moll informs us that she, at forty-eight, is past the point of being a desirable mistress. Furthermore, she describes herself as “Friendless and Helpless” (159), saying “I had no Assistant, no Friend to comfort or advise me” (159). Both descriptions emphasize that she has no social frameworks, whether familial or otherwise, to fall back on. So, in one sense, one that Moll insists on as she foregrounds her isolation and increasing distress, Moll is not completely responsible for her actions. Circumstances have conspired. And as we shall see those circumstances throw her into new social relationships that share the responsibility for her actions.
In *Harm’s Way: Tragic Responsibility and the Novel Form*, Sandra Macpherson argues that shifting senses of responsibility in the eighteenth century led to a kind of distributed agency that is found in collectives rather than individuals: “the legal ‘doctrine of agency’ making principals strictly liable for the undertakings of their agents becomes a generalized theory of agency over the course of the eighteenth century—one that sees agency as dispersed over a structure, shared by persons rather than located in an individual” (30). Macpherson explores these pressures in *Moll Flanders* via the outsourcing of rearing children. Should a woman give her child to another woman to raise and it should die of neglect, Moll suggests that the mother has murdered her child. We see the liability expressed as Moll remarks,

> But it touched my heart so forcibly to think of parting entirely with the child, and, for aught I knew, of having it murdered, or starved by neglect and ill-usage (which was much the same), that I could not think of it without horror. I wish all those women who consent to the disposing their children out of the way, as it is called, for decency sake, would consider that 'tis only a contrived method for murder; that is to say, a killing their children with safety. (145)

It is the figure of the hand, I argue, that emphasizes the shared culpability of mother and caregiver should a child die of neglect. “Without help,” Moll states, children “must perish”:

> and this help requires not only an assisting hand, whether of the mother or somebody else, but there are two things necessary in that assisting hand, that is, care and skill; without both which, half the children that are born would die. . . . Since this care is needful to the life of children, to neglect them is to murder them; again, to give them up to be managed by those people who have none of that needful affection placed by nature in them, is to neglect them in the highest degree; nay, in some it goes farther, and is a neglect in order to their being lost; so that 'tis even an intentional murder, whether the child lives or dies. (145-6, my emphasis)

Here Moll employs metonymy—the assisting hand of the caregiver stands in for the caregiver herself, emphasizing the attributes of a worthy caregiver—care and skill—which are two things heavily associated with the manual labor of women. The interchangeability
of the assisting hand emphasizes that both mother and caregiver bear responsibility for a child’s neglect, either by neglecting the child or by “giv[ing] them up to be managed by those people who have none of that needful affection placed by nature in them.” In the five or so pages over which Moll and her governess discuss “the inexpressible misfortune it was to [Moll] to have a child upon [her] hands” (144), hands are referenced seven times: nurses’ hands, parents’ hands, good hands, etc. The hands, as in the passage above, emphasize that children require work (“care” and “skill”) and that that work and the accompanying responsibility can be transferred and ultimately shared. That the mother retains liability for her child (Macpherson writes, “To be a woman is to be engaged in an undertaking—reproduction—so dangerous that one is never delivered of its burdens: the burden of care and the corresponding burden of liability” (47).) suggests that the hand, despite its physical boundaries, or perhaps because of its physical boundaries and limitations, is a figure for shared responsibility. When Moll’s hand is out of her control while she steals, the suggestion is that her liability is reduced. She shares responsibility—perhaps with a spirit, perhaps with those individuals and structures that have left her friendless and helpless.

Moll also distributes responsibility for her thefts to her victims. Moll is occasionally overwrought with thoughts about the people she has stolen from, as when Moll steals the valuables a woman has saved from her burning house. After her first theft, Moll is anxious to hear some information about whom she has stolen from. The possibility that she has stolen from someone impoverished as she is “tormented [her] worse than all the rest, for three or four days’ time” (161). However, quickly following the beginning of Moll’s thieving career, Moll lets her victims share in the blame for thefts. The first and best example of this move in the narrative is when Moll steals a necklace of gold beads from a child walking
home from dancing lessons. Moll states first that necessity prompted her to take the necklace. However, the parents also bear the blame of not safeguarding their daughter:

“poverty, as I have said, hardened my heart, and my own necessities made me regardless of anything. The last affair left no great concern upon me, for as I did the poor child no harm, I only said to myself, I had given the parents a just reproof for their negligence in leaving the poor little lamb to come home by itself, and it would teach them to take more care of it another time” (163). Moll has an even more specific and speculative accusation in store for the mother as well as the maid of the child: the necklace belongs to the mother and her vanity in letting the child wear the necklace is to blame:

I suppose it might have been formerly the mother's, for it was too big for the child’s wear, but that perhaps the vanity of the mother, to have her child look fine at the dancing-school, had made her let the child wear it; and no doubt the child had a maid sent to take care of it, but she, careless jade, was taken up perhaps with some fellow that had met her by the way, and so the poor baby wandered till it fell into my hands. (163)

Here Moll’s hands emerge exactly when she relinquishes—with a flair for dramatic possibility—responsibility for the theft. Indeed, her hands do nothing but grasp what has fallen into them. Similarly, Moll has no problem stealing from other thieves as she does when one thief lob’s his booty towards Moll to avoid being caught with it. Moll takes the booty: “This, indeed, I did with less disturbance than I had done formerly, for these things I did not steal, but they were stolen to my hand” (164). There is a fatalistic quality to this phrase, the passive voice suggesting that the items where not stolen by Moll but that they were stolen to end up in her hands. Who is Moll to argue with fate? Fate, the other thieves, the vain mother, the neglectful maid—all of these are to blame, not Moll.

Critics have made compelling arguments on both sides of the question of how seriously we should take Moll’s account and whether Defoe creates intentional irony
surrounding Moll’s account. In the question of whether or not we should take Moll’s suggestions about her victims’ shared responsibility seriously, I would point to the preface where Defoe seems to blame victims as well. In “The Preface” to *Moll Flanders*, Defoe makes conventional arguments as to the instruction (just and religious) that can be gained from Moll’s account. In reference to Moll’s life as a thief, Defoe writes that the following may be learned:

> All the Exploits of this Lady of Fame, in her Depredations upon Mankind stand as so many warnings to honest People to beware of them, intimating to them by what Methods innocent People are drawn in, plunder’d and robb’d, and by Consequence how to avoid them. . . . Her getting a parcel from a hair-brained Wench at the Coaches in St. *John-street*; her Booty made at the fire, and again at *Harwich*; all give us excellent Warnings in such Cases to be more present to ourselves in sudden Surprizes of every Sort. (5)

Yes, Defoe calls the victims “honest People” and “innocent people.” However, the thrust of the passage is that victims were not “present to [themselves]” in some sense. Defoe suggests that reading accounts of Moll’s thievery should both motivate and equip “honest People” to identify the ways they are taken advantage of and avoid such situations. In the final line of the passage, Defoe writes that we are warned “to be more present to ourselves.” Though he writes specifically if about being present in moments of surprise, this is what Defoe is urging throughout the entire passage, for readers to be attuned to their environments and all they encompass: people, “methods,” their own propensities to be “drawn in.”

Even after Moll admits that if necessity first drove Moll to steal, avarice drives Moll to continue stealing, Moll’s account encourages the reader to split the responsibility for her thieving with other people, especially Moll’s “School-Mistress” (168) in thieving and Moll’s governess who acts as Moll’s pawn broker and fence. Moll confesses, “practice had
hardened me, and I grew audacious to the last degree; and the more so because I had carried it on so long, and had never been taken; for, in a word, my new partner in wickedness and I went on together so long, without being ever detected, that we not only grew bold, but we grew rich, and we had at one time one-and-twenty gold watches in our hands” (169). Note the “our”; when Moll’s hands reappear, they are in the company of those of her school-mistress. Furthermore, not only is the take collective, so are their attributes: “we not only grew bold, but we grew rich.” After nearly being caught, Moll considers leaving the business, but now Moll remarks, “I had a new tempter, who prompted me every day—I mean my governess; and now a prize presented, which as it came by her management, so she expected a good share of the booty” (175). These relationships and the many other accomplices Moll engages with emphasize the systems that make Moll’s work possible. Not only does she need a teacher and sometimes accomplices, she needs a system of people—including the governess—to make her work profitable. The hands that enter the narrative, and their attendant connotations of work, ownership, and responsibility (or the lack thereof), emphasize the importance of these relationships and the hands that make them legible.

Challenging Head over Hand with Dexterity

In addition to emphasizing the shared responsibility inherent in Moll’s work, the hands in Moll’s narrative challenge the hierarchy between head and hand which gives us a more nuanced understanding of the mechanisms both manual and mental that allow Moll to manipulate or get the most out of her hands and her environment. Before Moll gets to the death of the banker in her narrative, she foreshadows the temptations she will encounter. She already excuses her actions: “But there are temptations which it is not in the
power of human nature to resist, and few know what would be their case if driven to the same exigencies. As covetousness is the root of all evil, so poverty is, I believe, the worst of all snares. But I waive that discourse till I come to an experiment” (158, my emphasis).

Experiment recalls the work of the Royal Society members we discussed earlier and the way in which experiment served to destabilize the head/hand hierarchy. Moll’s prowess at stealing—her dexterity—also muddies the distinction between hand work and head work. Above all, it becomes clear that stealing—which we might think of as only a manual act, is deeply mental as well. The hand and mind are united in enacting a complicated manual, mental, and ultimately social art form that makes Moll a successful thief.

When Moll complains to the governess that she has “no skill” (168) in stealing, the governess offers to “help [Moll] to a School-Mistress, that shall make [her] as dexterous as her self” (168):

> The Comrade she helped me to, dealt in three sorts of Craft, (viz.) Shoplifting, stealing of Shop-Books, and Pocket-Books, and taking off Gold Watches from the ladies Sides, and this last she did so dexteriously that no Woman ever arriv’d to the Perfection of that Art, so as to do it like her: I lik’d the first and the last of these things very well, and I attended her some time in the Practise just as a Deputy attends a Midwife without any Pay. (168)

Here, Moll describes thievery like any other craft to which one can apprentice. To become dexterous like her teacher, Moll must learn the skills and practice them over time. Though Moll is not in a world like Robinson Crusoe, where social hierarchies and the hierarchy of head and hand can be questioned and (at least temporarily) suspended, here thieving is treated as a craft that can be learned and perfected. However, it is more than even just craft; it is an art. Therefore, the word “dexterous” implies a certain elision between the head and the hand and their respective capabilities. According to the OED, the first uses of “dexterity” as “mental adroitness or skill” appear in 1527 before the use of dexterity to
mean “manual or manipulative skill” in 1548. A similar pattern is seen for the adjective
“dexterous,” appearing with the meaning of “deft or nimble of hand” in 1650 while the
definition “having mental adroitness or skill” is seen in 1622. These definitions signal the
depth of dexterity; it suggests not just a nimbleness of hand, but also (or, historically
speaking, first) a nimbleness of mind. A later example of this school mistress’ methods
emphasizes how her skill is both incredible manual dexterity and masterful control of the
situation—the combination of the mental and manual, plus the fact that stealing is a skill
that can be learned and practiced, is what makes it an “art.”

That dexterous can describe both manual and mental acuity is reflected in Moll’s use
of the word to describe her teacher and the plan they concoct to rob a woman of her watch:

At length she put me to Practise, she had shewn me her Art, and I had several
times unhook’d a Watch from her own Side with great dexterity; at last she
show’d me a Prize, and this was a young Lady big with Child who had a
charming Watch, the thing was to be done as she came out of Church; she
goes on one side of the Lady, and pretends, just as she came to the Steps, to
fall, and fell against the Lady with so much violence as put her into a great
fright, and both cry’d out terribly; in the very moment that she jost’d the
Lady, I had hold of the Watch, and holding it the right way, the start she gave
drew the Hook out and she never felt it; I made off immediately, and left my
Schoolmistress to come out of her pretended Fright gradually, and the Lady
too; and presently the Watch was miss’d; ay, says my Comrade, then it was
those Rogues that thrust me down, I warrant ye; I wonder the Gentlewoman
did not miss her Watch before, then we might have taken them. She
humour’d the thing so well that no Body suspected her, and I was got home a
full Hour before her: (168-9)

In this bit of thievery, important as Moll’s grasp of the watch is, it is almost incidental in
light of the performance that proceeds and follows the actual thieving of the watch. In
reality, the lifting of the watch could not be successful without both parts: the manual skill
such that “she never felt it” and the “humoring” such that “no Body suspected her.”
Even when Moll has her marks’ inattention on her side, she positions herself in such a way as to blend into the environment should that inattention falter. When Moll first steals, taking the maid’s bundle from the apothecary’s shop, it is because Moll has opportunity. The apothecary’s apprentice “was standing up on the Counter, with his Back also to the Door, and a Candle in his Hand, looking and reading up to the upper Shelf for something he wanted, so that both were engag’d mighty earnestly, and no Body else in the Shop” (160). “This,” Moll states, “was the Bait” (160). Moll “step’d into the Shop, and with my Back to the Wench, as if I had stood up for a Cart that was going by, I put my Hand behind me and took the Bundle, and went off with it, the Maid or the Fellow not perceiving me, or any one else” (160). Part of Moll’s success arises from the fact that she consistently naturalizes or justifies her position, gives herself a reason to be in the place she is, such as, in this case, avoiding a cart. Positioning herself as she does in this way also leaves her to do the job “blind,” emphasizing the hand that steals and the hand that will be branded if she is caught (and not hanged). Imperative to Moll’s success is her ability to read people and situations.

Another example of Moll’s various types of dexterity comes about when Moll’s attempt to steal a watch from a gentlewoman goes wrong. Moll is in a crowded meeting house, a prime place to be discovered. She reports, “I had full hold of her Watch, but giving a great Jostle, as if some body had thrust me against her, and in the Juncture giving the Watch a fair pull, I found it would not come” (176). Moll thinks and acts quickly: “I let it go that Moment, and cried out as if I had been kill’d, that some body had Trod upon my Foot, and that there was certainly Pick-pockets there” (176-7). Because Moll lets go of the watch immediately, the woman she has tried to rob is far enough away from Moll to not suspect
her in the ruckus that follows. And Moll is exceptionally lucky: in the same room a young man is caught pickpocketing. Moll calls the woman she failed to rob a fool because while she had enough foresight to fasten her watch well, she didn’t have the mental dexterity herself in the moment of the attempted robbery to see from whence it came:

> there was indeed a great many concurring Circumstances in this Adventure, which assisted to my Escape; but the chief was, that the Woman whose Watch I had pull’d at was a Fool; that is to say, she was Ignorant of the nature of the Attempt, which one would have thought she should not have been, seeing she was wise enough to fasten her Watch, so, that it could no be slipt up; but she was in such a Fright, that she had no thought about her proper for the Discovery; for she, when she felt the pull scream’d out, and push’d herself forward, and put all the People about her into disorder, but said not a Word of her Watch or of a *Pick-pocket*, for at least two Minutes time; which was time enough for me, and to spare; (177)

Moll gets away because she has both dexterity of hand and mind; both are essential to her art and one is not greater than the other. This point is made again when Moll writes that she “so well follow’d them [the instructions of the governess], that I grew the greatest Artist of my time, and work’d myself out of every Danger with such Dexterity, than when several more of my Comrades run themselves into *Newgate* presently, and by that time they had been Half a Year at the Trade, I had now Practis’d upwards of five Year” (179). Dexterity thus weds the mental and manual into an art form that is reinforced with intensive practice.

Indeed, Moll finds herself so much more dexterous than her comrades that she prefers to work alone and as a woman. When the governess suggests that Moll work in men’s clothing, Moll finds “it was a long time before I could behave in my new Cloths: I mean as to my Craft; it was impossible to be so Nimble, so ready, so Dexterous at these things, in a Dress so contrary to Nature; and as I did every thing Clumsily, so I had neither the success, or the easiness of Escape that I had before, and I resolv’d to leave it off” (179).
The added modifier “I mean as to my Craft” makes a distinction between everyday behavior and her work of thieving, but it seems unlikely that wearing men’s clothing would make much of a difference to one’s handiwork. The point here though, of course, is that it does make a difference. How Moll is dressed dictates how she moves in the world, physically and socially and that changes a great deal in the mental and physical calculations she makes in order to steal.

Therefore, we see that the process by which Moll seamlessly insinuates herself into each situation in which she steals emphasizes that the work of making and unmaking herself as a thief cannot be understood as purely manual or purely mental. Dexterity is an essential component of the remaking of the self and society Moll constantly participates in, and that remaking is both a manual and mental occupation, making it an art.

* A Journal of the Plague Year: The Work of the Narrative

I now turn to a few of the many hands in Defoe’s 1722 fictitious account of the plague outbreak in London in 1665-6 to consider another aspect of “making” found within both *A Journal of the Plague Year* and *Moll Flanders*. Both texts feature markedly *made* narratives, narratives that are made by the hands that write the narratives themselves and narratives that are formed by the rampant reformations of self and society that hands make possible (or devastatingly necessary) within the narratives. I explore this second dynamic first before turning to the written-ness of the narratives.

* A Journal is not so much a picture of the social as a picture of the social disrupted. Its brokenness brings into sharp relief the boundaries between self and other, boundaries that have become dangerously porous. Hands, not surprisingly, feature often in H.F.’s account of the plague and the way every-day procedures were re-written to control the reach and
touch of hands. In *The Deepest Sense*, Constance Classen describes a “new hands-off culture” (156) in the modern age that was ushered in partly thanks to plague outbreaks. Classen looks to Defoe’s *A Journal of the Plague Year* as a repository of evidence that “the notion of touch as contaminating had made a deep impression on the popular psyche” (156). In the *Journal* hands, especially potentially contaminated ones, must be made visible so that the plague’s causes can be traced. Among the “ORDERS concerning infected Houses, and Persons sick of the Plague” (36) Defoe includes, “‘That precise Order to be taken that the Searchers, Chirurgeons, Keepers, and Buriers are not to pass the streets without holding a red Rod or Wand of three Foot in Length in their Hands, open and evident to be seen’” (39). Holding some kind of red, three-foot stick in one’s hands would certainly make one visible and thus possible to avoid. Holding a large red stick also prevents the hands from touching anything else. Quarantining these people to some extent seems to be the purpose behind this rule as they are also implored “‘not to go into any other House than into their own, or into that whereunto they are directed or sent for; but to forbear and abstain from Company, especially when they have been lately used in any such Business or Attendance’” (39).

Hands are problematic because they are the vehicle of commerce: this is what hands do. And it is the hands that exchange that are responsible, it is thought, for bringing the plague home. That is why Defoe writes that the plague was often brought home by servants:

*The Infection generally came into the Houses of the Citizens by the Means of their Servants, who, they were obliged to send up and down the Streets for Necessaries; that is to say, for Food, or Physic, to Bake-houses, Brew-houses, Shops, &c.; and who going necessarily thro’ the Streets into Shops, Markets, and the like, it was impossible, but that they should one way or other, meet*
with distempered people, who conveyed the fatal Breath into them, and they brought it home to the Families, to which they belonged. (64)

Though Defoe mentions the “fatal Breath” here, there are many vectors of contagion in the text of which touching objects or persons is perhaps most compelling because it is visible. HF summarizes these dangers when he reflects that it is lucky that there were no fires during the plague as all of their usual methods of dealing with fire were disrupted because people won’t risk going into houses and touching things. The alternatives HF elaborates are “either the people must have let them alone unquenched, or have come together in great crowds and throngs, unconcerned at the danger of the infection, not concerned at the houses they went into, at the goods they handled, or at the persons or the people they came among” (142). From other descriptions, it is clear that hands (often worryingly sweaty) were seen to be serious vectors of contagion. Consequently, the processes of shopping—something that is described repeatedly in the context of Moll’s thieving scenes as well—had to be reconfigured to protect both the merchant and the shopper:

When any one bought a Joint of Meat in the Market, they would not take it of the Butcher’s Hand, but take it off the hooks themselves. On the other Hand, the Butcher would not touch the Money, but have it put into a Pot full of Vinegar which he kept for that purpose. The buyer carry’d always small Money to make up any odd Sum, that they might take no Change. They carry’d Bottles for Scents, and Perfumes in their Hands, and all the Means that could be us’d, were us’d: But then the Poor cou’d not do even these things, and they went at all Hazards. (68)

At the end of the narrative, one of the chiepest signs that the plague has abated is the willingness of people to touch one another again. H.F. notes, “They shook one another by the Hands in the Streets, who would hardly go on the same Side of the way with one another before” (210). Hands have been put back into circulation.
Writing Hands

Often in A Journal of the Plague Year, hands function as hands, as objects in the world that tell us something about the bodies they belong to. I’d like to switch gears to focus on hands that aren’t nearly as present. As a sort of hinge, I reference a peculiar story H.F. relates of one person’s grief following the death of family members. H.F. writes,

I have heard . . . of one, in particular, who was so absolutely overcome with the pressure upon his spirits that by degrees his head sank into his body, so between his shoulders that the crown of his head was very little seen above the bone of his shoulders; and by degrees losing both voice and sense, his face, looking forward, lay against his collarbone and could not be kept up any otherwise, unless held up by the hands of other people; and the poor man never came to himself again, but languished near a year in that condition, and died. Nor was he ever once seen to lift up his eyes or to look upon any particular object. (104, my emphasis)

I take note of this passage for several reasons. First of all, it seems to function as a kind of microcosm of a failing social body. Due to extreme grief born of extreme circumstances, the man’s head cannot support itself. Subsequently, other systems of the body fail, including voice and sense. In order for the body to be supported, other hands have to lift the head. A body that should be self-supporting, like the social body, is unable to support itself. What it needs is more hands that can hold up the structure. I can’t help wondering who the hands referenced in this passage belong to. They are almost spectral, appearing out of nowhere, especially as we have seen how loath people are to touch others and the man has (presumably) lost close relations.

In A Journal, the hands that uphold the social body, such as it is in A Journal, are the hands that write the narrative: those of H.F. and Defoe. Paula McDowell has reminded us that “[H.F.’s] journal is filled with references to the materiality of writing” (100). These references begin with the title page which establishes the medium, contents, and author of
that H.F. One when the story depicted us by the public never made publick before.” The narrative being a journal, one that has never been made public before by translating it into print, reminds us of the physical realities (so to speak) of the fictitious journal. It is presented as coming from a physical artifact, one that H.F. wrote by hand during the events themselves. McDowell continues, “[Defoe] . . . constantly reminds us that we are reading a written account penned long after the fact. Defoe could have depicted H.F. orally relating a story ‘as it happens,’ but instead he emphasizes that H.F.’s story is mediated by time, memory, and above all writing” (100).

H.F. gives a glimpse into his own process for writing at one point in the Journal when he regrets his decision to stay in London. He writes,

I cannot say but that now I began to faint in my resolutions; my heart failed me very much, and sorely I repented of my rashness. When I had been out, and met with such terrible things as these I have talked of, I say I repented my rashness in venturing to abide in town. I wished often that I had not taken upon me to stay, but had gone away with my brother and his family.

Terrified by those frightful objects, I would retire home sometimes and resolve to go out no more; and perhaps I would keep those resolutions for three or four days, which time I spent in the most serious thankfulness for my preservation and the preservation of my family, and the constant confession of my sins, giving myself up to God every day, and applying to Him with fasting, humiliation, and meditation. Such intervals as I had I employed in reading books and in writing down my memorandums of what occurred to me every day, and out of which afterwards I took most of this work, as it relates to my observations without doors. What I wrote of my private meditations I reserve for private use, and desire it may not be made public on any account whatever. (66-7)

One thing this passage does is tie together H.F.’s explorations and experiences with writing. H.F. reminds us often that the narrative is written, and this passage explicitly reminds us that we are reading written accounts of experiences. We are not experiencing the event
itself, we are reading the written account of it. This passage also sets up two levels of written mediation. There are the “memorandums of what occurred to me every day” and the end narrative: “out of which afterwards I took most of this work.” What we are reading is writing upon writing. Hands have doubly created the world that H.F. presents to us. Triply so, when we count Defoe.

The narrative is peppered with references to writing as well such as when H.F. writes, “I remember, and while I am writing this Story, I think I hear the very Sound of it, a certain Lady had an only Daughter…” (49, my emphasis). When H.F. ruminates on the correct number of deaths and burials that took place in September, he refers to both himself as writer and his reader as he decides that in his own narrative he will err on the side of conservatism: “it is much to the Satisfaction of me that write, as well as those that read, to be able to say, that every thing is set down with Moderation, and rather within Compass than beyond it” (203, my emphasis). H.F. concludes the narrative with reference again to his memorandums and a poem which he wrote: “I shall conclude the Account of this calamitous Year therefore with a coarse but sincere Stanza of my own, which I plac’d at the End of my ordinary Memorandums, the same Year they were written” (212).

Jayne Elizabeth Lewis has pointed out that the Journal should be read as writing, and it is the writing that also gives the Journal the feeling of historical weight. “A Journal of the Plague Year, in its turn, uses literature—‘writing’—to image a sensible world now past. The singular nature of this image allows the Journal to stand legitimately as the very authentic picture of events it seemingly only ‘pretends’ to be” (92). Lewis continues, “Both the Journal’s false designation of its own genre and its rampant heteroglossia force us to think of it first and foremost as nothing but writing” (93). Lewis’s distillation of the Journal to
“nothing but writing” opens up the question of what that writing can do. As the previous quote points out, the writing helps the narrative achieve its quasi-historical weight. More holistically, it emphasizes the powerful creative powers of that writing. Lewis writes that “the very authentic picture of events [the Journal] seemingly only ‘pretends’ to be…. is more like an apparition than anything else” (92). The world H.F./Defoe creates is fictional, apparitional even, but it is a created world all the same.

*Moll Flanders* too is created by a writing hand that is brought to the forefront of the narrative. On the title page, *Moll Flanders* is presented as “Written from her own Memorandums” introducing a similar writing process as H.F.’s. However, in contrast to *A Journal*, the writing hand of the main character is explicitly joined by the mediating hand of Defoe in the “The Preface.” In a fascinating moment towards the beginning of “The Preface,” Defoe writes, “The Author is here suppos’d to be writing her own History” (3). “Suppos’d” introduces a delectable sense of ambiguity for the reader. At what level does this supposition operate? That Moll is not writing her history? That she is responsible for that account, but as Defoe will explain, her account has essentially been translated? Defoe explains, “The Pen employ’d in finishing her Story,”—another oblique reference to the writing hand through the tool it uses— “and making it what you now see it to be, has had no little difficulty to put it into a Dress fit to be seen, and make it speak Language fit to be read” (3). Defoe elaborates: “It is true, that the original of this Story is put into new Words, and the Stile of the famous Lady we here speak of is a little alter’d, particularly she is made to tell her own Tale in modester Words than she told it at first; *the Copy which came first to Hand* [my emphasis], having been written in Language, more like one still in *Newgate*, than one grown Penitent and Humble, as she afterwards pretends to be” (3). *Moll Flanders*, then,
is a collaboration of writing hands. Or, rather, its presentation as a collaboration is a testament to the power of Defoe’s writing hand. He has created Moll, Moll’s memorandums, and the layering of Moll’s account and Defoe’s editing presence.

One of the things that this layering accomplishes is to emphasize the social relationality of Moll herself and her account. This is further emphasized in “The Preface” as Defoe describes where Moll comes from and what effects the account of those origins might have on the reader:

When a Woman debauch’d from her Youth, nay, even being the Off-spring of Debauchery and Vice, comes to give an Account of all her vicious Practices, and even to descend to the particular Occasions and Circumstances, by which she first become wicked, and of all the progression of Crime which she run through in threescore Year, an Author must be hard put to it wrap it up so clean, as not to give room, especially for vicious Readers, to turn it to his Disadvantage. (3)

Moll does not come from a vacuum. More important than the actual people from whom Moll comes is their category (“Debauchery and Vice”) which places Moll and her people in relationship to (or perhaps better yet out of continuity with) the Right and Good people. Her account is described as well in terms of the relationship between narrative and reader and the effects that narrative can have on the reader—here potentially ill effects. The rest of “The Preface” is at pains to justify why Moll Flanders is worth reading and why it is safe and even advantageous to read. The transformative power of Defoe’s editing hand is described when Defoe elaborates on what “But as this Work is chiefly recommended to those who know how to Read it, and how to make the good Uses of it, which the Story all along recommends to them; so it is to be hop’d that such Readers will be more pleas’d with the Moral, than the Fable; with the Application, than with the Relation, and with the End of the Writer, than with the Life of the Person written of” (4, my emphasis).
In contrast again to *A Journal*, Moll does not make references to the writing per se of her account as much as she references the reader. These references to the reader of course remind the reader that Moll is *writing*, and that she (or rather Defoe) is writing for an *audience*, an audience that Moll invites to actively build upon what she writes, emphasizing the essential role the reader plays in creating the text. In this respect, I picture another set of involved hands: the hands that hold the narrative as it is read. For instance, as the narrative of Moll’s thieving career draws to a close, Moll writes, “The Moral indeed of all my History is left to be gather’d by the Senses and Judgment of the Reader; I am not Qualified to preach to them, let the Experience of one Creature completely Wicked, and completely Miserable, be a Storehouse of useful warning to those that read” (224). Later, after her trial, Moll makes an even stronger injunction to the reader to make something of her stories. She writes, “I am not capable of reading Lectures of Instruction to any Body. . . It must be the Work of every sober Reader to make just Reflections on them, as their own Circumstances may direct; and without Question, this is what every one at some time or other may feel something of” (240). These points in the narrative remind the reader that the narrative is presented as something written, but it does so by reinforcing that the hand writes for another hand—the hand that will hold the account as the reader reads. Writing, for Moll and Defoe, is a relational enterprise: it creates a society of writer and readers and the individualized interpretations of the texts that flow from that reading relationship.

Paying attention to the hands present in *Moll Flanders* and *A Journal of the Plague Year* deeply enriches our sense of how exactly the characters, the society, and the narrative of these texts are *made*. Furthermore, we, perhaps more than before, understand making as a kind of dexterous art that involves both manual and mental work, deepening our
understanding of how Defoe contributes to the destabilization of the hierarchy of head and hand in the eighteenth century. The hand is the organ of the mind that allows Moll, H.F., Defoe, and the reader to create and create again.
CHAPTER 3
James Thomson Counts

Did man’s relationship to his environment not also necessitate his relationship with numbers?
—Karl Menninger, *Number Words and Number Symbols* (1958)

In 1845, reflecting upon a visit to Hagley Park, American geologist Hugh Miller wrote that seeing the prospect from the hill at Hagley, “enabled me to understand what I had used to deem a peculiarity—in some measure a defect—in the landscapes of the poet Thomson” (111). Miller’s problem with Thomson’s poetry is its “enumerative style” (111):

In dealing with very extended prospects, [Thomson] rather enumerates than describes. His pictures are often mere catalogues, in which single words stand for classes of objects, and in which the entire poetry seems to consist in an overmastering sense of vast extent, occupied by amazing multiplicity.... —a multiplicity which neither the pen nor the pencil can adequately express; and so description, in even the hands of a master, sinks into mere enumeration. (111-2)

For Miller, Thomson’s lists are a liability. Though his enumerative style puts Thomson in the company of other illustrious catalogers—specifically Homer—the implication is that “mere enumeration” is barely poetry: all Thomson (or Homer) can do with a catalogue is “dip it in poetry” (112). This chapter will argue that there is nothing “mere” about Thomson’s enumerative style. Thomson’s propensity to list and count—another sense of enumerate—reveal *The Season’s* (1726-1730, 1746), interest in ontological concerns closely aligned with the nature of number.

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* The *Seasons* first appeared printed together in 1730. I quote from James Sambrook’s edition of the poem based upon the expanded and revised version of 1746. All further references to the poem are line numbers from this edition.
What does it mean to say that James Thomson counts in *The Seasons* even if relatively few small number words (such as one, two, or three) appear in the text? What does counting entail? I offer immediately perhaps the best example of Thomson counting, one of Thomson’s lists that culminates in very large numbers. In this passage, Thomson enumerates blooms of spring from hyacinth to rose, concluding with the grand placeholder for nature’s bounty, “Infinite Numbers” (553):

No gradual Bloom is wanting; from the Bud,  
First-born of Spring, to Summer’s musky Tribes:  
Nor Hyacinths, of purest virgin White,  
Low-bent, and blushing inward; nor Jonquils,  
Of potent Fragrance; nor Narcissus fair,  
As o’er the fabled Fountain hanging still;  
Nor broad Carnations; nor gay-spotted Pinks;  
Nor, shower’d from every Bush, the Damask-rose.  
Infinite Numbers, Delicacies, Smells,  
With Hues on Hues Expression cannot paint,  
The Breath of Nature, and her endless Bloom. (*Sp.* 545-55)

In such a passage, where there are actually few numbers—besides “infinite numbers”—we might ask what it means to say that Thomson counts. What does counting entail? What can be counted? My main justification for saying that Thomson counts is that “infinite numbers” makes the blooms, their smells and hues seem counted, even as Thomson enumerates the blossoms by negation. Thomson utilizes litotes to emphasize just how many blooms there are—we are not left “wanting”—and the many stages of blooming in which the flowers appear. And while Miller argues that words in Thomson’s lists stand in for classes of objects, I will argue the opposite, that Thomson’s lists are counting because he evokes particular objects with a subtractive logic that leads to immense numbers. This logic is presented though the flowers are not numbered one by one.
Such a catalog, I argue, places Thomson as a participant in a larger argument in the eighteenth century about the nature of number and whether numbers should be treated as things with quantity or signs devoid of quantity but defined by their functions. Certainly, number pervades the poem in one form or another, from the vastness of Britain's agricultural exports to the terrifying prospect of the void—a lack of quantity. I argue that Thomson utilizes both senses of number—number as a sign and number as a quantity—to forge a stable sense of number that is rooted in things one experiences. Thomson counts this way, I argue, because he is thinking about the nature of number and number's stakes for existing in an increasingly large and populated world: number is able to adapt overwhelming size to the experiential zone of the body.

Counting and the Nature of Number

Since the nineteenth century, number has been defined as a purely rational concept. That is to say, number has no real connection to quantity or any other sense of material being. While counting connects abstract numbers to concrete things as every child learns as she counts on her fingers, mathematically speaking, numbers have nothing to do with quantity or material existence. Today this is a very comfortable idea. In A Very Short Introduction to Mathematics (2002), Timothy Gowers writes that “mathematicians can, and even should, happily ignore th[e] seemingly fundamental question” (18) of whether numbers exist. This is the abstract method in mathematics, and from this point of view what matters is what numbers can do; or in other words, "a mathematical object is what it does” (18). Perhaps the most important thing to emphasize for this discussion is that when we view numbers as abstract entities, we divorce them from a sense of quantity. So, one, two, or three need not correspond to any sense of one, two, or three units. This is
important for working with certain kinds of numbers, such as negative numbers. What is the quantity of a negative number, or, more troubling, what is the quantity of an imaginary number, like the square root of -1? Thinking about what number can do rather than what it is helps us to step around such quandaries as the square root of -1. As we shall shortly see, this is not a conception of number that is universally accepted in the eighteenth century. Furthermore, accounts of counting regularly test the definition of number as a purely abstract concept.

In *Number Words and Number Symbols* (1958), Karl Menninger writes,

> ... let us first determine how and what we actually count and what “counting” really is. Before us lies a heap of peas, which we wish to count. How do we go about this? We arrange the peas in a row, physically or mentally, touch the first one and say “one,” then touch the second and say “two,” touch the next and say “three,” ... touch the last and say “twenty-two”; there are 22 peas in all. What have we actually done? We have assigned a word to each individual pea. Counting thus constitutes assigning words to things. (7)

Counting thus wedds the abstract signifier (the number) to a concrete signified (the thing which is counted) through, it is worth noting, an embodied action: the lining up, the touching. Menninger like many others will work to break this connection between the abstract number and the concrete thing that is counted. The thing that makes number words so especially versatile, of course, is that they form an abstract set. This is Menninger again: “So long as there is no counting, [the abstract number sequence] is merely there, detached from all concrete objects, unused but ready” (7). Menninger continues, “But as soon as we count, then. . . the number words get assigned to the objects” (7). The number words themselves are abstract—Menninger figures them as empty boxes waiting to be filled with objects—but when they are assigned to an object they become as concrete as the three books on my desk. However, the power and versatility of number lies in the fact that
“our number sequence is its independence of the things themselves. It can be used to count anything” (8). The abstract nature of the modern number sequence distinguishes it from those used by what Menninger calls “primitive man” (8). When joined with two other distinguishing features, we get a full sense of the modern number sequence and how counting bridges the abstract and concrete. The second distinguishing feature is that “A finite and amazingly small quantity of number words is enough for [counting], for the number sequence uses these words over and over again, in their proper order and context” (Menninger 8). The more important feature of the modern number sequence for this discussion, however, is the third—the law of infinite progression: “We know that our number sequence embodies the law of infinite progression: we know that every number has a successor; and we also know how that successor is formed from its predecessor” (Menninger 8). It is thanks to this law we can count large sets, even those infinitely large or “without number,” or rather, “acknowledge the countability of sets even though we ourselves cannot actually do the counting” (Menninger 8). This law can be concretely demonstrated with smaller numbers which can then be extrapolated out to large sets. Thus, while the law of infinite progression is a rational rule, it is grasped, practically speaking, through the experience of counting in a much more concrete sense (often, as Menninger’s own example of the peas suggests, by touching or moving objects as they are counted). In this way, the most abstract numbers, such as very large numbers, are made comprehensible by their relationship to very small, more tangible numbers. We will see a similar logic in Thomson’s catalogs.

This relationship between number’s nature and the tangible world is explored by German philosopher Ernst Cassirer in The Philosophy of Symbolic Forms (we are concerned
with the first volume—“Language”—which appeared in 1923). Cassirer concedes that when the mind turns to the nature of number, “The world of tangible forms seems to recede, and in its place a new world gradually arises: a world of intellectual principles” (226); that is, Cassirer defines number as we have seen Menninger do already: number is a purely rational thing with no material substance or quantity. For Cassirer, however, much depends on that “seems.” He will argue against the nineteenth-century mathematicians such as Dedekind and Russell, Frege, and Hilbert, who defined numbers as “an immaterial attribute attaching to an immaterial content, not so much the attribute of a ‘thing,’ as of a pure concept” (Cassirer 227). Purely rational concepts, Cassirer argues, nevertheless “retain strong ties with language and its concepts” (228), and language cannot be fully separated from material things:

For language cannot take the decisive step which mathematical thought demands of numerical concepts, namely their characteristic detachment and emancipation from the foundations of intuition and the intuitive representation of things. It clings to the designation of concrete objects and concrete processes and cannot free itself from them even when it seeks mediately to express pure relations. (228)

Cassirer continues,

The differentiation of numbers starts, like that of spatial relations, from the human body and its members, thence extending over the whole of the sensuous, intuitive world. Everywhere man’s own body provides the model for the first primitive enumeration: the first ‘counting’ consists merely in designating certain differences found in external objects, by transferring them, as it were, to the body of the counter and so making them visible. All numerical concepts, accordingly, are purely mimetic hand concepts or other body concepts before they become verbal concepts. The counting gesture does not serve as a mere accompaniment to an otherwise independent numeral, but fuses in a sense with its signification and substance. (229, my emphasis)

Cassirer locates an avenue—language—by which number retains its connection to the material word and our embodied experience of it. This connection is forged through the
body, such as when primitive humans “count” with their fingers and or other body parts before having number words. Cassirer’s claim that numbers “are purely mimetic hand concepts” is in part born out in Menninger example of the counting of the peas. Even if one only lines the peas up mentally, the act of counting mirrors that of manipulating the peas in order to count them. Therefore, as I read Thomson, I am attentive not only to counting but also to how when Thomson counts, he turns to things “at hand” (Sp. 526).

So, counting is, then, the use of number that most closely ties number to objects in the world. Though the number sequence is abstract or “empty” in itself, the action of counting aligns numbers with things. It embodies both the abstract notion of number and its potential concreteness through a relation to things and, hence, quantity. This is one reason why I argue that James Thomson counts in The Seasons though we see few, especially small, number words. First of all, counting fits a certain kind of poetic genre Thomson adopts: the catalog. As Thomson enumerates (or establishes the number of something—one definition of enumeration) birds or flowers for example, he culminates these lists in very large numbers or even non-numbers (such as when he uses the adjective innumerable). The point of such passages is to explore what exactly constitutes the incredible bounty of nature, to make the infinite outpourings of spring, summer, and autumn into something concrete. In so doing, Thomson too oscillates between the concrete and the abstract, the countable and the infinite, the narcissus and the infinite bloom. In other words, he counts.

Is Number a Sign or a Quantity in the Eighteenth Century?

In the late seventeenth-century and early-eighteenth century, modern mathematics with its fully abstracted numbers had not yet arrived. And in some cases, treating numbers
as though they had no quantity was hailed as an irrational move. In *The Analyst* (1734) Bishop George Berkeley makes this very critique of Isaac Newton’s method of calculus, the fluxions. In the fluxions, to calculate the area under a curve, Newton essentially covers the area under the curve with infinitely small rectangles, the added area of which becomes closer to that of the area under the curve the more rectangles Newton employs. As the number of rectangles increases, the error in approximating the area under a curve (or the difference between the summation of the areas of the rectangles and the actual area beneath the curve) approaches zero. This error—corresponding to the area of the infinitesimally small corners of the rectangles cut off by the line of the curve—is what Newton throws out of his calculations. Though this move may be practical, to Berkeley it was seriously illogical to simply throw out the area of those infinitesimally small triangles, threatening the rigor of Newton’s whole enterprise. Infinitesimals have some very small amount of quantity; therefore, Berkeley thought it was insensible on Newton’s part to treat them like they have no quantity—as a zero for all intents and purposes. And so, Berkeley famously asks pertaining to the quantities contained in these tossed-out infinitesimals, “May we not call them the Ghosts of departed Quantities?” (18). Berkeley believed that Newton’s use of the infinitesimal was, if nothing else, contradictory and, therefore, incoherent: “if we remove the Veil and look underneath, if laying aside the Expressions we set ourselves attentively to consider the things themselves, which are supposed to be expressed or marked thereby, we shall discover much Emptiness, Darkness, and Confusion; nay, if I mistake not, direct Impossibilities and Contradictions” (4). Berkeley is suggesting that the “expressions” should correspond to “the things themselves”; for Berkeley there are
things with quantity that correspond to expressions: numbers, even infinitely small ones cannot be pure abstractions.

Berkeley is a useful figure for this discussion because while The Analyst’s mode of questioning the rigor of Newton’s calculus suggests that he may be a staunch supporter of number being treated as having quantity, he actually was not. One litmus test in the eighteenth century for mathematicians’ stance on the nature of number was whether mathematicians preferred algebraic or geometrical methods. Algebra adopts a symbolical stance on number. Helena Pycior writes Berkeley “was the first major British (and perhaps European) philosopher to come to terms with the symbolical style of early modern algebra. His early acceptance of symbolical reasoning and Barrow’s view of number [which treated number as a sign] helped to raise in him ‘semiotic consciousness’” (209). However, Pycior points out “it can be argued [Berkeley] did more to inhibit than encourage the development of algebra in Great Britain during the late 1730s” (210). By publishing The Analyst, “he almost compelled early-eighteenth-century British mathematicians to work on the geometric foundations of calculus” (210). Though The Analyst actually took attention away from algebra and the symbolic use of numbers, Berkeley is a useful figure in that through his thought we see both perspectives on number represented in his thought.*

Both perspectives on number—number as a sign or as a quantity—were valid in the eighteenth century though it would not stay that way into the nineteenth century. As mathematicians in the seventeenth and early eighteenth centuries (including Berkeley) developed early modern algebra, which eventually led to the “modern, abstract form”

* According to Pycior, Locke’s Essay is a foundational text for Berkeley’s early sense of number related to quantity or “unity.”
of the symbolical algebra of the late eighteenth century and early nineteenth century, mathematicians (such as Scottish mathematician Colin MacLaurin) “suggested a shift in the focus of mathematical foundations from objects to relations and to equations capturing relations” (3). Pycior underscores the “importance of individuals and individualist thought” in the development of British algebra, emphasizing the variability of arguments and approaches mathematicians took as they “redefine[d] mathematical ‘strictness’ or rigor in favor of fertility” (3). What I want to emphasize here is that the nature of number is truly an open question in the late seventeenth and early eighteenth centuries. And that open question gets considered in what we might think of as unlikely places such as The Seasons. Before we return to Thomson, however, I’d like to turn to another unlikely contributor to this debate, Daniel Defoe, as well as to some more conventional sources of thoughts on number: eighteenth-century arithmetic texts.

Defining Number—Fingers and Things.

In An Essay Upon Literature (1726), Daniel Defoe ties the ten-based number system we are familiar with to the ten fingers. He does this within a history of written language—another topic in which the hand plays a leading role—placing the origins of writing at the moment God writes with his finger the ten commandments on Mount Sinai. The origins and history of writing, Defoe argues, are worth studying because writing is “the Art by which all [authors’] Works are perform’d; and by which indeed all manner of Science is convey’d from Age to Age, and handed down from our Ancestors to this Day” (229). Writing, then, is both the substance and transmitter of an author’s work. That this work is then “handed down from our Ancestors to this Day” reminds us that the figurative work of handing down knowledge to one’s progeny is begun with literal work of the hand. Like Defoe embodies
knowledge and information gained over centuries in the action of writing, his description of numbers also links numbers and counting first, to the body, and secondly, to embodied practices and interactions with the environment often carried out by the hand.

Defoe foregrounds the hand when he gives an account of the origins of numerical figures which he posits were not in use before written letters: he says, rather baldly, “we do not read that Figures were in use before Letters” (232). Speaking of counting, Defoe links numbers to the body, specifically the ten fingers. Defoe writes, “All the ways that I meet with by which Men cast up Numbers of things, were prescribed by pointing to their Fingers” (232). This description of counting tells us several things about how Defoe might define number. Number is a question of the quantity of objects, a collection of things, the number of which can be signified by pointing with one’s fingers to other concrete objects literally to hand. Defoe describes the ancient Egyptians using “certain Bundles of Reeds, which lay open in some publick Place in every City... in reckoning any Number, they removed the Reeds one by one from the Right to the Left Side of the Mark” (233-4).

Defoe’s brief description of counting with the fingers points to a long history of finger counting and finger computation via the fingers themselves and various tools manipulated by the fingers from pebbles to abaci. This history reminds us that from the very distant past to the seventeenth century (and indeed in some practices that continue in use today), numbers and computation had very close connections to the hands and manual action. Amidst what Levi Leonard Conant calls “primitive methods of counting” he claims that the “finger method” “seems to have been almost universal” (425), though the shapes that method has taken are diverse. The ten-base finger system of bodily counting is the most common, occurring across enough cultures and historical moments to appear natural;
however, there are many ways to count with the body as diverse practices bear out: there is a two-base system based on the hands; four, based on hands and feet; five, based on the fingers of one hand; eight, based on the spaces between the fingers; twelve, based on the joints of the fingers excluding the thumb, or the fingers plus the feet; and twenty, based on the fingers and toes (Trumble 95). According to Donald Eugene Smith and Jekuthiel Ginsberg, the “numeral [1] probably came from the lifted finger, which seems to be the most easy and natural way of showing that we mean ‘one’” (434), and “the ‘five’ was generally V, perhaps as representing a hand” (440).

The body provides not only aids for counting but also for calculating. The prime example of this is the ancient Roman system through which one can, through a system of gestures involving the hands and various body parts, count to one million (Trumble 101). This system was ubiquitous among merchants and formed a public, transparent medium for calculations (Trumble 104): when someone added or subtracted a sum, one could watch the results of the calculations appear on his or her hands. Consequently, when people were punished for thieving or an inability to pay back a debt by having a finger lopped off, they were permanently taken out of business. Being able to count in such a way amounted to a numeracy separate from being able to read or write written numbers. The use of this system was wide-spread enough that writers of the time do not explain how the system works: we have some knowledge of it because of the Venerable Bede’s De Temporum Ratione (725 C.E.) and isolated Romanian communities that still used a system of finger computation at the end of the nineteenth century (Trumble 101-5).

In addition to calculating with the body itself, various tools manipulated by the hands have been used as aids for counting and representing large numbers: piling sticks,
splints, pebbles, shells, or kernels; making scratches or notches into wood or other materials; or knotting fibers (Conant 426). “Any such mode of counting,” Conant writes, “whether involving the fingers or not, is to be regarded simply as an extraneous aid in the expression or comprehension of an idea which the mind cannot grasp, or cannot retain, without assistance” (426). The word calculate is etymologically linked to a manual action involving a pebble, not to pure mental math:

The Romans used a counting table, or abacus, in which units, fives, tens, and so on were represented by beads which could be moved in grooves. . . . They called these beads calculi, which is the plural of calculus, or pebble. We see here the origin of our word “calculate.” Since the syllable calc means lime, and marble is a kind of limestone, we see that a calculus was a small piece of marble, probably much like those used in playing marbles today. (Smith and Ginsberg 447)

The Greco-Roman abacus was the ancestor of the European counting board and the development of both are tied to the ten fingers by A. Nagl in “Die Rechentafel der Alten” (1914): “we must regard as an unquestionable hypothesis that the ten fingers of both hands provided the principle support for it [the abacus], and led to the decimal system” (quoted in Sugden 2). In contrast to the frame-bead abacus, the western abacus, often taking the form of a counting tablet or table shared the same principle features (columns and counters) as the Greco-Roman abacus (Sugden 16). Before the widespread availability of paper, and even of slate, counting boards were used in Europe to aid calculations. Disks, or counters, were placed on lines representing units, tens, hundreds, thousands, etc. or between those lines which represented five, fifty, five hundred, etc. To add or subtract, one manually put down or took up counters. “The terms ‘carry’ and ‘borrow’ had more meaning than at present, because a counter was actually lifted up and carried to the next place. If one was borrowed from the next place, it was actually paid back” (Smith and Ginsburg
The abacus’s “physical shape had changed in line with the fashions and requirements of the times: it could be a complete table, sometimes folding, and sometimes possessing tills or drawers; a counter combined with a cupboard; a board to be used on a table or the knee; or an ordinary table on which a counter-cloth (to act as the abacus) was placed” (Sugden 16). Counting boards and tables stopped being widely used in the seventeenth century; however, the name remains—the counter in a store being the surface on which goods are displayed and exchanged (Smith and Ginsburg 449).

Counting boards and tables stopped being used because of the rising popularity of Arabic numbers and more accessible materials to write them with. Arabic numbers came into use in Europe during the twelfth century, their users and proponents called algorists. Though Arabic notation would eventually overtake the use of the abacus and Roman notation (promoted by abacists), this transition took several centuries. During this time, algorist (Arabic numerals) and abacal (the traditional abacus with Roman notation) methods were both used. Arabic numerals in the west were not formalized until after the advent of printing; furthermore, the expense of rag paper and limited literacy contributed to the popularity of the abacus and roman notation. Sugden presents evidence that there was a mix of both methods in commercial records, “reflecting the gradual change from Roman numerals to Arabic without affecting the continued use of the abacus... Support for this is provided by the Exchequer records of the seventeenth century, which show many examples of Arabic totals with dot diagrams—abacal jottings—at the side” (14). Additional evidence that the abacus was still in use even when Arabic numerals were known and used is provided by the 1658 introduction to Recorde’s Supra which states “[Counter casting] would not only serve for them that cannot read, but also for them that can do both but have
not at some time their pen or tables ready with them”’ (quoted in Sugden 15). Furthermore, as this quote makes clear, the abacus or counting board was an important tool for the illiterate.

On the discontinued use of the abacus or counting table, Sugden writes:

The abacus fell into disuse in England sometime between 1668, when the chapter on counter casting is still in the edition of Recorde’s *Ground of Artes*, and 1699, when it is omitted with the following prefatory remark from the editor: ‘I have taken all the care I could to do the Author justice by Expunging what is now useless.’ Barnard remarks that it had possibly become discredited with the better-educated classes as early as 1610, but lingered on with the old-fashioned or unlearned, and especially with women in their housekeeping, only gradually to disappear during the last three quarters of the century. (17)

Menninger, however, tracks literary references to counters into the eighteenth century. There is, for instance, this bit of French verse by an unknown author: “’Courtiers are but counters; / Their value depends on their place: / In favor, they’re worth millions, / And nothing in disgrace!’” (quoted in Menninger 366). Counters are also mentioned in Goethe’s Faust (366-7). The eighteenth century is perhaps the first century in Britain in which the algorist method is fully embraced, but the abacist methods were not yet expunged from the cultural memory. And little is known about how the use of the abacus may have persisted in the domestic sphere or among those who were illiterate and/or innumerate. This long tradition of the use of the abacus in Britain emphasizes the many ways in which mathematical computation was an embodied practice tied to counting.

It is partly because of embodied counting and computational practices that number is tied to quantity in the eighteenth century. We see this in definitions of number from the period that, first, tie number to the fingers, and, second, by doing so, connect number to quantity in the form of a collection of unities. In *The New Mathematical Dictionary*'s (the
Edmund Stone evokes the fingers as the source of our number system, attributing the practice of counting with the fingers not only to Europeans but also the “Arabians” who developed Arabic numerals: “Arithmetick (Decadal,) is the Arithmetic which we use by the nine Figures and a Cypher, which is commonly attributed to be the Invention of the Arabians, and was, no doubt, taken from the Number of our Fingers, which is ten; because in Computations, we use the Fingers before we understand Arithmetick.” The connection between numbers and fingers is also mentioned by John Ward in *The Young Mathematicians Guide* (1707), (the fourth edition of which was published 1724) where he links numbers to “digits”: “Arithmetick (in all its Parts) is performed by the various ordering and disposing of Ten Arabick [sic] Characters or Numeral Figures (which by some are called Digits)” (3). Ward then brings his definition to the familiar grounds of unity and multitude: “The first of these Characters is called Unity, and represents one of any kind of Species or Quantity. As one World, one Star, one Man, &c. Viz. Unity is that by which everything that is, is called one (Euclid. 7. Def. 1) and is the beginning of all Numbers. That is to say, Number is a Multitude of Units” (4).

These kinds of definitions of number were widespread; the concept of unity/a collection of unities underlies many of the definitions of numbers that appear in 1720s mathematics textbooks. In the definition of “number” in *The New Mathematical Dictionary* (1726), Edmund Stone writes, “Number, is whatever is referred to Unity; or it is a Collection of Units, and is that which teacheth us to know how many an of the Objects of our Knowledge are.” Edmund Wingate in *Mr. Wingate’s Arithmetick* (the 15th edition of which was published in 1726) defines number in a similar way but calls it a question of
“multitude”: “As Magnitude or Greatness is the Subject of Geometry, so Multitude, or Number is that of Arithmetick. Number is that by which every Thing is numbered; or that which answers this Question, How many? (unless it be answered by nothing:) So if it be asked, How many Days are in a Week? The Answer is Seven, which is called Number” (1). Wingate also describes number as a collection of units or unities: “The First of these [significant figures 1-9] is more particularly called an Unit or Unity, and the rest are said to be composed of Unities: So 2 is composed of two Unities, 3 of three Unities, &c.” (2). We see a similar definition in a mathematical textbook translated from German to English, Hainlin’s Synopsis Mathematica Universalis (1729—third edition). Describing “whole numbers,” Hainlin writes: “1. Number is the measure of multitude, or many, collected from Unities” (2). Elsewhere, Hainlin strengthens the sense of number based on unities when he calls numbers less than one “broken numbers” (9). Hainlin continues his definition of number to include the concept of multitude which is created from the starting off point of unity: “2. Multitude, is the distinction of many things bound together by some common band. 3. Unity is the beginning of Number, according to which, every one of them which are, is called One. 4. Numerical Characters, are Notes or Figures, by which Numbers are express’d in Writing” (2). As we can see from this definition, distinctions were made between numbers and their characters or figures.

Distinctions were also made between pure mathematics and mixed mathematics. Though that distinction was at work in the period (see this definition from Stone: “Abstract Numbers, are those that are consider’d as pure Numbers, without being apply’d to any Subject. And so Abstract Mathematicks is used in Opposition to Mix’d Mathematicks; the former signifying pure Geometry, or Algebra, and the latter: Opticks, Dialling, Navigation,
&c. where physical Considerations are connected with Mathematical ones.”), definitions of number repeatedly evoke, not just applied mathematics, but an embodied experience of number as we use numerical and arithmetic skills that are learned with the hands.

The handiwork of mathematical practice is also emphasized in several of these 1720s mathematical texts. Hainlin writes in the preface to his book,

Therefore we wholly deliver the studious from this Labour of learning by heart, for the Mathematics are not learnt by heart, but to be understood, and also they are to be exercised by hand; to which Exercise, a Ruler, a pair of Compasses, a Celestial and Terrestrial Globe; or instead of these, Charts and Geographical Maps are necessary: In these if the Masters and Schollars are sometime conversant, it cannot but happen, that also they will bear the Words themselves in memory; from which right Understanding of things, they may also speak plainly; that by reason of it there will scarce be any need of peculiar learning by heart; especially since Mathematical things are not only laid before the Understanding as Metaphysics are, but are also contemplated by the Eyes and handled by the Hands. (9)

Additionally, William Pickering’s *The Marrow of the Mathematicks* (1724) contains an entire section on Instrumental Arithmetick, consisting of the tools one can use to perform computations. Pickering covers what he proclaims to be the best of these tools: “Mr. Gunter’s Sector, Mr. Wingate’s Rule of Proportion, and Mr. Seth Partridge’s Sliding Rule” (34-5).

Seeing how number is linked to bodily practices and experiences is important because it helps us to understand how thinkers in the period made sense of large numbers and their experiences of them. It is worth re-iterating that while such a thing as an abstract number existed, numbers were widely explained as and thought of as collections of units, multitudes of things. These definitions are often made by connecting numbers to the fingers. Returning to *An Essay Upon Literature*, Defoe argues that we can make sense of
bigger numbers when we root those too in embodied experiences such as counting the ten
fingers and then add and multiply that original set of ten. Defoe writes,

All the ways that I meet with, by which Men cast up Numbers of things, were
prescribed by pointing to their Fingers, and consequently reach’d only to the
Decimal Point, to Number Ten which they could tell upon their Fingers; if
they went any farther, they did by telling the same Fingers over again, and so
making two Tens, and three Tens, and four Tens as they had Occasion; and by
this Means they cou’d cast up tho’ with Difficulty as far as Ten Tens, which we
call a Hundred, but which they knew no Name for, till many Ages of the
World were run off. (232-3)

In insisting that humans had no name for one hundred “till many Ages of the World were
run off,” Defoe is insisting on the number one hundred being a quantity independent of the
name. One hundred is ten tens, ten sets of fingers or, as Defoe describes it, the same set of
fingers ten times. One hundred is a quantity arrived at by adding units together ten at a
time. In Defoe’s account of numbers, then, even though the base-ten system allows for
endless “Ennumeration by Repetition of Decimal Periods. . . ad infinitum” (233), Defoe still
grounds number in countable, discrete quantities that can be experienced.

Of course, numbers can grow so large that, while, “practicable,” they become
“innumerable.” Defoe writes:

by Doubling, and Redoubling, all kinds of Numbers may be reckon’d, at least
all that are practicable to Men; there being a kind of Infinity in Arithmetick
beyond human Capacity of accounting, or least of expressing; no Number of
any thing being so great, but that it may be doubled, or reckon’d over again to
a Tenth of those Doublings, and so on again till every ten adds Ten-fold to
what went before, ’till we come to Innumerable, and even then to ten
Hundred Thousand Millions of Innumerable, if such a term was agreeable to
Sense. (233)

Infinity is beyond human capacity of accounting or expressing not because we don’t have a
name for it but because it is innumerable, an abstract concept and not a collection of say,
fingers, that we can count up. In this way, infinity is innumerable—not like a number. I
think part of what Defoe means at the end of this passage is that “ten Hundred Thousand Millions of Innumerables” is a kind of oxymoron because at some amount we lose track of the number’s quantity, perhaps when, as in the example Defoe provides, two very great numbers are multiplied together (“ten Hundred Thousand Millions” multiplied by “Innumerables”). A number like ten hundred thousand millions multiplied by an innumerable equals an innumerable. Infinity defies the concrete, quantity-based conception of number. In so far as we can understand it, we do so by counting things up.

There’s Just So Much in *The Seasons*

One reason there are few small counting words in *The Seasons* is that there is just so much in *The Seasons*. The main poems of interest here, *Spring* and *Summer*, are poems featuring so much bounty that Thomson is constantly resorting to descriptions of ten thousands, myriads, multitudes, and even innumerables. Repeatedly in *The Seasons* the bounties of nature outstrip the poet’s (or the botanist’s) ability to enumerate them. In *Spring* one such botanist attempts to number the flora but fails “to number up their Tribes” (224):

> Then spring the living Herbs, profusely wild,  
> O’er all the deep-green Earth, beyond the Power  
> Of Botanist to number up their Tribes:  
> Whether he steals along the lonely Dale,  
> In silent Search; or thro’ the Forest rank  
> With what the dull Incurious Weeds account,  
> Bursts his blind Way; or climbs the Mountain-rock,  
> Fir’d by the nodding Verdure of its Brow.  
> With such a liberal Hand has Nature flung  
> Their Seeds abroad, blown them about in Winds,  
> Innumerous mix’d them with the nursing Mold,  
> The moistening Current and prolifick Rain. (222-33)

Though the botanist fails in his attempt to number the kinds of flora, Thomson demonstrates that he, like the botanist, is not content to simply name the herbs or their
seeds “innumerous.” Thomson describes the lengths that the botanist goes to number the species, searching “the lonely Dale,” “the Forest rank,” or “the Mountain-rock.” Though ultimately the botanist’s way is “blind,” the end of his quest unobtained, the botanist does successfully count as he “steals... in silent search.” Thomson and the botanist are ever searching, even questing to enumerate the bounty of the seasons even if they must ultimately fail to “number up their tribes.” Every such failure, however, serves to emphasize what can be enumerated: in this instance, the botanist’s trek and the various habitats he traverses, along with the liberal profusion of nature.

Nature’s bounties outstrip the botanist and the poem’s bounties have outstripped critics too. Many critics have commented upon the muchness of the poem—the poem’s length, revisions, topics, modes and genres, rhetorical flourishes—and the difficulty enumerating what ties all the parts of The Seasons together. Describing the sheer multiplicity of Summer’s content, Blanford Parker writes that “Summer is Thomson’s greatest achievement. It most perfectly embodies the ever-expanding margins of the empirical project” (173). That “empirical project” is reflected not only in Thomson’s poem but in the wider literary culture. Parker posits, “By 1720 poetry was no longer a basically religious or even courtly matter. It was for the first time the art of everything. It was the vehicle of the fully literal, the realization of the physical and detached nature of things” (137). He continues, “It might be fairly said that no period before 1660 and 1740 was so fascinated with the poetry of the trivial, as none was ever so taken up with the objects near at hand” (Parker 137). If The Seasons are an example of a foray into “the art of everything”—perhaps not a bad description of The Seasons—this helps to account for all of
its numbers: the number of topics, the number of poetic modes, the numbers of the verse, and the numbers in the poem itself.

The vast and diverse content of the poem adds to the sense of profuseness; so too do Thomson's descriptions of the many different things he includes. *Spring* begins Thomson's first collected edition of *The Seasons*. *Spring* begins the seasonal cycle with descriptions of the bounty yielded by the agricultural pursuits that sustain the burgeoning empire:

Ye generous BRITONS, venerate the Plow!
And o'er your Hills, and long withdrawing Vales,
Let Autumn spread his Treasures to the Sun,
Luxuriant, and unbounded! As the Sea,
Far thro' his azure turbulent Domain,
Your Empire owns, and from a thousand Shores
Wafts all the Pomp of Life into your Ports;
So with superior Boon may your rich Soil,
Exuberant, Nature's better Blessings pour
O'er every Land, the naked Nations cloath,
And be th' exhaustless Granary of a World! (67-77)

The business of empire has turned Thomson's mind not just to the agricultural but the very muchness of British agricultural pursuits and products as Thomson emphasizes as he links the muchness of the passage by stringing it along with "and," "as," and "so." Britain's treasures are "unbounded," and though the empire stretches to "a thousand Shores," the first of many things Thomson will count or assign a number descriptor to, its granary is "exhaustless" along with the "better Blessings" which are enough to "pour / O'er every Land." The language here evokes images of abundance, excess even—enough to export to

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* Later in the poem, Thomson builds an association between "treasures" and large amounts. Thomson writes, "The Clouds consign their Treasures to the Fields" (173)—linking the rain to all of the "treasures" of *Autumn* the rain helps to produce. In both places, "treasures" suggests both great value and great quantity. This association is strengthened when Thomson describes the sun shining through a mist which "In twinkling Myriads lights the dewy Gems" (196).
the whole world. In doing so, and in mentioning autumn, Thomson lays out a trajectory not just for *Spring* but also for *Summer*, both poems featuring abundance and large numbers.

As Thomson moves through the landscape of *Spring*, he presents description after description of nature’s bounty which he emphasizes as he labels multitudes and myriads and doles out descriptions involving large, evocative numbers. For instance, Thomson writes, “From her lap,” Nature “pours ten thousand Delicacies, Herbs, / And Fruits, as numerous as the Drops of Rain” (*Sp.* 351-3, my emphasis). *Spring* as well as *Summer* are dominated by this sense of profusion. Much of the time Thomson simply labels plant and animal life as multitudinous. There are, for instance, “many-twinkling” leaves (*Sp.* 158) forming an “umbrageous Multitude” (*Sp.* 179). Other times Thomson relies on the number ten thousand, using either the number or the word myriad: Thomson writes the parts of the plants that move moisture are “ten thousand different Plastic Tubes” (*Sp.* 220). Insects are “Myriads on Myriads, Insect-Army” (*Sp.* 121). Many of these words, such as “multitude” and “myriad,” and the numbers, “ten thousand” particularly, are used as tropes, connoting a sense of muchness rather than a specific accounting. Myriad, of course, comes from the Greek word for ten thousand. However, for Thomson words like ten thousand and myriad do not simply suggest a great number because Thomson uses numbers more than ten thousand (such as when he describes bees as “swarming Millions” (*Sp.* 509)) and still connects them to experiences, such as seeing a swarm of bees. Ten thousand and even a million, then, seems to suggest a great number of somethings that is comprehensible and experienceable. Thomson suggests as much when he employs ten thousand to describe images, fears, and views (“And lost in lonely Musing, in a Dream, / Confus’d, of careless Solitude, where mix / Ten thousand wandering Images of Things, / Soothe every Gust of
Passion into Peace” (Sp. 461-4)), things that we may not normally count but that we experience and therefore have a sense of their number.

In addition to the large numbers just mentioned, Thomson also describes plant and animal life as “innumerous,” beyond the capacity of man to count as we have seen in the previous example of flowers and in the botanist struggling to number the species of flora. It is partly because of all that is innumerable in the poem that, Parker argues, Thomson at times turns from the prolific bounties of sun-filled prolificness of summer to the calmer, seemingly emptier shady groves. After writing that Summer is Thomson’s greatest achievement because it captures the empirical project, Parker argues that the poem registers an acute anxiety:

In such a floating panoply of the intellect, the choosing power is maddened. The eye, once the window of the soul, is now at turns ardent, nervous, feasting, hungry, roving, tired, and, at last, anxious. It has become a metonymy of the uncontrollable variety of the empirical poetic. Neither the waking nor the dreaming world, the nearest nor the most exotic, the private nor the imperial can escape the endless branching and expansion of prospect. In the end the philosophic mind, the telescopic eye of Newton, must seek the peaceful shade—the retreat from chaos. (173)

While Parker helpfully articulates and contextualizes what can be the overwhelming muchness of Thomson’s Seasons, I disagree with his argument that all ends in anxiety and a retreat from chaos. In fact, in The Seasons we see Thomson working through the ontology of number so that large numbers need not be anxiety producing. Sublime, perhaps, and very useful.

Let us return momentarily to the catalog of flowers I quoted at the beginning of this chapter: “Infinite Numbers, Delicacies, Smells, / With Hues on Hues Expression cannot paint, / The Breath of Nature, and her endless Bloom” (553-5). In light of the many examples of explicit number language in The Seasons, I read this passage literally, that
Thomson is interested both in the infinite numbers spring presents as well as the infinite numbers of things we experience. For Thomson, these two things are intricately tied together as we will see from the way Thomson “counts.” This too, I will argue contributes to a managing of the anxiety so much profuseness can create. It is significant that in describing the bounty of spring that Thomson relies not just on words with denotations of bounty or unboundedness but also employs large numbers. It may be tempting to write Thomson’s use of large numbers such as ten thousand or a thousand as merely figurative, evocative of vastness rather than providing an exact accounting. I will not argue that Thomson has counted out the bees or insists that there are exactly one million; however, I will argue that more is afoot with Thomson’s use of large numbers than simply evoking vastness. We can begin to understand what exactly is afoot by looking at instances where Thomson enumerates particular items such as birds and flowers.

How Thomson Counts

We have broadly accounted for what numbers appear in Spring and Summer as Thomson attempts to describe the bounties of the seasons. If this begins to answer the question of what Thomson counts, I would like to spend some more time now with the question of how Thomson counts. I argue that Thomson’s method of “counting” first emphasizes different kinds of embodied experiences. This emphasis on the embodied in turn emphasizes the concrete stimuli experienced by the body which are enumerated in catalogs which culminate in the expression of the “innumerable,” moving from the concrete to the abstract.
Kevis Goodman writes that "at least since Wordsworth's comment in 1815 that Thomson teaches 'the art of seeing,' readers have recognized that the instrument whose activity most engages Thomson is not the rake, hoe, or plow, but the eye" (38-9). Readings such as Goodman's de-emphasize other modes of sensual experience in the poem. I’d like to focus for a moment not on Thomson's gazing, but his walking. Though Thomson describes “the raptur'd Eye / [Hurrying] from Joy to Joy” (Sp. 111-2), he also moves through the landscape, engaging many of his senses and proprioception as he moves through the countryside:

Oft let me wander o’er the dewy Fields,  
Where Freshness breathes, and dash the trembling Drops  
From the bent Bush, as thro’ the verdant Maze  
Or Sweet-briar Hedges I pursue my Walk;  
Or taste the Smell of Dairy; or ascend  
Some Eminence, AUGUSTA, in thy Plains,  
And see the Country, far-diffus’d around (Sp. 103-9)

The freshness of dewy fields we might feel along our skin or as we breathe in and register both humidity and smell, Thomson’s breathing field (103-4) evoking one way to take in freshness—on a breath. We can imagine him brushing the dew from a bush with a hand or perhaps a walking stick, feeling the hedges with which he is surrounded. In this description Thomson experiences the environment both as closely as possible, through breath and touch, and at a distance through smell, taste, and sight. This point is important because much has been made of Thomson’s sweeping landscapes—something that is tied to a perceived dedication to abstractness in Thomson.

Speaking of Thomson’s landscapes, John Barrell has argued, “Some poets—notably those in the eighteenth century—are less anxious to convey this particularity [the individuality of a place] than others” (45). What is more important to Thomson, according
to Barrell is a particular abstracted form of landscape, a poetical imitation of the compositional techniques of painters such as Claude and Poussin. The overall effect, Barrell notes, is that while certain prospects retain individualized bits of specificity, the prospect as a whole does not correlate to a specific place: the individuality of the place is apparent everywhere, as the organizing eye tries to move on, and is continually arrested by facts and details; but because the place cannot be described at all by Thomson except in terms of an a priori idea of its design, arrived at elsewhere and not in response to the particulars of this view, its individuality can emerge only as a particular existence of that general idea. (30)

This affect also contributes to what Kevin Goodman has called *The Seasons*’ “pastoralization of the georgic” (38); critics who look for workers in *The Seasons* are disappointed. Barrell anticipates this idea as he puts forward a similar argument which I quote at some length:

> The poets were influenced, in the description they made of places, very little by the accidental knowledge they might happen to have about them, and in particular they had very little sense of what can perhaps be called the ‘content’ of a landscape—I mean, they gave little evidence of caring that the topography of a landscape was a representation of the needs of the people who had created it. Those who held this attitude to landscape, in short, were able to do so because they were not involved in the landscapes they met with: their eye ‘looked over’ them, and manipulated the objects in them, simply according to the rules and structures sanctioned by a pure and abstract vision, and without any reference to what the function of those objects might be, what their use might be to the people who lived among them. (59)

“A pure and abstract vision” aptly crystalizes what many readers find in *The Seasons*, a reliance on the eye and a dismissal of the ways in which Thomson describes concrete experiences in favor of abstractions.

That Thomson is more interested in categories, species, or abstractions than locatable particularities is an argument many critics make about *The Seasons*. Heather Keenleyside sees this dynamic in play in “a model of both personhood and society that
privileges species over individuals” (27). For Wickman, the affinity between *The Seasons* and fluxional calculus and the former’s “effort to construct figures over a widening abyss of symbolic reference” also accounts for the incongruous marriage of the empirically specific and the dislocated abstract in Thomson’s poem. “Indeed, Newton’s model and its penchant for abstract but true-to-life shapes helps explain the strange merger of the empirical and the ideal in *The Seasons*, the poem’s power to place us in a landscape of rich but geographically unrecognizable details” (165). Wickman’s observation echoes that of Shuan Irlam who observes that the poem oscillates between mimetic empirical descriptions and “an apocalyptic and ‘primitivist’ poetics” (119). Irlam writes,

*The Seasons* has been hailed for its minutely individualized, descriptive, and mimetic passages and its finely discriminating powers of observation. The several scientifc-empirical passages, the chronicles of rural life, and the minute descriptions of diurnal, climatic, and seasonal changes, all reflect a classic and georgic heritage, as well as an assimilation of the new habits of empirical observation fostered by the Royal Society and amateur natural historians. (117)

These kinds of passages, however, are juxtaposed by a different mode all together: “The poem constantly breaks with the mimetic exigencies of both loco-descriptive poetry and new-scientific orthodoxy. It pledges itself to an apocalyptic and ‘primitivist’ poetics in which the figures of prophet and bard are the tutelary geniuses” (119). Irlam’s attention is ultimately focused on this second mode as he considers the “epiphanic consciousness” (120) of the poem. Both Irlam and Wickman emphasize the abstract aspects of the poem over the empirical. By focusing on the concrete moments as Thomson moves through the landscape, our attention can turn not to just what Thomson counts and whether those numbers have quantity but also to how Thomson counts.
Returning to the Thomson passage above, I want to continue to draw attention to discrete experiences and objects in *The Seasons*, the things that can be counted. While this passage portrays an abstract, idealized kind of walk—“Oft let me wander...”—it toggles between categorizable locations—“dewy Fields,” “Some Eminence,” “the country”—and more discrete experiences, such as brushing the “trembling drops” from the “bent bush” (104-5). This passage proceeds one in which Thomson counts in a catalog, setting the scene for what that counting will entail: number is tied to discrete things and discrete experiences in *The Seasons*. Remember that the botanist too walks through the landscape, trying to account for all the species of plants. More evocatively put, the botanist

\[...\] steals along the lonely Dale,
In silent Search; or thro’ the Forest rank
With what the dull Incurious Weeds account,
Bursts his blind Way; or climbs the Mounting-rock
Fir’d by the nodding Verdure of its Brow. (Sp. 225-9)

This passage suggests a loss of sensory input: perhaps the botanist’s inability to “number up their Tribes” has to do with a lack of pointed investigation. The botanist’s way is “blind” and “lonely,” his search “silent.” Part of the point here is that the hand of Nature is so “liberal” that flora can be found everywhere, even on the “Mounting-rock”; however, the botanist does not focus on what is to hand while moving through the landscape.

While looking may give the viewer of the landscape a sense of its grandeur and of its large numbers in the most general sense, when Thomson turns to counting, he turns to what is “at hand.” Take the following passage and, first, the visual experience of a landscape it describes:

At length the finish’d Garden to the View
Its Vistas opens, and its Alleys green.
Snatch’d thro’ the verdant Maze, the hurried Eye
Distracted wanders; now the bowery Walk
Of Covert close, here scarce a Speck of Day
Falls on the lengthen’d Gloom, protracted, sweeps;
Now meets the bending Sky, the River now,
Dimpling along, the breezy-ruffled Lake,
The Forest darkening round, the glittering Spire,
Th’ ethereal Mountain, and the distant Main. (516-25)

The experience is large—the view is a vista and the “hurried Eye / Distracted wanders”
over the many aspects of the view from the quality of light to the physical features of the
landscape near and far. Thomson shifts focus when he continues,

But why so far excursive? when at Hand,
Along these blushing Borders, bright with Dew,
And in yon mingled Wilderness of Flowers,
Fair-handed Spring unbosoms every Grace; (526-29)

What follows is the flower catalog we have already considered and will consider
again. Here, Thomson sets the scene for counting. The first step is to constrict one’s
perceptual scope. Instead of hurriedly and distractedly looking at the landscape, Thomson
focuses in on what is at hand, in this case, flowers. Notice that spring is personified here,
spreading the graces of spring with fair hand, focusing our attention on, again, what is at
hand:

Fair-handed Spring unbosoms every Grace;
Throws out the Snow-drop, and the Crocus first;
The Daisy, Primrose, Violet darkly blue,
And Polyanthus of unnumber’d Dyes;
The yellow Wall-Flower stain’d with iron Brown;
And lavish Stock that scents the Garden round.
From the soft Wing of vernal Breezes shed,
Anemones; Arriculas, enrich’d
With shining Meal o’er all their velvet Leaves;
And full Renunculas, of glowing Red.
Then comes the Tulip-Race, where Beauty plays
Her idle Freaks: from Family diffus’d
To Family, as flies the Father Dust,
The varied Colours run; and, while they break
On the charm’d Eye, th’ exulting Florist marks,
With secret Pride, the Wonders of his Hand.
No gradual Bloom is wanting; from the Bud,
First-born of Spring, to Summer’s musky Tribes:
Nor Hyacinths, of purest virgin White,
Low-bent, and blushing inward; nor Jonquils,
Of potent Fragrance; nor Narcissus fair,
As o’er the fabled Fountain hanging still;
Nor broad Carnations; nor gay-spotted Pinks;
Nor, shower’d from every Bush, the Damask-rose.
Infinite Numbers, Delicacies, Smells,
With Hues on Hues Expression cannot paint,
The Breath of Nature, and her endless Bloom. (Sp., 529-55)

Here Thomson enumerates seventeen of the species of flowers seen in the spring and summer starting in a counting vein with the first to appear, the snowdrop and crocus. Thomson retains the pattern of giving descriptions that appeal to the senses, naming and describing specific blooms and species of flowers, before arriving at the more abstract “infinite numbers, delicacies, smells.” My point, however, is that the catalog works to make the “infinite numbers, delicacies, smells” as concrete as possible. The first step in achieving this is describing the individuals and individual species that comprise the catalog and its ultimate manifestation, “infinite numbers.” The description of the hyacinths—“of purest virgin White / Low-bent, and blushing inward” (547-8)—evokes the form and coloring of a single bloom. Whether describing individual blooms or species, the experience is a sensuous one, appealing to sense of sight and touch from “Arriculas, enrich’d / With shining Meal o’er all their velvet Leaves” (536-7) to “The yellow Wall-Flower stain’d with iron Brown” (533). While there are “Infinite Numbers, Delicacies, Smells, / With Hues on Hues Expression cannot paint, / The Breath of Nature, and her endless Bloom,” (my emphasis), Thomson clearly expresses many of the components of nature’s endless bloom. These culminating lines are a meditation on the sensuous experiences which make up the “infinite numbers,” evoking delicacies, smells, hues, and all of the painstaking descriptions
in the catalog just completed. When Thomson writes “infinite numbers... with hues on hues expression cannot paint” (553-4) he emphasizes the great quantities that make up these infinite numbers—more than can be named (remember Menninger’s definition of counting—assigning names to things). If this emphasizes that infinity is an abstract name for all of these discrete pieces, it also makes infinity seem like less of an abstraction. As much as “infinite numbers” impresses upon us a huge, incomprehensible number of flowers, the passage concretizes infinity because it maintains that infinity has quantity; it is a lot of flowers, hues, or smells.

Matthew Wickman argues that the catalogs of The Seasons “[convert] abstractions into images” (181). According to Wickman, in these catalogs, Thomson names specific (but not intrinsically important) birds or flowers before intoning “infinite numbers,” standing in for all of the flowers or birds or other bounties of nature that exist but are not named. “In their own way,” Wickman argues,

these catalogs reveal the workings of a metaphorically fluxional poetics, for they evoke a sense of number that seems virtually infinite without being “whole.” To this extent, poetic counting, like calculus, sets a “limit” to its available data in order to portray a general likeness to objects. Scenes in nature thus resemble points along a graph: our ability to move past the specter of the infinite or microscopic is what permits our passage to other objects. We behold nature in its entirety only because we partly “void” it or disregard its infinite (or infinitesimal) details. (182)

I take issue with Wickman’s argument that the catalogs “evoke a sense of number that seems virtually infinite without being ‘whole.’” Such a description of number and of Thomson’s poetry dismisses the efforts Thomson goes to in the flower catalog to describe individual blossoms, creating a “whole” sense of number based in quantity or unities. The
catalog has the opposite effect for infinity: instead of making it appear “spectral,” the catalog concretizes “infinite numbers” as I have argued.

Earlier I mentioned Blanford Parker’s assertion that Thomson can only retreat from the anxiety created by the expanding empirical project The Seasons encapsulates by turning to the peace of the shady grove. I think by this point I can offer some reasons why Thomson’s flower catalog actually manages anxiety rather than produces it. First, if Thomson is troubled by the “uncontrollable variety of the empirical poetic” (Parker 173), the catalog presents infinity not as a sign of uncontrollable variety but as a sign that gestures back to concrete, experienceable unities. Recalling Cassirer’s designation of number words as “mimetic hand concepts,” I think it is significant that nature is figured so frequently in the poem as having hands. In Summer, the “ALL-PERFECT HAND” (41) “impels, and rules the steady Whole” (42). Furthermore, it is often Nature’s hand which initiates the transformations of the seasons: "By Nature’s swift and secret working hand, / The garden glows" (Sp. 96-7). We see nature’s work made manual again when Thomson writes, "With such a liberal hand has Nature flung / Their seeds abroad" (Sp. 229-30). To the “Source of Being” Thomson also gives a hand; he hails the “Essential Presence,” “who, with a master-hand, / Hast the great whole into perfection touched” (Sp. 556-7). Nature flings her bounties from her hands (a personification that limits or concretizes nature’s activities) and Thomson invites the reader to consider what is at hand to make sense of nature’s spectacular bounty. If nature can throw it out, the hand can number it up. And, of course, when language fails to encapsulate all that there is, there is pleasure to be had in the attempt:

Behold yon breathing Prospect bids the Muse
Throw all her beauty forth. But who can paint
Like Nature? Can Imagination boast,
Amid its gay Creation, Hues like hers?
Or can it mix them with that matchless skill,
And lose them in each other, as appears
In every Bud that blows? If fancy then
Unequal fails beneath the pleasing Task,
Ah, what shall language do? Ah, where find Words
Tinged with so many Colours; and whose Power,
To Life approaching, may perfume my Lays
With that fine Oil, those aromatic Gales,
That inexhaustive flow continual round?
Yet, though successless, will the toil delight. (Sp. 467-79)

Though the thrust of this passage is that the imagination and language cannot capture all of
the variety of nature, “the toil [will] delight” (77). All the multiplicity in this passage, even
though it cannot be cataloged in the imagination or in language, serves to point the reader
back to the experience of the pleasures of the prospect.

So, the catalog insists upon numbers being connected to things as the enumerating
of the catalog links infinity to the objects that comprise it. Infinity, potentially
overwhelming, is made concrete and digestible. That number is connected to quantity also
resolves another famous anxiety in The Seasons. In Summer Thomson considers the wisdom
of the limited scope of human senses—that the eye cannot see microscopically, for
instance. On the other hand, however, Thomson suggests that it is a great boon that the
world is made up of multitudes we cannot see for it keeps us from contemplating “drear
Nothing”:

Has any seen
The mighty Chain of Beings, lessening down
From INFINITE PERFECTION to the Brink
Of dear Nothing, desolate Abyss!
Form which astonish’d Thought, recoiling, turns? (Su. 333-37)
In this passage what is far more frightening than infinity is zero. It is zero that thought must recoil from. In this passage Thomson suggests that zero is something that cannot be experienced. The answer to the question has any seen “drear nothing” (336), apparently, is no, since Thomson urges his reader, “Till then alone let zealous Praise ascend” (338), essentially saying, give thanks you haven’t! Why does “drear nothing, desolate Abyss” evoke such a visceral response in Thomson’s poem? I believe it is because nothing—zero—is so at odds with the plethora of sensual experiences the poem replicates for its reader. It is truly abstracted in that it has no true referent in experience—all experience is experience of something. According to this logic, zero and infinity don’t have much in common. Infinity is lots of somethings; zero is no somethings, whatever that is. The comfort in this passage is that the world is filled with many infinities, even ones we cannot see. Infinities Thomson can manage; zeros, he cannot.

To conclude I’d like to make a rather unlikely reading of another famous passage in which Thomson describes a rainbow made legible by “awful Newton” (Sp. 208). This passage is usually read as an homage to Newtonian optics, providing evidence of Thomson’s respect for Newton and the wonders of natural philosophy. The “sage-instructed Eye” is juxtaposed with that of a swain who, not understanding the nature of the rainbow, runs to catch it in his hands:

Here, awful Newton, the dissolving Clouds  
Form, fronting on the Sun, thy showery Prism;  
And to the sage-instructed Eye unfold  
The various Twine of Light, by thee disclos’d  
From the white mingling Maze. Not so the Swain,  
He wondering views the bright Enchantment bend,  
Delightful, o’er the radiant Fields, and runs  
To catch the falling Glory; but amazed
Beholds the amusive Arch before him fly,
Then vanish quite away. (Sp. 208-17)

I am struck by how the swain brings together two aspects of the passages we have seen that involve counting. First of all, the swain moves through his environment to gain knowledge about it; secondly, he reaches for that knowledge with his hands. This passage captures a transitional moment in eighteenth-century culture; it is easy to dismiss the swain as uneducated and quaint. However, I would argue that the swain usefully expands our sense of how to make sense of the world, especially considering the way numbers are made concrete in the poem—often by attuning to what is at hand. Even as the world and what it contains expands exponentially during the eighteenth-century, keeping a hand on what is “at hand” supports a sense of being that is in turn supported by embodied experience.
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