The Making of Knowledge: Experimental Texts and Textual Experiments in Early Modern Women’s Scientific Writing

Summary
The advent of the modern scientific method in the seventeenth century transformed European and American discourses of knowledge. While scholars increasingly recognize women’s participation in these exchanges, the parameters of knowledge making and early scientific discourse are still defined predominantly through the period’s male writers and thinkers. Related to the topics of “confrontation” and “collectivity,” this workshop will explore primary texts and critical frameworks that challenge current understandings of early modern discourses of knowledge (or the question of how we know) and urge us to re-think women’s engagement with them, both individually and through female-centred networks of knowledge.

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Description
In The Great Instauration (1620), Francis Bacon outlined a grand plan for reforming the structure of knowledge production, laying the groundwork for what would later become known as the scientific method. While Bacon’s mammoth volume remained unfinished, the project of restructuring the processes and discourses of knowledge production gradually unfolded over the course of the sixteenth and seventeenth centuries as Europe and the Americas saw the emergence of new scientific fields and an explosion of data collection and information cataloguing. Women writers and thinkers of the period were active agents in this process, but their names remain absent from the project’s most influential texts and materials. In the last several decades, however, early modern scholars have increasingly recognized the crucial role women played in the fields of natural philosophy, physics, and mathematics, recovering their contributions to the scientific discourse of the period.

Our workshop builds on this important recovery work, turning from the questions of “who” these women were and “what” their writing offers, to the crucial question of “how”: How did these writers engage with early modern structures of knowledge production? How do they make knowledge, and how might their process of knowledge production offer an alternative to the dominant processes at work in their contemporary moment? How does their participation in scientific discourse outside official channels confound accepted ideas of modern disciplinary boundaries, particularly the division between “scientific” and “non-scientific” disciplines? How do we re-calibrate our own understanding of early modern science in order to better understand their contributions? How can their contributions inform the ways we understand knowledge production in our present day?

Our discussions will be structured around four primary texts: Hester Pulter’s Poems Breathed Forth by the Nobel Hadassas (c. 1645-1665), Margaret Cavendish’s Philosophicall Fancies (1653), Sor Juana Inés de la Cruz’s Respuesta a Sor Filotea de la Cruz (“Response of the Poet to Sister...
Philome of the Cross,” 1691), and Marie-Geneviève-Charlotte Thiroux d’Arconville’s *Essai pour servir à l’histoire de la putréfaction* (“Essay on the History of Putrefaction,” 1766). Each of these writers offers a model of scientific discourse that engages with emerging scientific ideas, while also presenting alternatives to the predominantly masculine methods and structures of knowledge production underlying those ideas.

Three secondary readings will provide a critical framework through which to approach these primary texts, setting out the current “state of play” in the study of early modern women and science. In their essays, Stacy Alaimo and Susan Hekman, Elizabeth Spiller, and Wendy Wall each contribute to our understanding of women’s involvement in discourses of knowledge by questioning the dominant paradigms and dichotomies that structure our critical approaches. Together with our primary texts, which include a scientific essay, a pseudo-autobiography, and philosophical poetry, these secondary readings challenge the application of modern disciplinary divisions to early modern texts and question our contemporary dichotomies between fiction and fact, theory and production, and discourse and materiality.

Finally, bringing our workshop into the present day, we we will consider how our early modern materials might inform contemporary discussions of knowledge production. Using examples of contemporary scholars and practitioners who work outside established contexts of knowledge production, we will prompt participants to formulate provisional ideas about how we might move forward in this field. Heeding the calls in our secondary reading to emphasise the material in feminist discourse, while at the same time acknowledging the “constructed” nature of many scientific endeavours, we will focus here on two questions: First, how might we define the contours of a female-centred process of knowledge making, both for the early modern period and the present day? Second, how might we re-think the relationship between early modern voices and postmodern feminist discourse, so that the former are not simply defined by, but rather help define, the parameters of the latter?

Our workshop will be structured as follows:

1. Primary Source Introductions and Contexts (workshop organizers) (15-20 mins)
2. Small group discussion (based on questions below) (10 mins)
3. Group feedback and discussion (20 mins)
4. Contemporary Examples (workshop organizers) (10 mins)
5. Closing discussion (25-30 mins)

**Preliminary readings**

**Primary**
- Hester Pulteney, selections from *Poems Breathed Forth by the Noble Hadassas* (c. 1645-1665)
- Margaret Cavendish, selection from *Philosophicall Fancies* (1653)
- Sor Juana Inés de la Cruz, selection from *Respuesta a Sor Filotea de la Cruz* (“Response of the Poet to Sister Philothea of the Cross”) (1691)
- Marie-Geneviève-Charlotte Thiroux d’Arconville, selection from *Essai pour servir à l’histoire de la putréfaction* (“Essay on the History of Putrefaction”) (1766)
Secondary

Suggested further readings

Participants may also want to familiarize themselves with the work of Kate Davies (www.katedaviesdesigns.com and Instagram @katedaviesdesigns), and the Making and Knowing Project at Columbia University (www.makingandknowing.org).
Small-group discussion questions

If we think about our primary readings as “instances of early modern knowledge production,” to borrow Elizabeth Spiller’s language, what kinds of knowledge do they offer? What forms does that knowledge take? What forms of knowledge production do they resist and/or subvert?

How do each of these writers depict their own engagement in the process of knowledge production? How do they relate knowledge production with textual production? How do these writers use form (both material and poetic) and genre in their construction of alternative modes of knowledge production?

How can we identify the markings and effects of gender in the readings, and how is gender useful as a category with which to think about these particular texts in the first place?

How do each of these writers depict their relationship to dominant or masculine modes of knowledge production? Do they understand themselves as presenting an alternative means of approaching knowledge or production, or are they more concerned with establishing themselves within existence discourses? What might a female-centred approach to knowledge production look like for them?

Are there any ways in which the frameworks created by Spiller and Wall overlook or fail to account for something important or interesting about the primary texts, or ways in which the primary texts productively challenge an idea in Spiller or Wall?

What role does ‘making’ play in the structure of knowledge production offered in these texts? For instance, how might we consider Cavendish and Pulteney’s use of making in relation to Philip Sidney’s famous formulation of poësin, or poetic making? Or, perhaps we can draw on the set of terms Wall provides for the process of transforming “natural elements into ‘made’ worlds”: “labor,” contrivance, artifice, technē.” How do our primary texts engage with or offer alternative to such practices?

How do Spiller and Wall’s arguments affect how we read the texts by early women writers that we have previously identified as “scientific” in some way? In other words, if we trouble and extend our definitions of terms like “science,” “learned,” “domestic,” “knowledge,” “making,” etc., what do we do with early women’s texts that have seemed to fit comfortably within our previous definitions of these terms?

To what extent do these texts problematize the definition of “materiality, the body, and nature as products of discourse” (Alaimo and Hekman)? How might our understanding of early modern materiality be shaped by modern or post-modern discursive constructs? How might we bring the material within these texts back into focus?
Hester Pulter, *Hadassas Chast Fances*, MS Lt q 32, 9 (Brotherton Collection, University of Leeds Library).

**The Circle [1]**

In sighs and tears there is no end,
My soul, on heaven alone depend.
Sighs like the air doth clouds condense,
Which tears from our sad eyes dispense.
Trust me, in sighs there is no ease; 5
No more than wind doth calm the seas.
And tears (ah me) descend in vain;
To sighs they rarefy again.
In this sad circle I run round
Till, giddily, I tumble down.
But should poor I suspiré to air,
I know the sad fruits of despair,
Or should I into tears dissolve
What horror would my soul involve?
Then, gracious God, in thee I’ll trust, 15
Although thou crumble me to dust.
No grief shall so emergent be
To separate my soul from thee.
Of nothing you didst me create,
And shouldst thou now annihilate
Abrupt, or consummate, my story
Oh let it be unto thy glory. (112)

**The Circle [2]**

Those that the hidden chemic art profess
And visit Nature in her morning dress
To mercury and Sulphur philters give
That they consumed with love may live
In their posterity, and in them shine, 5
Though they their being unto them resign,
Glorying to shine in silver and in gold,
Which fretting vermil poison doth enfold,
Forgetting quite that they were once refined.
By time and fate to dust are all calcined,
Lying obliviatiæd in their urn
Till they to their great ancestors return;
So man, the universe’s chiepest glory,  
His primitive’s dust (alas) doth end his story. (115)

The Circle [3]

To be unwilling or afraid to die,  
In the whole world’s society,  
Is a sign of huge impatience.  
That many things revolve thou mayest explore,  
And when thou dost dissolve it is no more.  
For so this earthly, transitory mound  
In an eternal motion still runs round. (118)

The Circle [4]

The eternal spirit of life and love,  
Descending from his throne above,  
From nature’s mass extracted Light,  
Biding her triumph over Night,  
Who, in her prime of youth and day,  
Lovely Astraea did display,  
Who, conquering all the shades infernal,  
Her virgin womb showed life eternal  
To lapsed man then flew above  
To be involved again in life and love. (133)
moll; because the Locall motion is altered; yet we cannot knowingly say, it is not a sensitive creature, so long as the Figure lasts: besides when the Figure is dissolved, yet every scattered part may have sense, as long as any kind of motion is in it; and whatsoever hath an innate motion, hath sense, either increasing or decreasing motion; but the sense is as different as the motions therein, because those properties belonging to such a Figure are altered by other motions.

Of Sense and Reason exercised in their different shapes.

If every thing hath sense and reason, then there might be Beasts, and Birds, and Fish, and Men: As Vegetables and Minerals, had they The Animal shape to express that way; And Vegetables & Minerals may know, As Man, though like to Trees and Stones they grow.

Then Corall Trouts may through the water glide,
And pearl'd menows swim on either side;
And

And Mermayds, which in the Sea delight,
Might all be made of watry Lillies white;
Set on salt watry Billows as they flow,
Which like green banks appeare thereon to grow.

And Mariners midst their Ship might stand,
In stead of Mast, hold sayles in either hand.

On Mountaine tops the Golden Fleece might feed,
Some hundred years their Ewes bring forth their breed.

Large Deere of Oake might through the Forrest run,
Leaves on their heads might keepe them from the Sun;
In stead of shedding Hornes, their Leaves might fall,
And Acornes to increase a Wood of Fawnes withall.

Then might a Squerrill for a Nut be crackt,
If Nature had that Matter so compact:
And the small Sprouts which on the Husk do grow,
Might be the Taise, and make a brushing show.
Then might the Diamonds which on Rocks oft lye,
Be all like to some little sparkling Flye.
Then might a leaden Hare, if swiftly run,
(t) A Pig Melt from that shape, and so a (†) Pig become.

And Dogs of Copper-mouths found like a Bell;
So when they kill a Hare, ring out his Knell.

Hard Iron men shall have no cause to fear,
To catch a fall, when they a hunting were.

Nor in the Wars should have no use of Armes,
Nor fear'd to fight; they could receive no harms.

For if a Bullet on their Breasts should hit,
Fall on their back, but strait-waies up may get.
Or if a Bullet on their head do light,
May make them totter, but not kill them quite.

And Stars be like the Birds with twinkling Wing,
When in the Aire they flye, like Larks might sing.

And as they flye, like wandring Planets flew,
Their tails may like to blazing Comets grow.

When they on Trees do rest themselves from flight,
Appeare like fixed Stars in Clouds of night.

Thus may the Sun be like a Woman faire,
And the bright Beames be as her flowing Haire.

And from her Eyes may cast a silver light,
And when she sleeps, the World be as dark night.

Or Women may of Alabaster be,
And so as smooth as polisht Ivory.
Or, as clear Christall, where hearts may be shewn,
And all their Falsehoods to the World be known.

Or else be made of Rose, and Lillies white,
Both faire, and sweet, to give the Soule delight.
Or else be made like Tulips fresh in May,
By Nature dreft, cloath'd severall Co-lours gay.

Thus
Thus every yeare there may young Vir-
gins spring,
But wither, and decay, as soon aget
While they are fresh, upon their Breast
might set
Great swarmes of Bees, from thence
sweet Honey get.
Or, on their Lips, for Gilly-flowers, Flies
Drawing delicious sweet that therein
lies.
Thus every Maid, like severall Flowres
shew,
Not in their Shape, but like in Substance
grow.
Then tears which from oppressed hearts
do rise,
May gather into Clouds within the eyes:
From whence those tears, like flowed of
Raine may flow
Upon the Bancks of Cheeks, where Roses
grow.
After those flowers of Raine, so sweet
may smell,
Perfuming all the Aire, that neer them
dwell.
But when the Sun of Joy, and Mirth
doeth rise,
Darting forth pleasing Beames from loy-
ving Eyes. Then
Then silver Grass may in the Meadowes grow,
Which nothing but a Sickle of fire can mow.
The Wind which from the North a journey takes,
May strike those silver Strings, and Murder make.
Thus may another World, though matter still the same,
By changing shapes, change humours, properties, and Name.
Thus Colossus, a statue wonderous great,
When it did fall, might strait get on his feet.
Where Ships, which through his legs did swim, he might
Have blow'd their Sails, or else have drown'd them quite.
The Golden Calf that Israel joy'd to see,
Might run away from their Idolatry.
The Basan Bul of Brass might be, when roare,
His mettled Throat might make his voice found more.
The Hil, which Mahomet did call, might come
At the first word, or else away might run.

Thus Pompey's Statue might rejoice to see,
When kill'd was Caesar, his great Enemy.
The Wooden-horse that did great Troy betray,
Have told what's in him, and then run away.
Achilles Armes against Ulysses plead,
And not let Wit against true Valour speed.

Of the dispersing of the Rational Spirits.

Some think, that the Rational Spirits flye out of Animals,(or that Animal we call Man,) like a swarm of Bees, when they like not their Hives, finding some inconvenience, seek about for another Habitation: Or leave the Body, like Rats, when they finde the house rotten, and ready to fall; Or fear'd away like Birds from their Nests. But where should this Swarm, or Troop, or Flight, or Essences go, unlesse they think this thin matter is an Essence, evaporates to nothing?
This man was also with him. 29 He loved wisdom, carried it in his heart, followed after it, valued being a follower and lover of wisdom; and although he was so a longe [far off] that he did not understand or reach it, it was enough to incur its torments. There was always a foreign soldier to cause him distress, a maidservant to trouble him. I confess I find myself very far from the boundaries of wisdom and have wanted to follow it, although a longe. Yet this has brought me closer to the fire of persecution, the crucible of torment, to the extent that some have requested that I be forbidden to study.

This once was achieved by a very saintly, very ingenuous mother superior who believed that study was a matter for the Inquisition and ordered me to stop. I obeyed (for the three months her power to command lasted) in that I did not pick up a book, but not studying at all, which is not in my power, I could not do, because although I did not study books, I studied all the things God created, and these were my letters, and my book was the entire mechanism of the universe. I saw nothing without reflecting on it, heard nothing without considering it, even the smallest material things, for there is no creature, no matter how low, in which one does not recognize me fecit Deus, 30 none that does not astonish the understanding, if one considers it as one should. And so, I repeat, I looked at and admired everything; as a consequence, even the people to whom I spoke, and the things they said to me, gave rise to a thousand considerations: What is the origin of the varieties of intelligence and wit, since we are all one species? What could be the temperaments and hidden qualities that caused them? If I saw a figure, I would combine the proportion of its lines and measure it with my understanding and reduce it to other, different figures. I would walk sometimes in the front part of our dormitory (which is a very spacious room) and observe that since the lines of its two sides were parallel and the ceiling level, the eye made it seem that its lines inclined toward each other and the ceiling was lower at a distance than nearby, and from this I inferred that visual lines run straight, not parallel, but form a pyramidal shape instead. And I wondered whether this might be the reason the ancients were obliged to doubt the world was round. Because although it seems so, our sight could deceive us, showing concavities where there might not be any.

I notice everything in this manner and always have and have no control over it; in fact it tends to annoy me, for it wearies my head; I thought this, and composing verses, happened to everyone, until experience showed me the contrary; and this is so much my character or custom that I see nothing without considering it further. Two little girls were playing with a top in my presence, and no sooner did I see the movement and shape than I began, with this mad-
ness of mine, to consider the easy motion of the spherical shape and how the already transmitted impulse could last, independent of its cause, for far from the hand of the little girl, which was the motivating cause, the top still danced; not content with this, I had some flour brought in and sifted, so that as the top danced on top of it, I could learn whether the circles described by its movement were perfect or not; and I found that they were merely spiral lines that lost their circular nature as the impulse diminished. Some other girls were playing jackstraws (which is the most frivolous of children's games); I began to contemplate the figures they formed, and seeing that by chance three fell into a triangle, I began to connect one to the other, recalling that some say this was the shape of the mysterious ring of Solomon, which had distant indications and representations of the Holy Trinity, allowing him to perform countless miracles and marvels; and it is said that the harp of David had the same shape, and for that reason Saul was healed at its sound; harps in our day still have almost the same shape.

And what could I tell you, señora, about the natural secrets I have discovered when cooking? Seeing that an egg sets and fries in butter or oil but falls apart in syrup; seeing that for sugar to remain liquid it is enough to add a very small amount of water in which a quince or other bitter fruit has been placed; seeing that the yolk and the white of the same egg are so different that each mixed with sugar is different from both mixed with sugar. I do not mean to tire you with these inconsequentialities, which I mention only to give you a complete view of my nature, and which I believe will cause you to laugh; but, señora, what can we women know but kitchen philosophies? As Lupericio Leonardo\(^1\) so wisely said, one can philosophize very well and prepare supper. And seeing these minor details, I say that if Aristotle had cooked, he would have written a great deal more. Returning to my continual cogitation, I repeat that this is so constant in me I do not need books; on one occasion, because of a serious stomach ailment, the doctors prohibited my studying; after a few days I suggested to them that it would be less harmful to allow me books, because my cogitations were so strong and vehement that they consumed more energy in a quarter of an hour than studying books did in four days; and so they were persuaded to allow me to read. And further, señora: not even my sleep was free of this continual movement of my imaginative faculty; rather, it tends to operate more freely and unencumbered, examining with greater clarity and tranquility the events of the day, arguing, and composing verses, and I could offer you a large catalogue of them and the arguments and delicate points I have formulated more successfully asleep than awake, but I put those aside in order not to weary you, for what I have said is enough for your intelligence and perspi-

\(^1\) The citation should be attributed to Luperico's brother Bartolomé Leonardo de Argensola, Satire I.
cacity to penetrate and see perfectly my entire nature, as well as the origin, means, and state of my studies.

If these, señora, are meritorious (I see them celebrated as such in men), they would not be so in me, because I act out of necessity. If they are blameworthy, for the same reason I believe I am not at fault; nonetheless, I always have so little confidence in myself that in this or anything else I do not trust my own judgment; and so I remit the decision to your sovereign talent, submitting to whatever sentence you may impose, without contradiction or opposition, for this has been no more than a simple narrative of my inclination toward letters.

III

I confess as well that although it is true, as I have said, that I needed no books, yet the many I have read, in both divine and human letters, have not failed to help me. For I find Deborah issuing laws, both military and political, and governing a people that had many learned men. I find an exceedingly wise Queen of Sheba, so learned she dares to test with enigmas the wisdom of the greatest of wise men and is not rebuked for that reason; instead, because of it, she becomes judge of the unbelievers. I find numerous illustrious women: some adorned with the gift of prophecy, like Abigail; others, with the gift of persuasion, like Esther; others, with piety, like Rahab; others, with perseverance, like Hannah, mother of Samuel, and countless others possessing all kinds of gifts and virtues.

If I turn to the Gentiles, I first encounter the Sibyls, chosen by God to prophesy the principal mysteries of our faith, in verses so learned and elegant they enthrall our admiration. I find a woman like Minerva, daughter of the foremost god Jupiter and mistress of all the knowledge of Athens, worshipped as goddess of the sciences. I find Polla Argentaria, who helped Lucan, her husband, write the great Pharsalia. I find the daughter of the divine Tiresias, more learned than her father. I find Zenobia, queen of the Palmyrenes, as wise as she was valiant. Arete, the most learned daughter of Aristippus. Nicostrata, creative in Latin letters and extremely erudite in Greek. Aspasia of Miletus, who taught philosophy and rhetoric and was the tutor of the philosopher Pericles. Hypatia, who taught astronomy and studied for many years in Alexandria. Leontion, a Greek woman who wrote arguments countering the philosopher Theophrastus, which convinced him. Jucia, Corinna, Cornelia, in short, all the great number of women who deserved fame, whether as Greeks, muses, or pytho-

12 Sor Juana may have meant Julia (Donna), an intellectual Roman empress.
Sor Juana Inés de la Cruz, “Respuesta a la poetisa a sor Filotea de la Cruz”

que la he deseado seguir, aunque a longe. Pero todo ha sido acercarme más al fuego de la persecución, al crisol del tormento; y ha sido con tal extremo que han llegado a solicitar que se me prohiba el estudio.

Una vez lo consiguieron con una prelada muy santa y muy cándida que creyó que el estudio era cosa de Inquisición y me mandó que no estudiase. Yo la obedecí (unos tres meses que duró el poder ella mandar) en cuanto a no tomar libro, que en cuanto a no estudiar absolutamente, como no cae debajo de mi potestad, no pude hacer, porque aunque no estudiaba en los libros, estudiaba en todas las cosas que Dios crió, sirviéndome ellas de letras, y de libro toda esta máquina universal. Nada veía sin refleja; nada oía sin consideración, aun en las cosas más menudas y materiales; porque como no hay criatura, por baja que sea, en que no se conozca el me fecti Deus, no hay alguna que no pase el entendimiento, si se considera como se debe. Así yo, vuelvo a decir, las miraba y admiraba todas; de tal manera que de las mismas personas con quienes hablaba, y de lo que me decían, me estaban resaltando mi consideraciones: ¿De dónde emanaría aquella variedad de genios e ingenios, siendo todos de una especie? ¿Cuáles serían los temperamentos y ocultas cualidades que los ocasionaban? Sí veía una figura, estaba combinando la proporción de sus líneas y mediándola con el entendimiento y reduciéndola a otras diferentes. Paseábame algunas veces en el testero de un dormitorio nuestro (que es una pieza muy capaz) y estaba observando que siendo las líneas de sus dos lados paralelas y su techo a nivel, la vista fijaba que sus líneas se inclinaban una a otra y que su techo estaba más bajo en lo distante que en lo próximo: de donde infería que las líneas visuales corren rectas, pero no paralelas, sino que van a formar una figura piramidal. Y discurría si sería la razón que obligó a los antiguos a dudar si el mundo era esférico o no. Porque, aunque lo parece, podía ser engaño de la vista, demostrando concavidades donde pudiera no haberlas.

Este modo de reparos en todo me sucedía y sucede siempre, sin tener yo arbitrio en ello, que antes me suelo enfadar porque me cansa la cabeza; y yo creía que a todos sucedía esto mismo y el hacer versos, hasta que la experiencia me ha mostrado lo contrario; y es de tal manera esta naturaleza o costumbre, que nada veo sin segunda consideración. Estaban en mi presencia dos niñas jugando con un trompo, y apenas yo vi el movimiento y la figura, cuando empecé, con esta mi locura, a considerar el fácil moto de la forma esférica, y cómo duraba el impulso ya impreso e independiente de su causa, pues distante la mano de la niña, que era la causa motiva, bailaba el trompillo; y no contenta con esto, hice traer harina y cernírla para que, en bailando el trompo encima, se conociese si eran círculos perfectos o no los que describía con su movimiento; y hallé que no eran sino unas líneas espirales que iban perdiendo lo circular cuanto se iba remitiendo el impulso. Jugaban otras a los alfileres (que es el más trívulo juego que usa la puerilidad); yo me llegaba a contemplar las figuras que formaban; y viendo que acaso se pusieron tres en triángulo, me ponía a enlazar uno en otro, acordándome de que aquél era la figura que dicen tenía el misterioso anillo de Salomón, en que había unas lejanas luces y representaciones de la Santísima Trinidad, en virtud de lo cual obraba tantos prodigios y maravillas; y la misma que dicen tuvo el arpa de David, y que por eso sanaba Saúl a su sonido; y casi la misma conservan las arpas en nuestros tiempos.

Pues qué os pudiera contar, Señora, de los secretos naturales que he descubierto estando guiando? Veo que un hueso se une y fíe en la manteca o aceite y, por contrario, se despedaza en el almíbar; ver que para que el azúcar se conserve fluida hasta echarle una muy mínima parte de agua en que haya estado membrillo u otra fruta agria; ver que la yema y clara de un mismo hueso son tan contrarias, que en los unos, que sirven para el azúcar, sirve cada una de por sí y juntos no. Por no cansaros con tales fialidades, que sólo refejo por daros entera noticia de mi natural y creo que os causará risa; pero, señora, ¿qué podemos saber las mujeres sino filosofías de cocina? Bien dijo Lupercio Leonardo, que bien se puede filosofar y aderezar la cena. Y yo suelo decir...
viendo estas cosillas: Si Aristóteles hubiera guiado, mucho más hubiera escrito. Y prosiguiendo en mi modo de cogitaciones, digo que esto es tan continuo en mí, que no necesito de libros; y en una ocasión que, por un grave accidente de estómago, me prohibieron los médicos el estudio, pasé así algunos días, y luego les propuse que era menos dañoso el concedérmelos, porque eran tan fuertes y vehementes mis cogitaciones, que consumían más espíritus en un cuarto de hora que el estudio de los libros en cuatro días; y así se redujeron a concedérmelos para elReader leyer y más, Señora mi, que ni aun el sueño se libró de este continuo movimiento de mi imaginativa; antes suele obrar en él más libre y desembaraçada, confiriendo con mayor claridad y sosiego las especies que ha conservado del día, arguyendo, haciendo versos, de que os pudiera hacer un catálogo muy grande, y de algunas razones y delgadezas que he alcanzado dormida mejor que despierta, y las dejo por no cansaros, pues basta lo dicho para que vuestra discreción y transcendencia penetre y se entere perfectamente en todo mi natural y del principio, medios y estado de mis estudios.

Si éstos, Señora, fueran méritos (como los veo por tales celebrar en los hombres), no lo hubieran sido en mí, porque obro necesariamente. Si son culpa, por la misma razón creo que no la he tenido; más, con todo, viví siempre tan desconfiada de mí, que ni en este ni en otra cosa me fío de mi juicio; y así remito la decisión a ese soberano talento, sometiéndome luego a lo que sentenciare, sin contradicción ni repugnancia, pues esto no ha sido más de una simple narración de mi inclinación a las letras.

Confieso también que con ser esto verdad tal que, Como he dicho, no necesitaba de ejemplares, con todo no me han dejado de ayudar los muchos que he leído, así en divinas como en humanas letras. Porque veo a una Débora dando leyes, así en lo militar como en lo político, y gobernando el pueblo donde había tantos varones doctos. Veo una sapientísima reina de Sabá, tan docta que se atreve a tentar con enigmas la sabiduría del mayor de los sabios, sin ser por ello reprendida; antes por ello será juez de los incrédulos. Veo tantas y tan insignes mujeres: unas adornadas del don de profecía, como una Abigail; otras de persuasión, como Ester; otras, de piedad, como Rahab; otras de perseverancia, como Ana, madre de Samuel; y otras infinitas, en otras especies de prendas y virtudes.

Si revuelvo a los gentiles, lo primero que encuentro es con las Sibílitas, elegidas de Dios para profetizar los principales misterios de nuestra Fe; y en tan doctos y elegantes versos que suspenden la admiración. Veo adorar por diosa de las ciencias a una mujer como Minerva, hija del primer Júpiter y maestra de toda la sabiduría de Atenas. Veo una Pola Argentaria, que ayudó a Licano, su marido, a escribir la gran Batalla Farsálica. Veo a la hija del divino Tiríades, más docta que su padre. Veo a una Cenobia, reina de los Palmirenos, tan sabia como valorosa. A una Arete, hija de Aristipo, doctísima. A una Nicostra, inventora de las letras latinas y erudita en las griegas. A una Aspasia Milesia que enseñó filosofía y retórica y fue maestra del filósofo Pericles. A una Hipasia que enseñó astrología y leyó mucho tiempo en Alejandría. A una Leoncia, griega, que escribió contra el filósofo Teofrasto y le convenció. A una Jucia, a una Corina, a una Cornelia; y en fin a toda la gran turba de las que merecieron nombres, ya de griegas, ya de musas, ya de pitonisas; pues todas no fueron más que mujeres doctas, tenidas y celebradas y también veneradas de la antigüedad por tales. Sin otras infinitas, de que están los libros llenos, pues veo aquella esfíncica Catarina, leyendo y convenciendo todas las sabidurías de los sabios de Egipto. Veo una Gertrudis leer, escribir y enseñar. Y para no buscar ejemplos fuera de casa, veo una santísima madre mía, Paula, docta en las lenguas hebrea, griega y latina y aptísima para interpretar las Escrituras. Y qué más que siendo su cronista un Máximo Jerónimo, apenas se hallaba el Santo digno de serlo, pues con aquella vida ponderación y energía eficacia con que sabe explicarse dice: Si todos los miembros de mi cuerpo fuesen lenguas, no bastarían a publicar la sabiduría y virtud de Paula. Las mismas alabanzas le mereció Blesia, viuda; y las mismas la esclarecida virgen Eustocio, hijas ambas de la misma Santa; y la
II. Preface

The purpose of any sensible man’s study should be utility. Those whose character is fundamentally frivolous, and who have no other project except those which seek a reputation without merit, only seek to acquire vague knowledge, and, in wanting to cover too many objects at once, grasp none at all. The universal monarchy is a dream. Even the Alexanders and the Cesars realized it only in context. It is the same with universal talents.

On the contrary, those who are of fortunate birth and whose ambition disposes them to the general good, are driven to develop socially useful tastes. It is this fortunate instinct, fortified by the principles of humanity and charity, that informed the Newtons, the Stahls, the Boerhaaves, the Winslows, the Hallers, and many others who distinguished themselves by their love for the sciences that might be the most advantageous to humanity. They courageously sacrificed the dazzling, frivolous celebrity that passes for universal knowledge, for the happiness of being the benefactors of their contemporaries and the races that follow them. Such a noble and uninterested aim merited so much praise that successes quickly followed, and the homage we pay to these divine men must be all the more flattering to them because it is based on esteem and gratitude.

Yet if it is only appropriate for geniuses of the first order to set their sights on great projects, because they alone are in the position to see the whole extent and grasp all the branches of a system, would it not be possible to follow them from afar, and to venture forward along the path they have laid by their discoveries? So I thought I could cross the barrier that seems to separate the geniuses meant to observe and produce results as enlightening as they are interesting, with the simple historians of the phenomena of nature. I thought that the knowledge of proper substances to delay or accelerate putrefaction was sufficiently important to deserve the omission of the author in favor of the work.

The little research done here has yielded a vast range of observations. Mr. Pringle, the physician of the King’s armies, and almost the only one to focus on this matter, has done a series of significant experiments that he read at the Royal Society of London. However, this excellent work, which proves the profound knowledge of its author and its immense usefulness for everyone who might contribute to perfecting the art of healing, leaves many things to be desired. Mr. Pringle’s many occupations neither allow him to repeat his experiments nor to multiply them, as much as to integrate them into a single whole according to which he could establish a complete theory.

I dare to suggest that he was sometimes mistaken, but it is not surprising that in such a new area error accompanies and often precedes the truth. It is significant to undertake what no one else has attempted; that is what marks the creative genius. Those who follow the route he has ploughed only have the merit of seizing the spirit of their mentor and to have worked according to the outline he has sketched. Accordingly, I flatter myself that Mr. Pringle will not think too badly of me, if I offer facts that escaped him and if my experiments seem to contradict his. The reflective light sometimes has far more clarity than the flame that produces it, and from which it derives its existence. The superiority of the talents of Mr. Pringle, and our common goal, precludes any rivalry.
Extrait de l'Essai pour servir à l'histoire de la putréfaction

MADAME D'ARCONVILLE

i. Épitre dédicatoire à mon ami

C'est à mon ami, c'est à mon maître que j'ose offrir cet ouvrage, quelque peu digne qu'il soit de lui; les deux titres sous lesquels je lui en fais l'hommage me donnent lieu d'espérer qu'il voudra bien lui accorder quelque indulgence. Le premier donne naissance au second; les leçons du maître en deviennent plus efficaces, parce que l'ami m'était cher. L'amour, dit-on, instruit Pan; c'est à lui d'enseigner des arts frivoles comme lui. L'amitié, plus réfléchie et plus solide, n'enseigne que des connaissances utiles, parce qu'elle n'a en vue que l'avantage de l'objet de son attachement. L'amour ne cherche qu'à plaire, mais l'amitié veut rendre heureux. Si je le suis, c'est donc à vous que je le dois; et c'est l'être doublement que de l'être par ce qu'on aime.

ii. Préface

L'étude de tout homme sensé doit toujours avoir l'utilité pour but. Ceux

1. Marie Geneviève Charlotte Thiroux d'Arconville, Essai pour servir à l'histoire de la putréfaction. Par le traducteur des Leçons de chymie de M. Shaw (Paris, Didot le Jeune, 1766); voir la page de titre de l'ouvrage, fig.1, ci-dessous p.159. Nous ne reproduisons que l'épitre dédicatoire et la préface de trente-six pages de cet ouvrage qui en compte par ailleurs 578 et où sont consignées de très nombreuses expériences sur la putréfaction, présentées sous la forme d'un cahier de laboratoire (voir fig.2, ci-dessous p.160). Dans le titre, 'Monsieur Shaw' désigne Peter Shaw (1694-1768), auteur de Chemical lectures (ca 1754), dont la traduction française par Mme d'Arconville sera publiée en 1759, sous le titre Leçons de chymie, propres à perfectionner la physique, le commerce et les arts. Médecin du roi d'Angleterre et membre de la Société royale de Londres, ce chimiste est lui-même le traducteur de plusieurs traités, notamment ceux de Boerhaave et de Stahl.


4. P.i-xxxvi. Sur ce texte, voir E. Bardez, qui observe que, 'dans sa préface, Mme d'Arconville
donne une portée scientifique à l'étude de la chimie car, si elle affiche un 'objectif humanitaire', au-delà, c'est une ambition de chimiste qu'elle affirme ('Madame d'Arconville et les sciences: raison ou résonance?', dans Madame d'Arconville, 1720-1805: une femme de lettres et de sciences au siècle des Lumières, p.47).

5. Louis Antoine Caraccioli, La Grandeur d'Anne (Franfort, Bassompierre et Berghen, 1761), p.297.


7. A propos d'Isaac Newton (1642-1727), rappelons que ses Philosophiae naturalis principia mathematica (1687) ont été traduits en français par Mme du Châtelet et publiés en 1759, dix ans après la mort de celle-ci.

8. Médecin du roi de Prusse Frédéric-Guillaume II, Georg Ernst Stahl (1660-1734) est un chimiste allemand. Il est parmi les premiers scientifiques à distinguer l'alchimie de la chimie, à travers notamment sa théorie de la phlogistique, qu'il exposa dans son œuvre la plus importante, le Traité du soufre ou Remarques sur la dispute qui s'est élevée entre les chimistes au sujet du soufre, tant commun, combustible, ou volatile, que fixe, publié en allemand en 1717 et en français en 1766; il est également l'auteur d'une Zymotechnia fundamentalis, seu fermentationis theorica generalis (1697) qu'aurait pu connaître Mme d'Arconville.

9. Botaniste, médecin et chimiste hollandais, Hermann Boerhaave (1668-1738) est surtout connu pour son enseignement de la médecine, qui valorisait une démarche empiriste. Membre de la Société royale de Londres, il attirait des disciples de toute l'Europe; il a beaucoup publié et on lui doit notamment les Institutiones medicæ (1708).


11. Médecin, physiologiste et botaniste suisse, Albrecht von Haller (1708-1777) est le fondateur de la physiologie neuromusculaire qui distingue l'"irritabilité" de la fibre musculaire de la "sensibilité" des nerfs. Son œuvre principale, les Elementa physiologiae corporis humani, tient en huit volumes qui, partis entre 1757 et 1766, font la somme des connaissances physiologiques de l'époque.

12. La manière dont Mme d'Arconville associe les idées d'utilité sociale, de bienveillance et d'humanité aux grandes figures scientifiques participe d'un mouvement général foncé sur l'éloignement de la figure du savant; voir Jean-Claude Bonnet, Naissance du Positivisme: essai sur le culte des grands hommes (Paris, 1998).

laisse cependant encore plusieurs choses à désirer. Les grandes occupations de M. Pringle ne lui ont pas permis de répéter ses expériences, ni de les multiplier autant qu'il eût été nécessaire pour en former un corps complet, d'après lequel on pût établir une théorie certaine. J'ose même avancer qu'il s'est trompé quelquefois; mais il n'est pas surpris que dans une matière aussi neuve, l'erreur accompagne et souvent même précède la vérité. C'est beaucoup que de s'entendre entreprendre ce qu'aucun autre n'a tenté; c'est ce qui constate le génie créateur. Ceux qui suivent la route qu'il a tracée n'ont même, en la prolongeant, d'autre mérite que celui d'avoir saisi l'esprit de leur maître et d'avoir travaillé au tableau qu'il avait esquissé. D'après cet aveu, je me flatte que M. Pringle ne me saura pas mauvais gré, si je rappelle des faits qui lui ont échappé, et si mes expériences paraissent même quelquefois contredire les siennes. La lumière réfléchie a quelquefois plus de clarté que le flambeau même qui l'a produite, quoiqu'elle lui doive son existence. La supériorité des talents de M. Pringle, et le but que nous nous proposons tous deux, excluent toute rivalité. On ne saurait être jaloux que de ses maîtres ou de ses égaux, et le guide ne saurait en avoir.

L'auteur de la nature, en créant tous les êtres qui composent l'univers, assigna à chacun, selon son genre, des limites qu'il ne passe jamais. Mais quelque distance que nous apercevons entre l'inertie d'un caillou informe et inactif, et le mécanisme merveilleux qui anime les animaux et qui les rend même capables d'une espèce d'éducation, la gradation est si bien observée, et si insensible, que nos faibles yeux distinguent à peine les bornes qui séparent chaque genre. Le règne minéral n'est ni le règne végétal, ni le règne animal. Tout le monde en convient; cependant les plus grands naturalistes sont souvent embarrassés pour assigner précisément le règne dans lequel on doit ranger certains individus. Les observations les plus exactes et les mieux suivies trompent quelquefois les observateurs les plus éclairés et les plus scrupuleux. N'a-t-on pas cru que les coraux, les madrepores, et plusieurs autres productions animales étaient des plantes formées du limon de la mer? (a) L'Illustre voyage qu'il fit sur les côtes de Barbarie, [...] examina le corail avec une plus grande attention et il se convainquit enfin que ces filets qu'on prenait pour des fleurs appartenaient à des animaux' (Pharmacopée du Collège royal des médecins de Londres, t.1, Paris, P. Fr. Didot jeune, 1771, p.112). Sur le débat auquel ont donné lieu les travaux de Jussieu, voir la page suivante du même ouvrage: 'M. Bernard de Jussieu, aussi illustre par ses vertus et sa modestie que par l'imense étendue de ses connaissances qu'il se plaît à communiquer à tous ceux qui veulent s'instruire, a rendu la première découverte due à M. Peyssonnel incontestable par les observations savantes qu'il a faites sur les Productions marines mises au nombre des plantes, et qui sont l'ouvrage des insectes de mer, tels que les polypes, etc.'

(b) Tome I, p.75, 1ère édition. [Il s'agit, en fait, de la deuxième édition de la Relation mentionnée dans la note précédente, dont la 'Lettre V à monseigneur le comte de Pontchartrain' (Amsterdam, aux dépens de la Compagnie, 1718, p.71-86) décrit l'île d'Antiparos et ses grottes; dans la notice que Mme d'Arconville consacrât à Tournefort, elle cite un extrait de cette lettre (voir 'Sur la botanique', p.46-48].

(c) Bourgou est le premier qui a expliqué la formation des stalactites dans un volume in-12, publié en 1729, où il détruit le sentiment de Tournefort sur ces concrétions. Ses premières idées étaient datées de 1714. [Cette note de l'auteur se réfère à Louis Bourgou (1678-1742) et à son ouvrage Lettres philosophiques sur la formation des sels et des cristaux et sur la génération et le mécanisme organique à l'occasion de la pierre bélemnite et de la pierre lenticulaire avec un mémoire sur la théorie de la Terre (Amsterdam, François L'Honoré, 1729).]

14. Botaniste français, Joseph Pitton de Tournefort (1656-1708) fait plusieurs voyages au Levant pour étudier la flore. Dans ses Éléments de botanique ou Méthode pour connaître les plantes (1694), il propose une classification à laquelle on s'est référé jusqu'à nos jours et qu'évoque ailleurs Mme d'Arconville (voir 'Sur la botanique', PRA, vol.9, p.43). Il est l'auteur d'une Relation d'un voyage du Levant (Paris, Imprimerie royale, 1717), ouvrage qui s'ouvre sur un 'Éloge de monseigneur de Tournefort' que l'on doit à Fontenelle et dont s'inspire la notice bibliographique que l'on retrouve dans 'Sur la botanique' (voir Sarah Benharrech, 'L'Anti-Tournefort, ou la botanique d'une paresseuse', ci-dessous p.211-219).
What is fact and what is fiction? This question may be philosophically vexed. Yet, we all feel confident in a day to day kind of way that we know what fact and fiction are, if not always which is which. While the categories of fact and fiction structure how we apprehend the world on a very basic level, much of what we think we know about fact and fiction may be little more than a fiction. First, these categories are historically and culturally specific, ones that are invented as we understand them sometime during the seventeenth century. Second, we have become used to thinking that what separates a lie from the truth, literature from science, is a question of content. The right dates and data can transform romance into history or alter a valid report into a scientific fraud. Literature is fiction and science is fact. Yet, as we shall see throughout this study, early modern writers recognize how knowledge involves form as well as content. The early modern period is an age of discovery: these discoveries include not simply new knowledge but new definitions of knowledge. For early modern writers, the existence of science depends on the possibility of fiction; literature acquires meaning and validity against the framework of fact. Early modern imaginative literature and experimental science are inventions of a startling new attention to knowledge: they represent new ways of thinking, new understandings of how man could create knowledge, and new ways of writing that try to recreate those ideas for readers.

Critics of the early modern period have recognized how closely allied the “inventions” of literature are with those of science. Recent studies consider how literature and science, both as systems of thought and writing forms, intersect in the early modern period. These studies concentrate primarily on tracing a single idea or discipline of thought through a variety of texts. […] What is needed, though, is a more complete sense not of what ideas people had but of the intellectual grounds that allowed them to have those ideas in the first place. […] What these texts demonstrate is that early modern science is practiced as an art and, at the same time, that imaginative literature provides a form for producing knowledge. Within this framework, literary texts become more than just topical commentaries on new scientific discoveries or intellectually (but not truly scientifically) interesting examples of the cultural work that literature might produce in the face of changing scientific knowledge. It is not just that fiction serves as a (more or less accurate) record of, as John Donne puts it, how the “new philosophy calls all in doubt.” Rather, literary texts gain substance and intelligibility by being considered as instances of early modern knowledge production. Early modern fiction needs to be looked at as more than just a kind of repository for new facts or errors. By the same token, scientific texts are not just realized through various literary devices or narrative and rhetorical forms. Scholars in science studies have concentrated on the rhetorical strategies and metaphoric devices of early modern scientific texts, but I will suggest that works in early modern science and philosophy do not align themselves with early modern poetry because of the ways in which they are written. Rather, science maintains strong affiliations with poetic fictions because, in ways that are rarely acknowledged, its practice emerges out of a central understanding of art as a basis for producing knowledge. A belief in the made rather than the found character of early modern knowledge unites poets and natural scientists.
Rather than thinking about the “constructedness of knowledge” simply as a social fact, I instead see Renaissance literature and science beginning in aesthetic acts – forms of “making” that are congruent with Sidney’s definition of the poet as a “maker.” This emphasis on making not only identifies a common ground between literature and science as early modern knowledge practices, it also makes clear how important readers are since, within this framework, knowledge cannot be simply given to readers but must in some way be produced by them. The end of poetic making that is fiction is the making of the reader.

These arguments are not limited to fictional creations: similar claims are at the heart of the works of Gilbert, Kepler, Galileo, and Hooke. Even as early modern science increasingly moves towards an emphasis on scientific practices such as experimentation, scientific texts continue to need to create experience precisely as a way of creating knowledge for readers. Scientists who call for observation and experiment work to find ways to produce knowledge for readers. What we may see, though, as a gap between scientific practice and scientific writing is one that early modern scientists instead understand as an extension of the acts of making, representation, and imitation that comprise their scientific practice. William Gilbert crafts globe-shaped magnets to create a “world” of virtue in his magnets and, as a model, for virtue he sees in England and his readers; William Harvey uses a generative theory of art to explain how ideas can be made for readers; Galileo and Hooke structure their texts to make reading into a form of perception that mimics the optic enhancements of the telescope and microscope. Readers bring together a dual emphasis on practice and form to the extent that reading is almost never simply understood as the acquisition of facts (dates, data) but rather as an act of doing or becoming that is achieved through the experience in some way provided by the text (modeling, repeating, verifying). That is, reading becomes an extension of the intellectual practices and creative acts that underlie texts. These acts of making knowledge in and through readers are part of a larger cultural history of authorship and reading in the early modern period. Such histories begin with the “making” that connects the intellectual acts of scientific practice and imaginative fiction to the forms in which they are written, published, and read.

The purpose of this anthology is to bring the material, specifically the materiality of the human body and the natural world, into the forefront of feminist theory and practice. This is no small matter indeed, and we expect this collection to spark intense debate. Materiality, particularly that of bodies and natures, has long been an extraordinarily volatile site for feminist theory—so volatile, in fact, that the guiding rule of procedure for most contemporary feminisms requires that one distance oneself as much as possible from the tainted realm of materiality by taking refuge within culture, discourse, and language. Our thesis is that feminist theory is at an impasse caused by the contemporary linguistic turn in feminist thought. With the advent of postmodernism and poststructuralism, many feminists have turned their attention to social constructionist models. They have focused on the role of language in the constitution of social reality, demonstrating that discursive practices constitute the social position of women. They have engaged in productive and wide-ranging analyses and deconstructions of the concepts that define and derogate women.

The turn to the linguistic and discursive has been enormously productive for feminism. It has fostered complex analyses of the interconnections between power, knowledge, subjectivity, and language. It has allowed feminists to understand gender from a new and fruitful perspective. … The strength of postmodern feminism is to reveal that since its inception, Western thought has been structured by a series of gendered dichotomies. Postmodern feminists have argued that the male/female dichotomy informs all the dichotomies that ground Western thought: culture/nature, mind/body, subject/object, rational/emotional, and countless others. Postmodern feminists have further argued that it is imperative not to move from one side of the dichotomy to the other, to reverse the privileging of concepts, but to deconstruct the dichotomy itself, to move to an understanding that does not rest on oppositions. Feminist theory and practice have been significantly enriched by these postmodern insights. … But it is now apparent that the move to the linguistic, particularly in its postmodern variant, has serious liabilities as well as advantages. … Although postmoderns claim to reject all dichotomies, there is one dichotomy that they appear to embrace almost without question: language/reality. Perhaps due to its centrality in modernist thought, postmodernists are very uncomfortable with the concept of the real or the material. Whereas the epistemology of modernism is grounded in objective access to a real/natural world, postmodernists argue that the real/material is entirely constituted by language; what we call the real is a product of language and has its reality only in language. In their zeal to reject the modernist grounding in the material, postmoderns have turned to the discursive pole as the exclusive source of the constitution of nature, society, and reality. Far from deconstructing the dichotomies of language/reality or culture/nature, they have rejected one side and embraced the other. Even though many social constructionist theories grant the existence of material reality, that reality is often posited as a realm entirely separate from that of language, discourse, and culture. This
presumption of separation has meant, in practice, that feminist theory and cultural studies have focused almost entirely on the textual, linguistic, and discursive. […]

This retreat from materiality has had serious consequences for feminist theory and practice. Defining materiality, the body, and nature as products of discourse has skewed discussions of these topics. Ironically, although there has been a tremendous outpouring of scholarship on “the body” in the last twenty years, nearly all of the work in this area has been confined to the analysis of discourses about the body. While no one would deny the ongoing importance of discursive critique and rearticulation for feminist scholarship and feminist politics, the discursive realm is nearly always constituted so as to foreclose attention to lived, material bodies and evolving corporeal practices. An emerging group of feminist theorists of the body are arguing, however, that we need a way to talk about the materiality of the body as itself an active, sometimes recalcitrant, force. Women have bodies; these bodies have pain as well as pleasure. They also have diseases that are subject to medical interventions that may or may not cure those bodies. We need a way to talk about these bodies and the materiality they inhabit. Focusing exclusively on representations, ideology, and discourse excludes lived experience, corporeal practice, and biological substance from consideration. It makes it nearly impossible for feminism to engage with medicine or science in innovative, productive, or affirmative ways—the only path available is the well-worn path of critique.

One of the most significant areas of discontent within feminism is feminist science studies. Initially, feminist critiques of science focused on the androcentrism of science—the masculine constructions, perspectives, and epistemologies that structure scientific practice. Following the social studies of science, feminists argued that scientific concepts constitute the reality they study, that science, like all other human activities, is a social construction. Despite the persuasiveness of this position, however, questions began to arise about the viability of this approach. Feminist and other critics of science began to explore alternative approaches that bring the material back into science without losing the insights of social constructionism. … Our intent in this anthology is to address the dis-ease in contemporary feminist theory and practice that has resulted from the loss of the material. But our intervention in this debate is a very specific one. … We have sought theorists who do not simply lament the loss of the material but, rather, attempt to formulate approaches that address this problem. … A central element of that attempt, however, is to build on rather than abandon the lessons learned in the linguistic turn. The new settlement we are seeking is not a return to modernism. Rather, it accomplishes what the postmoderns failed to do: a deconstruction of the material/discursive dichotomy that retains both elements without privileging either. … The most daunting aspect of such projects is to radically rethink materiality, the very “stuff” of bodies and natures. The innovative work of these theorists and many others constitutes what we are calling the “material turn” in feminist theory, a wave of feminist theory that is taking matter seriously.
I began this project with a simple curiosity about what recipes from the past could tell us about early modern culture. From previous research, I knew that early English recipes were a nodal point for attracting consumers to join an increasingly complicated global commerce system, [and] that people then, as now, used recipes to define social standing, national identity, and racialized categories. But what I had not yet understood, and what this book attempts to bring to light, were the intellectual components involved in the creation, exchange, and use of a type of writing that we now consider distinctly unlearned.

As I discovered a vast and understudied archive of English manuscript and printed collections produced between 1570 and roughly 1750, I began to dream up new and more specific questions: How could a recipe function simultaneously as scientific experiment and poetic exercise of wit? How might a recipe’s mode of commemoration intersect with its use as a writing exercise pad for learning skills that crossed paper and food? How did recipes open doors so that people could reflect on concepts such as “knowledge,” “wit,” “literacy,” “taste,” and “time” even as they went about their everyday labors? In what precise ways did housewives contemplate figuration, natural philosophy, memory, and matter itself, even as they seemingly conformed to traditional and presumptively passive norms of female behavior? What did recipes allow people to explore, think, do, consider, make, and taste (in its meaning of “sample”) in the early modern period?

“The cook must be neither a madman nor a simpleton,” wrote Maestro Martino in a fifteenth-century Italian cookery book, “but he must have a great brain.” In this book I argue that early English recipes constituted and now bear witness to a rich and previously unacknowledged literate and brainy domestic culture, one in which women were predominantly, though not exclusively, involved. In scribal and print communities, recipe users circulated forms of fantasy and processed modes of thought that now appear to us to rest at the intersection of physiology, gastronomy, decorum, knowledge production, and labor. As I researched this book, it seemed to me more than incidental that the crafting and use of manuscript recipes involved the very “mechanic” skills taught in the collections themselves—how to sharpen a quill, make ink, inscribe meanings into surfaces, “read” by putting a hand to material, and experimentally test abstract notions. As Sara Pennell and Michelle DiMeo observe, “studying recipes helps to reinvest those quotidian activities of making, maintaining and mending with the significance they carried for early modern householders.” To my mind, these materials make legible the striking fusion of mental and manual early modern activities that lay at the core of domestic work. The recipe archive thus points us toward a highly substantial and practical mode of thinking concocted out of embodied action and textual engagement.

Previous investigations of recipes have tended to be studies of practice, of which the recipe acts as a transparent window onto the past with little regard for the recipe form, its manner of transmission, or its relationship to modes of intellection. Yet the story of recipes expands well beyond the history of puddings and pies, as it opens our view onto a household culture more complex, expansive, and speculative than previous accounts have acknowledged. Recipes, that is, tell a story in which what counts as “food,”
“writing,” “taste,” “nature,” “letters,” “matter,” and “knowledge” are all profoundly in question and, as I shall argue, in flux. It is a story that adds domestic experiences to scholarship that has defamiliarized and historicized the very practice of early modern “reading,” in part by taking seriously the materiality of representation.

Even as they functioned as sites of theoretical exploration, recipes also crossed households and other social spaces in ways that show us that domesticity was not a “private” sphere opposed to some reified public domain. Recipes were transit points that actively created and defined knowledge communities and networks of association. Exchanged as displays of skill, recipes could behave as forms of currency for moving up in the world and as tools for conspicuous acts of social and personal definition. Handed down to future generations as bequests or presented as tokens of affection, they were paper registers of bonds between people remote in time or space. While a recipe could provide a simple personal memorandum for workers in a kitchen, it was also simultaneously an assertion of existence (“I am here”) and a community “message board” (or, in today’s terms, a wiki) that collated responses and opinions for others to view. In fact, the term used in the early modern period, the receipt as opposed to our modern word recipe, signified this mobility and communal function: from the Latin recipere, meaning “to take back or receive,” the receipt recorded a transaction. It functioned as what Pennell and DiMeo describe as a “palimpsest: the self and communities in ‘conversation.’”

We might start with a signature feature of recipes: they are founded on the transformation of natural elements into “made” worlds—through labor, contrivance, artifice, techne. They exist at the cusp of the movement from nature to art, from shapeless materia to cultural product, from the raw to the cooked. In their content, manner of address, format, and mode of exchange, recipes raised pointed questions about the stakes and meaning of that transformation; that is, they probed what it meant to be a maker, knower, creator, artist, artificer, worker, and preserver in early modern terms and within spaces that included the domus. I see the recipe genre, itself a striking syntactical and formal structure, as thus providing a case study for mapping domestic engagements with the intellectual and philosophical conundrums that emerged at the center of humanist thought in the Renaissance, a time in which poetry (poiesis) was understood as the art of “making,” and scientific experimentation was taking place in artisans’ shops as well as academies. Recipes asked readers outside formal sites of education to reflect on how something called “nature” was to be positioned in relation to the artifactual; they demanded that practitioners think about how and when to put natural materials in and out of time and how to evidence “truth.” Reading and writing recipes, that is, offered practitioners the occasion for undertaking and scrutinizing nothing less than world making.