

Introduction

The Change of Fourteen Years

There lies all the braine worke.

— John Marston, *Parasitaster, or The Fawne* (1606)

When early moderns described their minds as changed, stuck, or drawn away, they were not just thinking metaphorically. They understood cognition as a material phenomenon. The external senses delivered perceptual impressions to the brain, where the animal spirits concocted there carried them through it to be shaped, judged, and stored. The principle mental faculties (imagination, understanding, and memory) were only as robust as the body in which that brain was embedded, and, together, they were all subject to the vagaries of an individual's temperament and the environmental factors that daily altered it. At the same time, the force of one's cognitive activities could trigger responses that extended beyond the porous brain, working with the heart and humors to produce passions within the body, but also affecting matter (human and otherwise) beyond the permeable envelope of the skin.¹ Thanks to the recent turn in early modern studies to theories of embodied cognition, we are now alert to these reciprocal conditions.² The editors of a foundational collection on the subject mark this critical shift with the “re-cognised” term *body-mind*, which captures “the embodied, enactive, dynamic, and distributed” quality of these activities.³

Early modern scholars from a range of sub-disciplines have embraced this model, combining it with their individual specialties to create dynamic theoretical networks in the past decade. The result has been an inspired outpouring of studies that have reimagined the body-mind's participation in everything from religious communities and theatrical spaces to ecological and posthuman phenomena.⁴ But as scholars move forward in their discoveries of these rich, new cognitive worlds, they consistently leave one category behind: gender. Perhaps they are reluctant to apply potentially restrictive models to this novel interpretive paradigm, one in which

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body-minds interact limitlessly with the world at large regardless of one's sex. This critical avoidance coincides with Valerie Traub's assessment that recent methods in early modern studies "exhibit only sporadic investments in gender." She connects this trend to a general sense in the humanities "of fatigue, particularly in reference to the keyword 'feminist': a feeling of 'been there, done that'."⁵

As a consequence, the early modern female brain has become yesterday's news. When critics do address it, they tend to rely on a familiar narrative about cognitive inferiority based in humoral theories passed down from ancient Greek, Latin, and medieval Arabic commentaries and sources.⁶ According to these classical models and their adaptors, women failed to produce enough heat to keep their bodily fluids efficiently in motion. As a result, the cold female brain failed to concoct the same high-quality animal spirits as men's brains, a deficiency that left their mental processes relatively dysfunctional.⁷

Girls on the verge or in the midst of sexual maturation fare especially poorly when approached from this theoretical perspective. In her study of early modern puberty, Helen King argues that sixteenth-century English beliefs positioned menarche "as the key point of danger for women, a time when their bodies and their minds are equally in turmoil."⁸ Turning to medical accounts, she traces representations of adolescent girls as victims of their bodies. Rather than *ripening*, the common term for healthy female maturation, they potentially retained their menstrual blood and seed (the female equivalent at that time of male sperm) to the point of putrefaction and greensickness. The latter was an alleged disease that early moderns revived from its classical sources and circulated in popular and medical texts alike. Heterosexual intercourse (preferably marital) would relieve both problems, as orgasm and an enlarged genital passageway would release a girl's excess seed and menstrual fluids, respectively. Without this sexual "cure," however, adolescent girls' body-minds potentially succumbed to chaos: the body's putrefied matter produced vapors that could, as one physician declared, "ascend unto the Brain, which disturb the Rational Faculty, and depose it from its throne."⁹

The brain of an unmarried adolescent girl would appear to be doubly endangered, then, yoked as it was to a body that was both humorally inferior *and* sexually mature, yet unrelieved of the excess blood and seed that only intercourse could release. This belief found fictional expression in characters like the delusional, lovesick Jailer's Daughter of William Shakespeare and John Fletcher's *The Two Noble Kinsmen*, a teenager who is seemingly cured of her hallucinations once she is tricked into

having sex – a particularly insidious example of the “pushes” she laments wenches are “driven to / When fifteen once has found us” (2.4.6–7).¹⁰ The physician John Hall, Shakespeare’s son-in-law, diagnosed the Bard’s own fifteen-year-old granddaughter with a uterine pathology that was believed to strike adolescent girls in particular. Elizabeth had been suffering from convulsions of the mouth, but was cured (according to Hall’s notes from January 5, 1624) after he administered pills and unguents to his daughter that brought on her menses: “[B]y this she had great advantage, her Courses being obstructed. . . . After the use of these, the former forme of her mouth and face was restored.”¹¹ One can imagine how Elizabeth, with her distorted visage, looked the part of a madwoman before her father stepped in to restore her body-mind to its proper maidenly form.

Captivating as these stories of teenage pathology may be, they overshadow what this book illuminates: the many popular early modern depictions of adolescent girls’ brainwork as agile and productive. *Brainwork* is not a term commonly used in cognitive theory, nor in early modern studies of embodied cognition. I use it here to emphasize the industrious quality of girls’ mental processes, and to signal my attention to the *mind* part of the body-mind equation. This is a book that minds girls in a few ways. First and foremost, it remembers and attends to them; it also recognizes the value of their thinking *as a whole*. Early moderns understood a mind as both a general abstraction that denoted an individual’s thoughts, inclinations, and desires and as a force that acted on matter. According to this latter understanding, a mind could “beat” upon an image (understood as an object inserted between the eye and the brain), “coin” a song, and even put on someone else’s mind. When I use *mind*, it is to reference one or the other of these concepts, although they often conjoin in important ways – especially when girls’ minds are bound or beaten down to size by the men who control them. I use the term *body-mind* when I want to emphasize the co-dependence of the mind and the body – the porous psychophysionomies that animated early modern beliefs about how humans moved through and experienced their worlds. Finally, I use *brainwork* when analyzing depictions of girls’ mental processes that signal specific cognitive effort, focus, and intention.

This sustained critical attention to girls’ cognition is a necessary counterbalance to the enduring scholarly presumption that early moderns viewed all female psychophysionomies as inferior and damage prone.¹² On the contrary, unlike their older, colder adult versions, girls’ bodies appeared to burst with heat when they experienced the changes that culminated in menarche, a process that early moderns generally keyed to

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age fourteen. This transformation also activated girls' principal mental faculties – imagination, understanding, and memory – in new, largely positive ways. Early modern writers often described the mutual work of these girls' faculties, and the transfer of thoughts and images between and beyond their brains' individual ventricles, where each of the faculties was generally believed to reside. Evidence of this dynamic cognitive movement animates depictions of female adolescence across all kinds of writings – not just medical texts, but philosophical treatises, parenting guides, prayers, poems, prose fiction, mythographies, histories, plays, and autobiographical accounts. By mining representations of this changing brainwork across a variety of genres, I identify a particular vocabulary that early moderns used to endow adolescent girls with cognitive abilities that were distinct to this stage of girlhood.

When the Catholic Englishwoman Mary Ward sat down in 1622 to write the story of her spiritual development, she remembered her teenage self directing her thoughts toward a state of determined mental constancy. In one especially memorable set of episodes, she describes her adolescent brain and body-mind working together to effect her transformation into a servant of God:

When I was about 15 years old I had a religious vocation, which grace, by the mercy of God has been so continuous that not for one moment since then have I had the least thought of embracing a contrary state. . . . I practised much prayer, some few fasts, and some austerities and internal and external mortifications. . . . I delighted in reading spiritual books, . . . and I spent much time by day and sometimes by night in this employment. . . . I had during these years burning desires to be a martyr and my mind for a long time together fixed upon that happy event; the sufferings of the martyrs appeared to me delightful for attaining to so great a good, and my favourite thoughts were how? And when?¹³

Ward animates this anecdote from her girlhood by describing the interactive dynamics of brain, body-mind, and environment that scholars of embodied cognition have brought to our attention: she prays, fasts, reads day and night, and puts her body through a series of mortifications in order to fix her mind on the future martyrdom she imagines for herself. As Ward's autobiography demonstrates, this theoretical model is especially crucial for a study such as this, as it offers a way to see beyond the limited narrative of weak-minded female pathology that I am rethinking and revising. What could adolescent girls perceive, imagine, judge, invent, and remember as they moved through different environments and experiences? What made their minds expand or contract, beat upon images or

coin them? What were their brains imagined to hold and concoct if they were orphans as opposed to monitored daughters, or if they were raised in aristocratic as opposed to common households? In what ways were these girls free to use their brainwork? And why might early moderns have endowed them with these unique cognitive talents?

Theories of embodied cognition inform my questions, but I am also motivated by the work coming out of Girls' Studies, an interdisciplinary field that has grown exponentially over the past decade and that has emerged from both earlier feminist scholarship and, in the case of early modern cultural criticism, studies of childhood. The result has been a welcome recovery of early modern girls' writings and voices; innovative research into the word *girl* itself; and studies of girlhood as a performance of gender.¹⁴ But we have yet to reckon with the story of sick, unhinged body-minds that continues to dominate studies of early modern females, and adolescent girls especially. In focusing on girls' minds and brainwork, I am neither trying to avoid the female body nor to essentialize it. Rather, I am using cognitive theory and early modern beliefs about adolescent body-minds to understand girls' brainwork as a physiological *and* cultural phenomenon. I begin with menarche, but I study how the mental gifts it allegedly bestowed on girls were jointly produced by the early moderns who witnessed, felt, and/or described it. My goal, then, is not to claim that the processes and effects of puberty and adolescence on the female brain are natural or universal, but to identify a stage of girlhood that begins with a biological change and to map out its particular early modern contours.

My argument has two interlocking premises. First, in post-Reformation England, when girls were expected to marry and turn their minds toward husbands, early moderns imagined the stretch of time between age fourteen and marriage as a stage of relative cognitive liberty. Second, these temporarily free and flexible adolescent minds, materially expressed through the newly agile and industrious brainwork brought on by the changes of puberty, seemed boundless in their new-enlivened capabilities. The girls that I analyze – real, fictional, pseudo-historical, and otherwise – harness the powers of their mental faculties in ways that early moderns depicted as unique and expansively engaged. They use their imaginations to see beyond restrictive social codes and envision their futures; with the faculty of understanding, they judge the people and ideas around them and manipulate existing forms to invent new arts and sciences; their memories store up their countries' and their families' histories, and bear witness to individual and communal traumas. Their brains are imagined to take in, assess, judge, and remember what others can't or won't.

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Imagined is the key word here. Throughout this study, I am looking at depictions of girls' brainwork, minds, and body-minds that are deeply embedded in the fantasies, needs, and concerns of their creators. The early modern English writers and translators of the various genres I examine – and the depictions of adolescent cognition that they offer – were all participating at some level in the same dominant cultural debates and disruptions that were informing most early modern English people's experiences, from the everyday to the existential. Some of the most controversial changes, and the ones that are most relevant to my exploration here, include the seismic shifts in England's official religious orientation, and the alterations to daily spiritual practice and belief that these demanded; the increasingly heated, sometimes violent challenges to tyranny and to the God-given nature of kingship; new scientific methods and theories that reimagined the nature of matter, the production of knowledge, and man's place in the universe; debates in philosophical and theological thought about the actions and location of the soul, and the possible role of the imagination and memory in the construction and maintenance of ethical subjectivity; and the persistent anxiety (made more intense with the Protestant emphasis on marriage and procreation) over how to recognize the markers of virginity, chastity, pregnancy, and paternity – and how to wrestle them from the elusive operations of the sexually mature female body-mind.

My belief in the broad impact of these many changes on early modern people's lived experiences informs my methodological commitment to exploring non-literary depictions of adolescent girls in conjunction with literary ones. I am able to uncover a much more robust understanding of how early moderns imagined the adolescent female's cognitive processes and effects – and how these representations connected to particular quakes in England's shifting ideological landscapes – by reading different genres alongside one another, and attending to how they mutually resonate (and how and why they differ). In Chapter 3, for example, I argue that portrayals of daughters' inventive brainwork, which often builds on or surpasses their fathers' arts, dovetail with popular representations of innovation. The figure of Truth, the Daughter of Time, forms a connective tissue between a real physician's call for intellectual progress, the remaking of a pseudo-historical potter's daughter into the inventor of painting, and two Shakespearean girls whose brainwork echoes and amplifies these other daughters' connections to the production of new knowledges. In the same vein, my opening chapter puts depictions of the real fourteen-year-old Mary Glover's allegedly possessed body-mind in conversation with the

almost-fourteen-year-old Juliet Capulet's brainwork to introduce this book's foundational premise: that the changing brainwork of the early modern girl was a lightning rod for some of the period's most vital epistemological debates about the body and soul, faith and salvation, science and nature, God and the material universe – and the place and agency of human perception in the midst of it all.

Sexing the Adolescent Brain

The English mans treasure, a popular anatomy text first published in 1577, includes a typical early modern depiction of the brain's ventricles, faculties, and animating spirits. I quote at length here from the third edition of 1596:

The substance of the Braine is divided into three partes, or ventrikles. . . . And from eache one to other bee issues or passages that are called Meates, through whome passeth the spirite of life to and fro. But here ye shall note that everie Ventrickle is divided into two partes. . . . First in the foremost Ventrickle God hath founded and set the common Wittes, . . . as Hearing, Seeing, Feeling, Smelling, and tasting. And also there is in one parte of this Ventrickle, the vertue that is called Fantasie, and he taketh all the formes or ordinaunces that be disposed of the five Wittes, after the meaning of sensible things: In the other parte of the same Ventrickle is ordeined and founded the Imaginative vertue, the which receiveth of the common Wittes the fourme or shape of sensitive things, as they were received of the common Wittes. . . . In the middest Cell or Ventrickle there is founded and ordeyned the Cogitative or estimative vertue: for he rehearseth, sheweth, declareth, and deemeth those things that bee offered unto him by the other that were spoken of before. In the thirde Ventrickle and last, there is founded and ordeyned the vertue Memorative: in this place is registred and kept those things that are done and spoken with the senses, and keepeth them in his treasure. . . .¹⁵

This description aligns with other popular vernacular representations of the brain, including an early sixteenth-century illustration from a general encyclopedia of knowledge by Gregor Reisch (Figure 0.1). That said, early modern medical texts were an amalgamation of often contradictory ideas from medieval Latin writings influenced by Arabic and Hebrew translations of and commentaries on Aristotle, Galen, and Hippocrates, among others. It was not uncommon for writers to include alternative views on the placement and precise function of each cognitive faculty, and the number of ventricles that housed them.¹⁶ When it came to imagining cognition and displaying it for wider, popular consumption, however, the

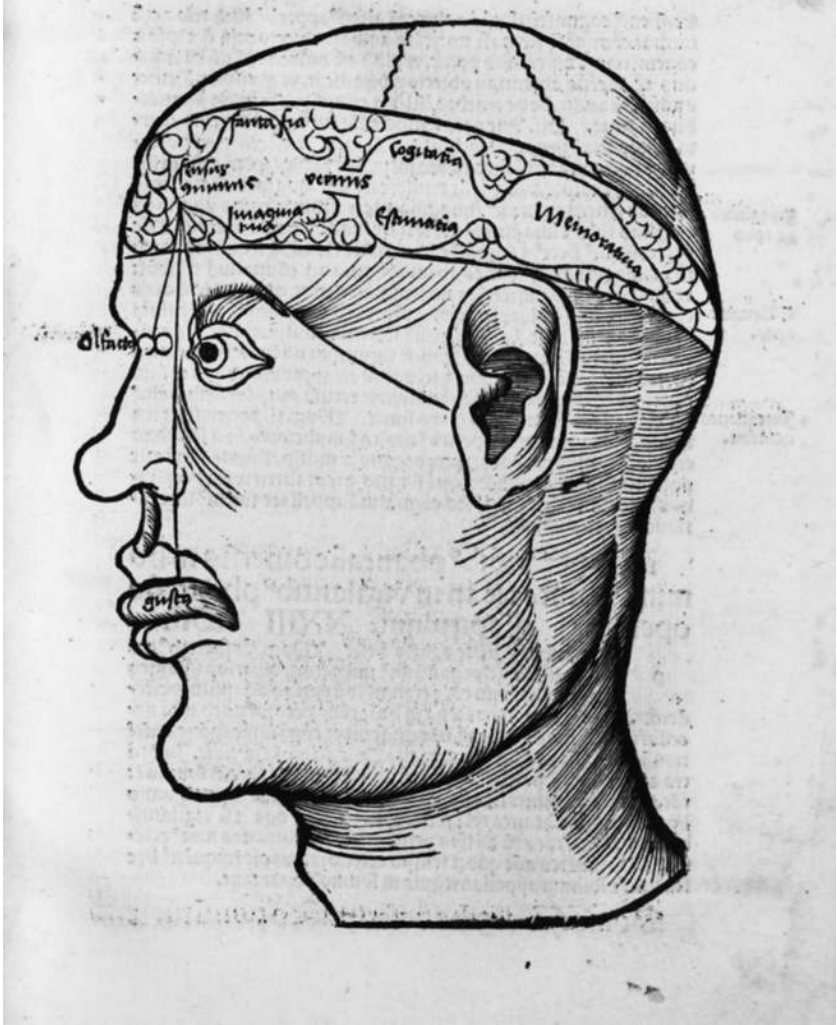


Figure 0.1 The cognitive faculties, from Gregor Reisch, *Margarita philosophica* (1508).
 Courtesy of HathiTrust

general mapping of the brain that we see in Reisch and the later *English mans treasure* remained largely unchanged until the mid-seventeenth century. Although Andreas Vesalius had dissected the human brain and called the ancient theory of ventricular division into question in his influential *De humani corporis fabrica* (1543), for example, he did not offer an alternative theory of cognition.

The English mans treasure was following popular precedent by dividing the brain into three areas, or ventricles, and in placing the principal mental faculties within them. The space of the front ventricle is the most crowded and confusing (a point I return to in Chapter 2): in it, the common wits (also known as the common sense) collect all of the material conveyed to the brain by the five external senses; these images and other sensory material are then passed on, either to the imaginative faculty (which temporarily stores them “as they were received”) or to fantasy (also called “fancy” in the period), a faculty that could manipulate these forms into new shapes. Although there is a distinction here between the functions of imagination and fantasy/fancy, they often blur in early modern discourses – a fact that accounts for the interchangeable use of the terms themselves in the period (although *fancy* was more often associated with youthful imagination).¹⁷ The second ventricle contains the “Cogitative or estimative” faculty, more commonly identified as understanding, and sometimes reason. Its role was to assess the dangers and benefits of the forms delivered to it from the imaginative faculty.¹⁸ The “Memorative virtue,” residing in the rear ventricle, then registered and stored those forms.

In this description, the cognitive faculties appear to work in an ordered, intentional way as they process the forms that the animal spirits carry into each of the brain’s ventricles: they take, receive, rehearse, show, declare, deem, and keep them. Ideally, the brain’s animal spirits move unimpeded “to and fro” through the meaty substance of this brain, facilitating these controlled cognitive processes as they appear here. But in practice (at least as early moderns conceived of it), this mental ecosystem rarely ran smoothly. Factors like diet, climate, sleep habits, and humoral complexion, or temperament, inevitably affected the quality and effectiveness of one’s cognitive operations. In 1605, philosopher and statesman Francis Bacon outlined some of the many inherent and external factors that influenced the “severall Characters of Natures and dispositions”:

Of much like kinde are those impressions of Nature, which are imposed upon the Mind *by the Sex, by the Age, by the Region, by health, and sicknesse, by beauty and deformity, and the like, which are inherent and not externe; and again, those which are caused by extern fortune: as Sovereignty, Nobility, obscure birth, ritches, want, Magistracye, privatenesse, prosperity, adversity, Constant fortune, variable fortune, rising per saltum, per gradus, and the like.*¹⁹

One might be able to move geographical regions, gain riches, and moderate some of the factors associated with health or sickness – and hence some of what Nature “imposed upon the Mind” – but sex and age in particular were beyond one’s control.²⁰

When it came to identifying the gender and age group that was least well equipped to manage these mutable psychophysiological processes and environmental effects, early modern writers of all kinds singled out adolescent boys, not girls. In his description of the seven ages of man, lawyer and poet William Vaughan figures age fourteen as an especially disruptive and illness-prone time for the young male body:

In the fourteenth year proceedeth their stripping age. And betwixt that and the fifteenth year there faller out in the body a tumultuous whurly-burly or wambling commotion of humours, which in some breakes out into scabs or hote watry issues, in others into kindes of agues.²¹

The Dutch physician Levinus Lemnius adds mental disarray to this catalogue of commotions that, in the words of his English translator, rock “yonge Stryplings aboute 14. or 15. yeares of age.” His *Touchstone of complexions* describes this as a “slypperie and daungerous age,” one that threatens the development of adolescent youths into well-ordered adult men: “Neyther are they incited to these immoderate pleasures through reason or any well stayed discretion, but by impotencie of mynde and wylfull affection, digressing and swarvyng from modestye, temperaunce and moderacion: the lack whereof gooleth theyr unstayed heades.” These googled heads and unstable body-minds, which might remain with a male into his twenties, were aggravated by “the boyling of theyr bloude wythin them,” and signified “a shuttle waveryng nature, and a mynde subject to great mutability.”²²

Shakespeare’s twins in *Twelfth Night* provide an exemplary case for investigating how age and gender conjoined to differentiate male and female adolescent cognition. Many of the play’s comic turns hinge on how identical Viola is to her brother, Sebastian. Yet she is distinguished from him in two ways that bear directly on this book’s argument. In the first case, Sebastian tells Antonio that, although his twin “much resembled” him, Viola “bore a mind that envy could not but call fair” (2.1.21, 24–25). Her mind is not just fair, however; it is actively focused from the start of the play on shaping her present situation and her future. When she washes up on the shores of Illyria, she hatches a plan to conceal herself as a eunuch and serve Count Orsino: “For such disguise,” she hopes, “shall become / The form of my intent” (1.2.50–51). She enlists the Captain to help her, and tells him to “shape thou thy silence to my wit” (1.2.57). Viola uses the vocabulary of cognition to make her intent and wit the primary forces around which things (her disguise) and people (the Captain) will shape themselves. And she imagines that this distributive