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Davis, Isabel (2019) The experimental conception hospital: dating pregnancy and the gothic imagination. *Social History of Medicine* 32 (4), pp. 773-798. ISSN 0951-631X.

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The Experimental Conception Hospital: Dating Pregnancy and the Gothic Imagination

Isabel Davis*

Summary. The Experimental Conception Hospital is a fictional laboratory described in a note by Robert Lyall on the medical evidence given in the Gardner Peerage dispute (1825–26). This fantasy institution would discover the natural length of human gestation and ascertain from when and what to date conception, calculations which eluded the House of Lords Peerage Committee which heard the case. This article introduces the Gardner case and Lyall’s writing about it, focusing on the Gothicism which emerges particularly in relation to the perceived secrecy of the female reproductive body. By considering Lyall’s Experimental Conception Hospital alongside three other technologies—the Panopticon, the hot air balloon and anatomical drawings of the gravid uterus—this article discovers the anachronistic persistence of supposedly out-dated modes of thoughts around female sexuality and reproductive biology in an apparently hyper-modern moment.

Keywords: gestation; conception; Gothicism; women’s secrets; Gardner Peerage

Introduction

We recommend that a spacious building shall be immediately erected, in a healthy site, in the environs of this metropolis, which shall be surrounded by walls at least 100 feet in height;—that all aeronauts shall be forbidden from approaching the same edifice upon pain of death;—that no males, except *the privileged*, shall have admission;—that it shall be put under the care of a proper number of virtuous matrons selected from nunneries;—and that the whole shall be governed by monastic regulations. This superb establishment shall be nominated, the EXPERIMENTAL CONCEPTION HOSPITAL, in coincidence with its destination.¹

So begins an elaborate science fiction fantasy developed in a single footnote in a commentary by Robert Lyall on the medical evidence presented at the Gardner cause, heard before the House of Lords Peerage Committee in 1825–26. The cause concerned the disputed baronetcy of Gardner and revolved around a case of adulterine bastardy; could the Gardner title, and associated properties, pass over a child born during a marriage but widely understood to be the child of an adulterous liaison? Robert Lyall, who had

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¹Robert Lyall, *The Medical Evidence Relative to the Duration of Human Pregnancy as Given in the Gardner Peerage Cause before the Committee for*

Privileges of the House of Lords in 1825–26 (London: Burgess and Hill, 1826), xvii, n. Subsequent quotations will be cited by page number in the text.

practised as a surgeon in Scotland and as a personal physician in Russia, published a pamphlet on the medical evidence in the Gardner case because it frustrated him; he gave it as a status report on the failures of modern medical science.² The idea of the Experimental Conception Hospital was devised to think around the problem at the heart of the dispute: of determining, precisely, the length of human gestation, a calculation which foundered on the difficulty of diagnosing early pregnancy. This essay introduces the Gardner case, Lyall's writing on it and his idea of the hospital, which have so far gone unnoticed in modern scholarship. After offering an account of the Gardner case in the first part of this essay, I turn to Lyall's writing more particularly, using it as evidence for a thriving medievalism flourishing at the limits of early nineteenth-century scientific knowledge, particularly when it confronted female sexuality and reproductive physiology.³

A number of historians have noted the remarkable tenacity of classical and medieval understandings of gynaecology and human reproduction, which travelled under the collective designation 'the secrets of women' and which were carried into the cultural unconscious far beyond the Middle Ages particularly by *Aristotle's Masterpiece*, a seventeenth-century compendium, which was repeatedly reissued through the eighteenth and well into the nineteenth centuries.⁴ Its sub-title, *The Secrets of Nature in the Generation of Man*, as Mary E. Fissell has noted, makes the association with earlier secrets literature explicit.⁵ According to Monica H. Green, through this dense intertextual tradition, an association developed between the uterus and secrecy and not just because the uterus is a hidden internal organ; after all, so are others, like the lungs and the heart.⁶ Green suggests that this corpus of literature, emergent in the twelfth century, moved concern from 'alleviating women's suffering', which preoccupied older gynaecological writing, to 'learning how the female body works as a site of reproduction'.⁷ Katherine Park, considering the early history of Italian anatomy, elaborates that the uterus's reputation for secrecy was built upon its 'identity as the enigmatic space where both life and knowledge began and within which the male seed was mysteriously transmuted into a human child'.⁸ The tradition traded on its antiquity, as the title, *Aristotle's Masterpiece*,

²John H. Appleby, 'Lyall, Robert (1789–1831)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, May 2006, accessed 17 January 2017.

³Two recent scholarly pieces briefly mention the Gardner dispute, neither considers Lyall's commentary. M. A. Crowther and Brenda M. White, 'Medicine, Property and the Law in Britain 1800–1914', *The Historical Journal*, 1998, 31, 853–70, 858; Margot C. Finn, Michael Lobban and Jenny Bourne Taylor, 'Introduction: Spurious Issues', in Finn, Lobban and Taylor, eds, *Legitimacy and Illegitimacy in Nineteenth-Century Law, Literature and History* (Basingstoke: Palgrave Macmillan, 2010), 1–24, 8.

⁴Monica H. Green, 'Secrets of Women', in Margaret Schaus, ed., *Women and Gender in Medieval Europe: An Encyclopaedia* (London: Routledge, 2006), 733–4, 734. Mary E. Fissell, 'Hairy Women and Naked Truths: Gender and the Politics of Knowledge in "Aristotle's Masterpiece"', *William and Mary Quarterly*, 2003, 60,

43–74, 62; Roy Porter and Lesley Hall, *The Facts of Life: The Creation of Sexual Knowledge in Britain 1650–1950* (New Haven, CT: Yale University Press, 1995), 36; Peter Wagner, *Eros Revived: Erotica of the Enlightenment in England and America* (London: Secker & Warburg, 1988), 12.

⁵Fissell, 'Hairy Women and Naked Truths', 62.

⁶Monica H. Green, *Making Women's Medicine Masculine: The Use of Male Authority in Pre-Modern Gynaecology* (Oxford: Oxford University Press, 2008), 218.

⁷Monica H. Green, 'From "Diseases of Women" to "Secrets of Women": The Transformation of Gynecological Literature in the Later Middle Ages', *Journal of Medieval and Early Modern Studies*, 2000, 30, 5–39, 6.

⁸Katherine Park, *The Secrets of Women: Gender, Generation, and the Origins of Human Dissection* (New York: Zone Books, 2010), 34–5.

with which it culminates, suggests, although in fact that work had nothing to do with Aristotle. Part of the appeal of this advice literature was its age, albeit renovated and repackaged for each new generation. As Green writes, 'the effect of medieval habits of reading about women's secrets was permanent'.⁹

The other appeal of the secrets-of-women tradition was its potential to titillate; Fissell and others have noted, for example, the 'mixed messages' in *Aristotle's Masterpiece*, which hovered between medical sexology and erotica.¹⁰ Another kind of erotica, anti-Catholic erotica, has been identified by Diane Long Hoeveler as offering a long pre-history to later 'Gothic Ideology'. In her account, popular anti-Catholic erotica emerged at the Reformation and was buoyed up by the cheapening of print, just as, as Raymond Stephanson and Darren N. Wagner amongst others have noted, the gynaecological secrets tradition was.¹¹ These two different textual traditions both explored fantasies around the female body at the same time as negotiating anxieties about the medieval past. Erotic writing, then, provides a meeting place for the medical and the Gothic before the Romantic 'Gothic Revival', offering evidence for an unbroken, although mutating tradition of curiosity about female sexuality and reproductive physiology.¹²

In this essay I explore how that persistence took effect in one particular case. I do not suggest that Lyall directly read material from the Middle Ages or, for that matter, sexual and anti-catholic writing, although it is likely that he did these last two. Lyall's commentary demonstrates, however, his astonishment and frustration at the long reach of old books. Yet, despite that frustration, his work turns to the past and sometimes particularly the medieval past, albeit as it was dreamed of in the Gothic imagination, when facing the questions raised by the Gardner case, as if such a turn were an instinctive reflex. Whilst the phrase 'the Gothic Imagination' in my title evokes literary modes, my interest is in how that imagination energised a dilemma in medical jurisprudence. The imaginative forms which are particularly associated with Gothic novels are not confined to them and, whilst I refer briefly to novels here, and whilst I am fully concerned with fictive form, this is not primarily a discussion of literary materials as they are usually understood. In this way, this article adds to the interdisciplinary conclusions of scholars, such as Corinna Wagner, Paul Youngquist and James Robert Allard, whose work on medical writing understands it to be embedded rather than at a remove from other cultural modes.¹³ The fact that Gothic novels were particularly concerned with women may of course have aided the continuity and amplified the significance of gynaecological text transmission. Scientific knowledge about conception and gestation was entangled with

⁹Green, *Making Women's Medicine Masculine*, 244.

¹⁰See, for example, Fissell, 'Hairy Women and Naked Truths', 63 and 73–4.

¹¹Diane Long Hoeveler: *The Gothic Ideology: Religious Hysteria and Anti-Catholicism in British Popular Fiction 1780–1880* (Cardiff: University of Wales Press, 2014), for example 6–7, 10, 28–40. Raymond Stephanson and Darren N. Wagner, 'Introduction', in Raymond Stephanson and Darren N. Wagner, eds, *The Secrets of Generation: Reproduction in the Long Eighteenth Century* (Toronto: University of Toronto Press, 2015), 3–33, 6.

¹²For an account of the Gothic Revival see for example, Clare A. Simmons, 'Romantic Medievalism', in Louise D'Arcens, ed., *The Cambridge Companion to Medievalism* (Cambridge: Cambridge University Press, 2016), 103–18, *passim*.

¹³Corinna Wagner, *Pathological Bodies: Medicine and Political Culture* (Berkeley: University of California Press, 2013); Paul Youngquist, *Monstrosities: Bodies and British Romanticism* (Minneapolis: University of Minneapolis Press, 2003); James Robert Allard, *Romanticism, Medicine, and the Poet's Body* (Aldershot: Ashgate: 2007).

female secrecy and subjectivity and, because these were subjects so prominently explored in Gothic literature set in or associated with the medieval past, they were perceived to apply an anachronistic drag on scientific progress. In order to test the extent of this disruptive anachronistic influence, I consider the Experimental Conception Hospital in relation to three other technologies: the Panopticon, the hot air balloon and anatomical understandings of the gravid uterus. All these relied on or enabled new sightlines or ways of looking. In contrast, the question which concerns Robert Lyall cannot be resolved visually and, as such, is described as cloaked in darkness and secrecy. I will show that, although Lyall's Experimental Conception Hospital is an apparently modern laboratory which proposes to wall off the present from history, the laboratory conditions that Lyall sets out readmit the spectre of the past, broadly clothed in medieval dress, to walk through that wall. Furthermore, I suggest that this readmission contests the claims of other technologies to be wholly modern, exposing the limits of sight and demonstrating the persistence of supposedly out-dated habits of thought and particularly on the issue of the inscrutability of female reproductive anatomy.

In a letter which Lyall wrote to *The Lancet* some months after the publication of his pamphlet he tells the strange medieval tale of the 'Windsor Immaculate' which, as we shall see, shares some similarities with the Gardner case. The case concerned a lady, Lyall writes, who was 'unwell' and whose principal symptom was a swelling abdomen.¹⁴ She maintained and was prepared to swear an affidavit before a magistrate to the effect 'that she had never known man'. She was 'frequently examined per vaginam, and at various periods' but doctors were unsure and divided. Some said she was pregnant and others that she was not; one treated her for a 'peculiar kind of dropsy'. As time went on, several changed their minds. However, '[t]hree weeks afterwards a fine, stout, healthy child made its *debut* upon the bed, to the *astonishment* of the pure virgin'. Lyall's parodic miracle tale is full of ironic italicisation—as is his pamphlet on the Gardner cause—pointing up its impossibility. Finally Lyall addresses the people of Windsor, advising them that

if they play their cards well, *The Windsor Immaculate* may distinguish the Royal Burgh, and may become a source of great wealth by the number of visitors who will be induced to visit so wonderful a phenomenon in the 19th century.

This is a vision of the Middle Ages in which unregulated pilgrimage routes and shrines spring up in relation to popularly-reported miracles associated with female bodies. The idea of the holy virgin is the obvious but unspoken contrast to the Windsor Immaculate who 'had even the effrontery to come to London, and to be examined oftener than once'; Lyall is exasperated that empirical evidence cannot be gathered in this case. Female opacity, Lyall asserts, represents the main obstacle facing scientific learning in this field.

Unwittingly Lyall's evocation of the holy female body returns to the medieval scene which, as Katherine Park has described, provoked early autopsy practices and a similar desire for empirical truth in the face of corporeal mystery.¹⁵ However, the sceptical tone

¹⁴Robert Lyall, Letters, *The Lancet*, 19 August 1826, 10, 659–61, 661. Quotations from this letter in the following two paragraphs are from the same page.

¹⁵Park, *Secrets of Women*, e.g. 35.

of Lyall's tale from Windsor presents a modern front, rejecting women's accounts of their bodily experience and sexual histories as medieval. Lyall says at the end of his letter, that the matter will not be decided 'by the experience of the *past*, but may be determined by *future* researches' and he looks to that future by inaugurating a mass-observation research project, asking *The Lancet's* professional male readers to send him their notes, and particularly 'such details as could be verified by oath, or at least, as have been made with the utmost attention and care'. At the end of his description of the Experimental Conception Hospital, Lyall extends that research project, bringing it even closer to home:

Let all medical men, especially just after marriage, carefully note the results of their '*private practice*', *i.e.* the cases of their own wives, and, in time, a mass of really useful knowledge will be accumulated, from which general conclusions might be drawn. (p. xvii n.)

His ambition, then, is to produce a set of procedures for dating pregnancy which transcend women's embodied knowledge and which might be used objectively to determine right parentage. However, the rest of Lyall's writing on the Gardner case and its physiological puzzles points up the impossibility of removing women and their own estimations of their conditions from the field of study. The separation between modernity and pre-modernity is thus very hard to police and the prospect of finding a clearly modern scientific practice, untroubled by apparently older forms of knowledge—that is, women's secrets—is a faint hope.

The Gardner Case

The Gardner peerage cause (1825–26) and the divorce case that preceded it (1804–05) were sensational. The servants' testimony was full of revelations about clandestine comings and goings, unlocked doors, disrupted bedroom arrangements, and a hidden pregnancy, all of which were avidly reported in the press. As well as the evidence of domestic dysfunction, the peerage committee heard strange and contradictory medical testimony. The Lord Chancellor, commenting on another later case which also concerned a disputed pregnancy, remarked that 'it would take much to surprise him after what he had heard on the case of the Gardner Peerage'.¹⁶

The peerage of Gardner had been in abeyance since the death of the second baron, Lord (previously Captain) Alan Hyde Gardner, in 1816.¹⁷ There were two potential claimants to the title, sons of Lord Gardner's two wives. The elder, Henry Fenton Jadis alias Gardner, was born on 8 December 1802 to Alan Hyde Gardner's first wife, Maria Elizabeth Gardner née Adderley; the younger son, named Alan like his father, was born in 1810 to his second wife. Gardner divorced his first wife in 1805, when Henry was nearly three. Gardner acceded to his title sometime afterwards. The presumption in law was that a child born during a marriage was legitimate; the legal maxim was: *pater est quem nuptiae demonstrant* [marriage points to him who is the father].¹⁸ In a Scottish case recent to the Gardner dispute, Lord President Blair who presided summarised the

¹⁶Law Intelligence, *The Morning Post*, 25 January 1827.

¹⁷The facts are described in Lyall, *Medical Evidence*, iv–v.

¹⁸Denis Le Marchant, *Report on the Proceedings of the House of Lords on the Claims to the Barony of Gardner* (London: H. Butterworth, 1828), 349.

logic behind the presumption: a child's 'birth is a fact that may be proved by witnesses, but the conception is a fact which never can be proved'.¹⁹ The difficulty of diagnosing early pregnancy meant that children like Henry Jadis were usually made the heirs of their mother's husband regardless of blood and biology.

However, Blair added, 'the presumption must no doubt give way to the fact, wherever a kind of impossibility of intercourse between the parties is proved', opening the possibility of exceptions to the general rule.²⁰ Evidence given during the Gardner divorce proceedings seemed starkly to rule out the possibility of Henry Jadis's blood legitimacy and so his rights to the Gardner title and properties. Indeed, the divorce settlement accepted that Mrs Gardner had been adulterous with a man also called Henry Jadis and declared her son illegitimate.²¹ There had also been a decision in the Court of Pleas in 1804, awarding Gardner £1000 in damages from Jadis.

The peerage cause was heard in response to a petition brought by the guardians of Gardner's second son. His petition should have been a foregone conclusion but, against expectations, it was contested by Henry Jadis, now grown from a child into a young man. If Henry were Gardner's son he must either have gestated for 311 or 150 days, time frames worked out in relation to the dates Captain Gardner sailed for the West Indies in the ship, the *Resolution*; the log book was brought out as proof for the peerage committee. Convincing testimony was given by men on the *Resolution*, which dated the couple's conjugal visits in relation to sailing, pay day and other events on board. For example, Captain Gardner's servant, James Jennings, testified to the 'general satisfaction' that Mrs Gardner's visit to the ship on 10 January 1802 had not coincided with the execution of nine men for mutiny, just two days before.²²

Nineteen medical witnesses were called to give evidence at the peerage cause—two female midwives and 17 male. Lyall counts only 17 because he ignores the evidence of the female midwives, Mary Ann Farrell and Mary Tungate. Whilst Farrell was commenting on her own pregnancies and so might be counted in with another six lay women called as witnesses, Tungate was asked about and answered on her case load. Unanimously the medical experts, male and female, rejected or were not asked about the possibility of a 150-day gestation. On the longer length of 311 days, five testified that a gestation of that length was impossible, that 'human utero-gestation was limited to about nine calendar months' (p. viii) and that Henry could not be Gardner's child. Fourteen testified otherwise, to the outside possibility that he could, 'that pregnancy might be protracted to nine and a half, ten or eleven calendar months' (p. viii). The committee heard from seven women about their own previous, and in one case current, pregnancies, including the midwife Mary Ann Farrell. The picture these witnesses collectively drew was far from clear; pregnancy was frustratingly ambiguous, difficult to diagnose and date.²³ Indeed, the more evidence that was brought before the committee, the

¹⁹*Ibid.*, 348–9.

²⁰*Ibid.*, 350.

²¹*Gardner v Gardner*, 13 May 1805, 9, HL/PO/JO/10/8/82 Parliamentary archives, London. Where evidence is in Lyall's commentary, I cite it from there. Otherwise, I have used the manuscript evidence. Le Marchant prints the Gardner evidence, including the

non-medical evidence, but often abridges and paraphrases.

²²*Gardner Peerage Cause* 19 May 1825, 16–17, HL/PO/JO/10/8/711 Parliamentary archives, London.

²³See, for this ambiguity, Cathy McClive, 'The Hidden Truths of the Belly: The Uncertainties of Pregnancy in

less certain the case became. In the letter Lyall wrote to *The Lancet*, he referred to the Gardner medical evidence as a 'great abortion', as if the case itself were a pregnancy that might have gestated and delivered good scientific knowledge but, instead, miscarried.²⁴

Eventually the peerage case was determined in favour of Alan Gardner, the claimant, on the non-medical evidence and, in particular, Maria Gardner's attempt to conceal her pregnancy. When Captain Gardner had returned from the West Indies, in July 1802, Mrs Gardner openly declared she was pregnant. He was attentive, buying supplies of linen ready for the birth from Abrams of Houndsditch where he ordered sea stores for the *Resolution*.²⁵ He was concerned about her when her carriage overturned one day because of her pregnant condition.²⁶ But they slept in different rooms; Mrs Gardner told her husband there was a risk of miscarriage.²⁷ But, as the pregnancy went on, Mrs Gardner confided in her lady's maid, Susanna Baker, that she was worried that 'the child couldn't be brought in on time' to be considered her husband's son.²⁸ She went out in her carriage and rode fast over the cobbles to try to bring on the labour.²⁹ When that did not work, she told people that she was not pregnant but suffering from an illness which she had mixed up with pregnancy, a 'dropsical' condition, which manifested as spasms 'occasioned by obstructions'.³⁰ This was her new reason for not sleeping in the same room as her husband. Servants testified in the divorce proceedings that she continued her affair with Jadis throughout this time.³¹

When she went into labour, as various servants deposed, Mrs Gardner had arranged for her brother to take her husband on a two-day outing. After delivery, the child was wrapped up and taken to a wet nurse, a Mrs Bailey living in Swallow Street. Baker testified that it was 'took out secretly' but did not remember, when cross-examined, how secretly, whether its 'face was peeping through the flannel', whether it was carried like a 'child, a bundle of linen, or a parcel'.³² Mrs Gardner visited the child at Bailey's house and was sometimes accompanied by her brother and, at other times, by a man disguised 'in a large great coat and large handkerchief bound around his mouth'.³³ In July 1803, some eight months after Henry was born, a servant told Captain Gardner about the birth and his wife's infidelity for the first time, precipitating the couple's separation.³⁴ After the Gardners' divorce, Mrs Gardner married Henry Jadis and Jadis acknowledged the child. 'Did he caress the Child and treat it as his own', Susanna Baker was asked in court; '[y]es he did', she said.³⁵

Early Modern Europe', *The Social History of Medicine*, 2002, 15, 209–27, e.g. 210.

²⁴Lyall, *Lancet*, 661.

²⁵Gardner Peerage Cause, 6 June 1825, 13, HL/PO/JO/10/8/711 Parliamentary archives, London.

²⁶*Ibid.*, 8–9.

²⁷*Gardner v Gardner*, 13 May 1805, HL/PO/JO/10/8/82 Parliamentary archives, London.

²⁸Gardner Peerage Cause, 2 June 1825, 57, HL/PO/JO/10/8/711 Parliamentary archives, London.

²⁹*Ibid.*, 58.

³⁰*Ibid.*, 53 and Gardner Peerage Cause, 6 June 1825, 19, HL/PO/JO/10/8/711 Parliamentary archives, London; *Gardner v Gardner* 1804, fols 22r, HL/PO/

JO/10/8/82 Parliamentary archives, London. For a discussion of the confusion between dropsy and pregnancy, see Sally Frampton, 'Diseased Ovaries in Eighteenth-Century Medicine', in Stephanson and Wagner, eds, *The Secrets of Generation*, 344–63, 352.

³¹*Gardner v Gardner* 1804, fols 24r-v, HL/PO/JO/10/8/82 Parliamentary archives, London.

³²Gardner Peerage Cause, 2 June 1825, 68, HL/PO/JO/10/8/711 Parliamentary archives, London.

³³*Ibid.*, 6 June 1825, 36.

³⁴*Ibid.*, 9 June 1825, 5.

³⁵*Ibid.*, 2 June 1825, 79.

Counsel for Jadis, Mr Tindal, unsuccessfully argued that none of this mattered; the case, he said, hung on the 'abstract physiological question whether a child could be born within the period assumed for its birth from the access of the father'.³⁶ Mrs Gardner's actions, although they suggested that she *believed* her son to be Jadis's, did not definitively prove that he was not Gardner's. After all, Mrs Gardner might have been wrong. Tindal said he had only to

find one case where it [i.e. a pregnancy] has been protracted to [311 days] and even to a longer time. If I can find only one in which it has been protracted to nearly that time—If I can find several in which it has far exceeded the ordinary period of 280 days, I insist upon it that is evidence of the fact in contradiction to all the Theory and all the judgement of the best medical men called on the other side.³⁷

When any example was presented of a lengthy gestation, more evidence was sought. The committee wanted names, dates, written proofs. So, for example, one woman, Sarah Mitchell, said that she had a very similar situation.³⁸ She fell pregnant by her husband who then went off to sea. Her evidence was thought so compelling as to reprise the case in the next parliamentary session and after the other evidence had been printed; it was too late to go into Lyall's pamphlet, too. However, the court got the log book from her husband's ship, the *Galatea*: she had misremembered the dates and what was a woman's memory to the naval records of the British Empire?³⁹

Dating Pregnancy in the Modern Inspection House

Lyall is exasperated by the variety of ways that the Gardner witnesses referred to gestational time, sometimes talking in lunar months, sometimes calendar months and sometimes weeks. Sometimes witnesses suggested, and this irritates him the most, that nine calendar months *is* 40 weeks, although there is a difference of some five to eight days. Not only does he point out this discrepancy in his pamphlet, in his later *Lancet* letter he further remarks that: 'the more I think of, and read on this subject, the more am I persuaded of the necessity of attention to it'.⁴⁰ Furthermore, each of the medical witnesses had their own way of determining when and from what to begin calculating pregnancy. Lyall lists them as:

- (1) Certain Peculiar Sensations experienced by some females at the time of conception, or within a few hours, or a day, or two or more days after the coitus, which was succeeded by impregnation.
- (2) The Cessation of the Catamenia.
- (3) The Period of Quickening.
- (4) A Single Coitus.

Lyall, like some of the Gardner witnesses, is particularly unhappy about number two because it leaves a yawning four-week window, during which conception could happen. Furthermore, there were many documented cases of women who did not menstruate

³⁶*Ibid.*, 20 June 1825, 41.

³⁷*Ibid.*, 23 June 1825, 25.

³⁸Gardner Peerage Cause, 16 March 1826, 3–20, HL/PO/JO/10/8/744 Parliamentary archives, London.

³⁹*Ibid.*, 23 March 1826, 1–2.

⁴⁰Lyall, *Lancet*, 661.

becoming pregnant and, on the other hand, of women bleeding throughout a pregnancy. Other witnesses dated gestation from quickening, number three on this list: the moment when the motion of the foetus is felt. Again, this is a pretty imprecise event, being different in different women and, worse in Lyall's view, relying on women's impressions of their own bodies; 'the force of imagination, may readily impose on the woman herself' (p. xvi), he notes. Others felt they knew the exact time of gestation from those cases where there was only one act of intercourse, number four. These witnesses were aggressively cross-examined about the reliability of female witnesses who were unhappily pregnant. They would say that they only had intercourse once, after all.

That leaves only 'Certain Peculiar Sensations', number one on Lyall's list; these were mentioned by a number of witnesses. Some were referring to female orgasm and the idea that it was a sign of conception; others talked about a peculiar sensation some days after sex. Witnesses discussed many possible relationships between menstruation, sexual intercourse, orgasm and conception. Because of these relationships, Lyall, citing a medical law textbook, speculates as to whether conception could really be described as 'the work of a moment or not', as it was sometimes perceived to be (p. ix). Lyall tries to imagine what this peculiar sensation might be like, 'the sting of a wasp, or like the bite of some other insects', as if he would like to feel the keenness of the effect for himself (p. ix). The shifting time frame evident in the anaphoric 'or' in the list itself—'at the time of conception, or within a few hours, or a day, or two or more days'—indicates the problem: this dating event was the most mysterious of the four and did not stand up to forensic scrutiny. Because of these dating difficulties, those who testified to the possibility of prolonged gestation could never produce the killer proof, the one verified protracted case that Jadis's counsel was looking for, but they cast enough doubt to leave the issue bewilderingly unsettled.

The Experimental Conception Hospital is thought up in relation to number four in Lyall's list: the single act of coitus. Robert Gooch, one of the Gardner witnesses, noted that 'ordinary cases', by which he meant the conceptions of 'married people [that] commonly live together, having constant access and frequent intercourse' (p. 16), 'are not strict experiments' (p. 20). In contrast, as Lyall notes, a pregnancy resulting from one act of intercourse held out the prospect of a proper scientific study, if only it could be somehow isolated and investigated objectively, free of women's mendacity, ignorance or misguidedness. Lyall is everywhere suspicious of women's testimony, which is shown in his disregard for the evidence of the female midwives. Indeed, he says that he considered leaving all the female witnesses' depositions out of his book, only including them in the interests of comprehensiveness (p. 86 n.). In Lyall's view, women are generally not credible and, when responding to questions about sexual morality, they are particularly deceptive: 'women, when even in the pangs of labour, have denied that they have ever been subjected to sexual intercourse—so much for the veracity of the sex' (p. 6 n.). The Experimental Conception Hospital is a fantasy about freeing the law from women's flawed reporting of pregnancy by means of an experiment to engineer the conditions that could promote the single sexual act into a valid dating event.

Lyall prefaces his plan for the Hospital with the following disclaimer:

We should be glad the following proposal, which was communicated by way of *jeu d'esprit*, when the Gardner Peerage Cause was exciting great attention, could be

carried into execution. But religion, morality, and decency equally forbid it, supposing it were practicable.

Lyll suggests here that the plan for the Experimental Conception Hospital is not of his own devising. He elliptically refers to its having come up during the case and sets it in quotation marks. I have not found it, though, in the transcripts of the cause, the printed evidence or in the newspaper reports on proceedings. A contemporary review of Lyll's pamphlet in *The Lancet*, which singles out the experiment for special mention, assumes that it is Lyll's own invention, whatever he says.⁴¹

By dismissing the idea for the Hospital as mere '*jeu d'esprit*' and by consciously setting it beyond the limits of religion, morality and decency, Lyll gives himself licence to imagine. Into his hospital, Lyll proposes to incarcerate 'fifty virgins, between the age of fourteen and forty-five, and ... fifty unmarried women, who may have borne children, between the age of fifteen and forty-five'. These women will receive 'physic and consolation', as he euphemistically refers to sexual intercourse, during a 'single nocturnal visit' from one of 10 'most distinguished healthy physician-accoucheurs of London, between the age of twenty and fifty'. *The Lancet* reviewer is astonished by the sexual athleticism the Hospital requires of these visitors:

We shall pass on to the following *jeu d'esprit*, which certainly does him [i.e. Lyll] infinite credit. One would wonder, indeed, how an idea so wholly unprecedented, so far surpassing the conceptions of ordinary mortals, should have entered his head; but he has travelled much, and doubtless has seen many wonderful things.
...

*Fifty virgins, and fifty unmarried women, in all 100 souls,—just five virgins and five women for each accoucher's 'operations,' 'during a single nocturnal visit!' Labor ipse voluptas, may be truly said; but we are apt to believe that few practitioners carry about them enough of 'physic and consolation' to dispense the Doctor's prescription.*⁴²

The reviewer assumes that the 'single nocturnal visit' refers to the experience of each physician-accoucheur, rather than one of the female inmates, missing Lyll's investment in the 'single coitus' and magnifying the male sexual feat that the Hospital represents. Indeed the review considers the proposition wholly from a male perspective, worrying about the physical capacities of the Hospital's visitors, rather than showing any concern for the resident visited. In doing so it pokes fun at Lyll's masculine pretensions, 'he has travelled much, and doubtless seen many wonderful things'. The review thus strips the polite veneer from Lyll's prospect, exposing it as sexual fantasy.

That polite veneer in Lyll's plan valorises the 'physician-accoucheur' by describing the Hospital's aims as scientific and civic:

the results of the experiments shall be freely communicated to the world for the advantage of society, and especially for the purpose of affording our good British

⁴¹Anonymous, *The Lancet*, 3 June 1826, 10:144, 289–300, 291. ⁴²*Ibid.*, 291.

Parliament sure data upon which they shall be able to construct precise and just laws with regard to the legitimacy or illegitimacy of all children born in these realms, after the year 1830.

The obvious point of comparison for Lyall's Experimental Conception Hospital is, of course, Jeremy Bentham's Panopticon. Whilst prisons were the headline institutions which could be systematically reformed by panopticism, in his *Panopticon Writings* (1787) Bentham also included discussions of other institutions: asylums, workhouses, factories, hospitals and schools. Lyall's fantasy institution shares many features with this expansive idea of the Modern Inspection House. Lyall's Hospital is nominated an 'experiment', a word which Bentham uses regularly, along with 'elaboratory', to describe the Panopticon.⁴³ Like a Panopticon, the Experimental Conception Hospital is established on scientific principles and works to produce what Michel Foucault has described as 'docile bodies'.⁴⁴ These bodies are to be disciplined through supervision built into the Hospital's architecture. The projected purpose of Lyall's institution is a meticulous record of bodily reproductive processes of the kind that was unavailable in the Gardner peerage cause: '[t]he clerk of the hospital—one of the matrons of course—shall keep an exact register of all operations'. With a similar emphasis upon process, when Bentham moves from discussion of prisons to hospitals he notes how the inspection principle, adapted to strip out the 'severe and coercive measures' suitable for a prison, could guarantee the accuracy of medical regimens for the sick in hospitals, bringing all staff into a considered and precise system which would administer a prescription exactly as the presiding medic required.⁴⁵ Although he accepts that the Experimental Conception Hospital is a fantasy, an accurate register is what Lyall hopes will come out of his pamphlet. Elsewhere in his commentary he is adamant that the Gardner case necessitates a new

register of cases carefully kept by practitioners of veracity,—there must be no trusting to memory, or to second hand details: facts must be ascertained from women themselves, and only from such women as have a good moral character, or credence cannot be given to their statements (p. iv).

Lyall's hospital is, of course, different from Bentham's and indeed others in that it is established not to cure its inmates but, instead, to produce knowledge that will advance medical jurisprudence in cases of contested paternity. In that sense, it looks more like one of the other institutions which Bentham treats, a factory perhaps, producing scientific knowledge. Yet, of all the institutions reimagined in Panoptical terms by Bentham, Lyall's hospital most resembles the girls' school. When Bentham speculates on the application of the inspection principle to schools, in the final letter of the *Panopticon Writings*, he, like Lyall, uses the phrase 'jeu d'esprit', undercutting his proposal from the start.⁴⁶ By doing so, Bentham is able to enjoy a humorous extension to his plan which shares some

⁴³Jeremy Bentham, *The Panopticon Writings*, ed. Miran Božovič (London: Verso, 1995), e.g. 33, 44 and 91. For a discussion of the word 'elaboratory' in Bentham's *Panopticon Writings*, see Peter Otto, *Multiplying Worlds: Romanticism, Modernity and the Emergence of Virtual Reality* (Oxford: Oxford University Press, 2011), 57.

⁴⁴Michel Foucault, *Discipline and Punish: The Birth of the Prison*, Alan Sheridan (trans) (London: Penguin, 1991), e.g. 137–8.

⁴⁵Bentham, *Panopticon Writings*, 82.

⁴⁶*Ibid.*, 33.

interesting similarities to Lyall's. For boys, Bentham answers the charge that a school run on the inspection principle would indeed turn out docile bodies: soldiers or monks rather than free citizens, machines rather than men. He answers dryly: '[c]all them soldiers, call them monks, call them machines: so they were but happy ones, I should not care'.⁴⁷ Bentham's thoughts become more elaborate, however, when he turns to the question of how girls would fare in such an institution. Bentham notes that Jean-Jacques Rousseau disliked an institutional education for his 'natural man', Emile, but approved of it for Emile's eventual wife, Sophia.⁴⁸ For Rousseau this gender difference was to do with the importance of social opinion in socialising young women into the virtue which will ensure right paternity: "'What will people think" is the grave of a man's virtue and the throne of a woman's', he says, recommending boarding schools and convents, for girls, whilst rejecting institutions as disfiguring for boys.⁴⁹ Bentham takes this preference for social scrutiny quite literally in his speculation about the panoptical girls' school and the possibility of ensuring and enculturating feminine virtue through visibility and observation. Bentham says his building, run on the principles of scientific modernity, will make the folkloric virginity tests, which may have been relied on in the past, defunct.⁵⁰

In her response to Rousseau on the desirability of an institutional education for girls, Mary Wollstonecraft takes the opposite view, fearing that 'nurseries, schools or convents' spoil girls, making them less not more virtuous. She writes:

Secrets are told—where silence ought to reign; and that regard to cleanliness, which some religious sects have, perhaps, carried too far, especially the Essenes, amongst the Jews, by making that an insult to God which is only an insult to humanity, is violated in a brutal manner. How can DELICATE Women obtrude on notice that part of the animal economy, which is so very disgusting?⁵¹

As Tom Furniss points out in his analysis of this passage, the bodily parts and processes hinted at here are not named.⁵² In this way, Wollstonecraft herself keeps those secrets she says should not be shared even amongst women. With her reference to ritual purity in Jewish Law, she is clearly referring to menstruation and, however elusively, identifies it as a synecdoche for women's secrets. Although her reference is to the ancient world, nonetheless she signals her distaste for any discussion of menstrual health—of which the secrets-of-women literature was the most prominent example—which she describes as a 'brutal' violation of women's privacy. Here Wollstonecraft demonstrates the irritation with anatomical and biological accounts of womanhood which Paul Youngquist sees in her work. In particular Youngquist finds Wollstonecraft 'asserting the agency of mother flesh, not in the hidden recesses of gestation where anatomy stakes its claim to know the secret all of women's bodies, but in the open habits of affection where women affirm

⁴⁷*Ibid.*, 89.

⁴⁸*Ibid.*, 90.

⁴⁹Rousseau, *Émile*, Barbara Foxley (trans) (London: J. M. Dent, 1911 reprinted 1955), 328.

⁵⁰Bentham, *Panopticon Writings*, 90.

⁵¹Mary Wollstonecraft, *A Vindication of the Rights of Woman; A Vindication of the Rights of Woman; An*

Historical and Moral View of the French Revolution, ed. Janet Todd (Oxford: Oxford University Press, 1993), 204–5.

⁵²Tom Furniss, 'Nasty Tricks and Tropes: Sexuality and Language in Mary Wollstonecraft's *Rights of Woman*', *Studies in Romanticism*, 1993, 32, 177–209, 202–3.

their vitality'.⁵³ In Wollstonecraft's quotation above she is not thinking of anatomy, of course, but rather of girls 'shut up' in institutions together. Yet she similarly rejects a lurid and invasive habit of revealing or discussing women's intimate anatomical and bodily functions, which she pins to the secrets-of-women tradition. Thus Wollstonecraft understands all-female institutions as extensions to, or promoters of popular secrets writing. Read in Wollstonecraft's terms, then, Lyall and Bentham's proposals, for all their claim to modernity, fall in line with a reinvigorated but nonetheless very old *curiositas* about women's sexual biology.

Characteristically Michel Foucault, in his discussion of Bentham's plans for schools, ignores questions of gender and sexuality. Foucault never mentions the differences that Bentham drew between the sexes and the possibilities the Panopticon held out, especially for girls' education. Rousseau had specifically identified ensured paternity as 'a fresh motive for duty and propriety, which prescribes to women in particular the most scrupulous attention to their conduct, their manners and their behaviour' and it is this 'motive' which Bentham gives as a reason for using the Panopticon in the design of girls' schools, where none exists for the education of boys.⁵⁴ Although Bentham is writing, as he says, in the spirit of play—he worries, for example, that his girls' school might put the brothels out of business, starving them of recruits—he has a greater curiosity about and produces a more intricate plan for the education of girls than for boys.⁵⁵ His is a joke like Lyall's, with an earnest intent, thinking through a problem which was perceived as real.

Corinna Wagner, in her analysis of anxieties surrounding late eighteenth-century anatomy, has described the perceived convergence of erotic Gothic modes and scientific detachment.⁵⁶ A similar effect can be seen in Bentham's and Lyall's *jeux d'esprit*. Bentham's idea is about preventing female sexual misconduct by watching for it and, thus, an erotic frisson attends his imagined girls' school, just as it does in Lyall's fantasy. In his discussion of the Panoptical school, Foucault misses the sexual emphases in Bentham's proposal.⁵⁷ Bentham sets out not only to prove Helvetius' proposition that 'anyone might be taught anything', as Foucault notes, but also to extend an experiment credited to Egyptian pharaoh Psammitichus.⁵⁸ Whilst Psammitichus's experiment, which Foucault elides, was said to prove the naturalness of language, Bentham's redesign seeks to discover, instead, the natural 'language of love', where 'language' might cover bodily gestures and physical acts as much as ways of speaking. Bentham is suggesting the girls' school here as a laboratory which will discover true *sexual* nature. With his *jeu d'esprit*, Bentham, like Lyall, edges into erotica, thinking up science fictions about women confined in institutions. For all the ethical and moral probity that Bentham claims the inspection house will guarantee, it also offers the opportunity for watching women, either alone or with male lovers, albeit for the benefits of science.

In his consideration of boys' schools, Bentham's analogies between monastic austerity, military discipline and mechanical automata imply that he took for granted the good conduct of those within enclosed religious communities. However, elsewhere, Bentham suggests that a Panopticon might sort out the reputed problem of immorality within

⁵³Youngquist, *Monstrosities*, 148.

⁵⁴Rousseau, *Émile*, 325.

⁵⁵Bentham, *Panopticon Writings*, 90.

⁵⁶Wagner, *Pathological Bodies*, 99–111.

⁵⁷Foucault, *Discipline and Punish*, 204.

⁵⁸Bentham, *Panopticon Writings*, 91.

monastic houses.⁵⁹ Lyall's idea betrays a similar, although more aggravated contradiction. On the one hand, his institution puts its trust in staff recruited from convents and subject to monastic *regulae* to guarantee the accuracy of data. On the other, because the experiment requires overseeing a programme of unmarried sex with, indeed the rape of, 100 women, it also conspires with anti-clerical gothic narratives, such as, say, Matthew Lewis's *The Monk* (1796) in which the supposed holiness of members of the religious orders only deepens readers' shock at their many crimes. There is a similar problem with Lyall's experimental subjects, 50 of whom are to be virgins, and the visiting accoucheurs, whose reputations must also be impeccable. The Experimental Conception Hospital thus relies on moral and physical integrity to ensure the results of an experiment which is admittedly built beyond ethical limits.

Bentham is not very interested in history in the *Panopticon Writings*. Indeed, he blames the 'charms of novelty' for his *jeu d'esprit* about schools.⁶⁰ His use of Catholic transubstantiation theology and his discussion of Panoptical monasteries might equally be an engagement with contemporary continental Catholic culture as the medieval past. The Panopticon itself does not cite Gothic architectural forms. Indeed, the building can be open and modern precisely because of its resort to the visibility of Catholic sacramental practice. By figuring the watch tower as monstrosity, the doors of Bentham's modern Inspection House can be flung open, and human action governed through belief in the Real Presence of an inspector.⁶¹ The design of Lyall's hospital, on the other hand, has a more explicitly Gothic cast. Whilst Lyall suggests that the findings of his research will be openly accessible, the experiment itself will be conducted in dark secrecy. There is to be no public observation of the hospital's residents or research methods. The design is principally focused on a high wall. Conversely, Bentham is not concerned with the Panopticon's perimeters: the public and visible nature of its work is its point. The 100-foot-high walls around the Experimental Conception Hospital, in contrast, evoke skyscraping Gothic architecture; contemporary prisons had walls only about a quarter of that height.⁶²

Novels such as Lewis's *The Monk* and Ann Radcliffe's riposte, *The Italian* (1797), offered a contemporary continental Catholic milieu as a substitute for a medieval historical setting. Yet, despite their contemporaneity, they were nonetheless fully Gothic. As Chris Baldick and Robert Mighall have suggested 'Gothic novels were set in the Catholic south because ... Gothic (that is "medieval") practices were believed still to prevail there' and that '[s]uch representations drew upon and reinforced the cultural identity of the middle-class Protestant readership'.⁶³ They argue that, although the heroes of, say, Ann Radcliffe's novels, 'are "modern" types drawn from Richardsonian sentimental fiction, the villains are characteristically archaic, their principal function being to represent the values of benighted antiquity'.⁶⁴ In contrast, in Bentham's *Panopticon Writings* and

⁵⁹*Ibid.*, 93.

⁶⁰*Ibid.*, 33.

⁶¹*Ibid.*, 48.

⁶²For example, Newcastle prison wall, built in 1822, was 25 feet. William White and William Parson, *History, Directory and Gazetteer of the Counties of*

Durham and Northumberland (Durham: W. White, 1848), cxiv.

⁶³Chris Baldick and Robert Mighall, 'Gothic Criticism', in David Punter, ed., *A New Companion to the Gothic*, 2nd edn (Oxford: Wiley Blackwell, 2015), 267–87, 278.

⁶⁴*Ibid.*, 278.

Lyall's Experimental Conception Hospital these relationships between character and history are mixed up. In Lyall's fantasy nothing much is said about the female inmates. They evidently do not receive the dividends which Hoeveler has described returning to the passive victims of gothic plots, as they might in *The Mysteries of Udolpho* (1794), for example.⁶⁵ Whilst Ann Radcliffe inclines readers' affections towards the person, especially the female person, caught up in disputes around inheritance, legitimacy and dynasty—as is Emily St Aubert in *The Mysteries of Udolpho*—Lyall suggests a way to straighten out such disputes without any such regard for the bodies of his female test subjects. At the same time, neither does Lyall allow the reader to look at his female test subjects from the perspective of his male protagonists as, for example, in Lewis's *Monk* where readers, through Ambrosio's eyes, are able to 'remain for some moments devouring those charms . . . , which soon were to be subjected to his ill-regulated passions'.⁶⁶ Whilst Bentham's Panopticon is entirely predicated on vision, exactly what an inspector might see when he looked at the girls in their school quarters is not fully detailed and there is no sense that they are in any jeopardy.

Correspondingly, the jailers and visitors in Lyall's fantasy are cast as good citizen scientists, even though they resort to unethical and sexually predatory conduct, of the kind more associated with villains like Lewis's Ambrosio. Similarly the Panopticon's inspection staff are imagined by Bentham as a benign authority, indeed he proposes the role of inspection is taken up by a family.⁶⁷ Whilst Ambrosio's conduct is not endorsed by the narrative of *The Monk* and he is punished—'[t]he Caves and mountains rang with Ambrosio's shrieks'—in Lyall's vision the physician-accoucheurs and the directors of the Hospital who select and support them will be fêted for their contribution to society (p. xvii).⁶⁸ Lyall himself fantasises about being given a £20,000 reward for dreaming up the plan. Paradoxically, Lyall's staff work for the 'good British [and, of course, Protestant] Parliament', even though they operate in Catholic, conventual structures. In this way both Lyall and Bentham disrupt the Whiggish plot lines that Hoeveler, Baldick and Maghill locate in other contemporary Gothic writing.⁶⁹ They write neither female nor male gothic in the terms set out by critics such as Ellen Moers and Robert Miles, for example, but rather a new scientific Gothic, similar to that explored by Corinna Wagner.⁷⁰

When Lyall borrows the carceral motifs from Gothic fiction, he does not also adopt its baroque prose textures. Instead, like Bentham, Lyall takes on the voice of scientific dispassion, describing an objective quantitative experiment built on mathematical principles. In this way he exhibits the association that Wagner, writing about anatomy and anatomists, has found between 'clinical detachment and . . . voyeuristic desire'.⁷¹ Within this frame, Wagner considers the Marquis de Sade's grotesque versions of the Gothic: the experiments conducted by the doctor Rodin, in *Justine* (1791) for example, which she

⁶⁵Diane Long Hoeveler, 'The Construction of the Female Gothic Posture: Wollstonecraft's *Mary* and Gothic Feminism', *Gothic Studies*, 2004, 6, 30–44, esp. 31.

⁶⁶Matthew Lewis, *The Monk*, ed. Howard Anderson, Nick Groom, rev'd (Oxford: Oxford University Press, 2016), III, I, 232.

⁶⁷Bentham, *Panopticon Writings*, 44.

⁶⁸Lewis, *The Monk*, III, v, 338.

⁶⁹Hoeveler, *The Gothic Ideology*, e.g. 9–10; Baldick and Mighall, 'Gothic Criticism', 278.

⁷⁰Ellen Moers, *Literary Women: The Great Writers* (New York: Doubleday, 1976; rpt Oxford University Press, 1985), e.g. 90; Robert Miles, *Gothic Writing, 1750–1820: A Genealogy* (Manchester: Manchester University Press, 2002), e.g. 56–8 and 81–2. Wagner, *Pathological Bodies*, 100 and 111–12.

⁷¹*Ibid.*, 100.

describes as demonstrating ‘the dangers of scientific enthusiasm’.⁷² Lyall’s version of scientific eroticism coupled with his conventual paradoxes—the hypocritical but scrupulous staff and the violated virgins under their ‘protection’—would indeed be Sadeian except for his use of euphemism. Unlike de Sade, Lyall uses a proliferation of numbers to avoid fully describing the 100 women and the things that are done to them. Otherwise his experiments would perhaps read like the debaucheries tallied in *The One Hundred and Twenty Days of Sodom* (1785, published 1904). ‘I find it odious’, Rodin says in *Justine*, ‘that futile considerations check the progress of science’; the ‘futile considerations’ here brushed aside are the restraints of ‘religion, morality, and decency’ which forbid Lyall’s fantasy hospital any further detail or reality.⁷³

Lyall’s experimental institution cannot, like Bentham’s modern Panopticon, have everything on view, because it necessarily involves sex. Only properly Gothic architecture can supply the laboratory in which such research methods are appropriate. Yet the points of comparison between the Panopticon and Lyall’s more evidently Gothic hospital, reveal the convergence of modern scientism and erotic Gothicism and, so, the pull of the past when faced specifically with the issue of women’s sexual and reproductive bodies.

The Hot Air Balloon and the Uterus Engraved

In Gothic novels, the castles and abbeys in which women are imprisoned are never impenetrable. In Radcliffe’s *Mysteries of Udolpho*, for instance, Monsieur Du Pont helps Emily St Aubert escape from the Castle of Udolpho down a secret staircase which leads to a vaulted passageway.⁷⁴ Lyall worries that his structure is as potentially violable as a building like that and his experiment undone from the start; thus he takes the trouble to issue a ban on all unauthorised men coming or going from the building. Whilst the height of the walls rules out any surveillance from the ground, it does nothing to prevent the Hospital from being overlooked from the air: ‘all aeronauts shall be forbidden from approaching the same edifice upon pain of death’ (p. xvii n.). Balloons often took off from the grounds of hospitals and prisons which offered the advantages of an open space and a perimeter which could house a ticket stall; hospitals were, then, the sorts of buildings that balloonists overlooked.⁷⁵ Yet the bizarre detail about the aeronauts was also, I think, motivated by the fact that balloons were themselves experimental, competing ‘laboratories’, spaces for experiment. From the first, balloon flight offered a chance to resolve many obscurities of the physical world. Balloons were at the forefront of modernity and, in Lyall’s fantasy, not even an impossibly high wall can keep them from over-flying and undoing the work going on in the hospital buildings below.

For the natural philosopher Tiberius Cavallo, writing in the early days of balloon flight in 1785, balloons would remedy the poor state of modern knowledge on altitude: ‘hardly anything’ he wrote, ‘of what passes in the atmosphere is known with precision, and that

⁷²*Ibid.*, 111–12.

⁷³Marquis de Sade, *Three Complete Novels: Justine, Philosophy in the Bedroom, Eugène de Franval and Other Writings*, Richard Seaver and Austryn Wainhouse (trans and ed.) (London: Arrow, 1991), 552.

⁷⁴Anne Radcliffe, *The Mysteries of Udolpho*, Bonamy Dobrée, ed., Terry Castle introduction and notes (Oxford: Oxford University Press, 1998), 449.

⁷⁵Michael R. Lynn, *The Sublime Invention: Ballooning in Europe, 1783–1820* (London: Routledge, 2015), 134.

principally for want of a method of ascending into the atmosphere'.⁷⁶ Cavallo's statement is reminiscent of one from Lyall, in the introduction to his Gardner commentary, although this time about reproductive knowledge: 'we are nearly in the same state, on these points, as were the most ancient fathers of medicine; indeed, in one respect it may be said, that the present investigation [i.e. the Gardner evidence] has added difficulty to the subject' (p. iii). However, between 1785, when Cavallo was writing, and the Gardner cause in 1825–26, aeronauts had been hard at work. Jean Pierre Blanchard, for example, documented a series of experiments he conducted on the first American balloon flight in 1793:

I had been requested by Doctor Glentworth to make experiments in the ethereal regions with a load-stone which he had lent me: on the ground it raised 5 1/2 ounces avoirdupois; but at the aforesaid height it would hardly bear 4 ounces.⁷⁷

Such tests were not unusual and were being done to discover the effects of altitude on all sorts of different substances and processes. Balloonists occupied an enviable position: flying in airy laboratories in which the laws of physics were being tested, they were able to see, not just over the world below them, but also into the properties and nature of things. In contrast, knowledge of a more earth-bound subject, the female reproductive body, was harder to gather. Here was a topic so familiar and near to hand and yet so far from modern understanding.

Balloons also offered an escape route, one which was unavailable to the heroines of novels with historical settings, like *The Mysteries of Udolpho*. Whilst they were enabling discovery and definition of natural phenomena, balloons were making women more, not less difficult to pin down. Frederick Pilon, in a preface to his 1784 play, *Aerostation*, performed at the height of balloon-mania, worries that:

[t]here is no Security now against the bold Aeronaut; he may rob us of our Daughters, and our Wives from our highest Windows and set the fleetest Pursuers at Defiance, who are only able to follow him upon Terra firma.⁷⁸

Furthermore, women were not just passengers or victims waiting to get abducted from upper windows. Female aeronauts, such as Sophie Blanchard and Sophia Stocks, offer a striking contrast to the passive women imagined as inhabitants of the Experimental Conception Hospital.⁷⁹ This was the threat that the balloons represented: a science which helped women fly away and evade scrutiny, rather than being held down and investigated properly; theirs were not docile bodies. Balloons were symbolic of a modernity which, for all its achievements, had notably not produced objective knowledge around conception nor freed British law from the difficulties presented by women like Mrs Gardner.

⁷⁶Tiberius Cavallo, *Treatise on the History and Practice of Aerostation* (1785), cited in Richard Holmes, *Falling Upwards: How We Took to the Air* (London: William Collins, 2014), 26.

⁷⁷From: Jean Pierre Blanchard, *Journal of my Forty-Fifth Ascension, being the first performed in America, on the ninth of January, 1793* (Philadelphia: Charles

Cist, 1793 reprinted Tarrytown: William Abbatt, 1918), 277.

⁷⁸Frederick Pilon, *Aerostation; or, the Templar's Stratagem. A farce, in two acts* (London, 1784), v.

⁷⁹For more on Blanchard and Stocks, see Holmes, *Falling Upwards*, 40–6 and 47–9.

Furthermore, the pregnant uterus was a balloon-like structure, as if to confirm female flightiness. Descriptions stressed its off-ovoid shape and identified buoyancy as its principal property. John Burns, for example, in his *Anatomy of the Gravid Uterus* (1799) describes the impregnated uterus as 'expanding out like a balloon', incrementally 'rising' over the course of the pregnancy.⁸⁰ In his later 1809 *Principles of Midwifery*, Burns considers the uterus to be 'globular' until the fifth month when 'it becomes more oblong, and by the seventh,' he says, 'it resembles a balloon'.⁸¹ His description is in close dialogue with William Hunter's *Anatomical Description of the Human Gravid Uterus* (1794), which laid down similar emphases: 'the uterus rises up from the cavity of the pelvis'; it 'instantly mounts up before the small intestines'; 'the uterus is stopt in its ascent'.⁸² Like a balloon with its ballast and tethers, the uterus rose up or was stopped or directed in its ascent by the variable nature of women's bodies.

Although produced 20 years later, Hunter's *Anatomical Description* accompanied his *Anatomia uteri humani gravidi* (1774), with its arresting engravings by Jan van Rymsdyk which have been so often discussed in critical scholarship. With new sightings of the foetus in situ and of the uterus at different stages of pregnancy, Hunter says that the *Anatomia* is concerned to demonstrate 'the peculiar habit and composition of parts, as well as the outward form, situation and connection of them'.⁸³ Most of the images do indeed show the uterus in its 'situation and connection', whether still lodged in the abdomen or, once removed, attended by trailing ligaments and 'spermatic vessels'.⁸⁴ These were not anomalous; other anatomical images, like van Rymsdyk's for William Smellie's *Anatomical Tables* for example, similarly show the uterus in its relation to the rest of the body.⁸⁵ A few of Hunter's plates, though, do not; these were designed to demonstrate only the 'habit and composition' of the uterus and, in these, connecting tissues and proximate organs cannot be seen. In particular, those plates which represent the uterus turned inside out to show its inner surface and the vessels and fasciculi of the uterine wall (see Figures 1 and 2), necessarily hide the adnexa and other tissues which bind the organ in place. These were less precedented and, although they were thoroughly modern, life drawn from surgically-prepared specimens, they gave the impression of the uterus as an independent organ, reminiscent of the wandering womb of ancient Greek authority, or the extracted vessel-like organ familiar from images of foetal positions and malpresentation at labour in typical depictions from the Middle Ages onwards.⁸⁶ Hunter thus gave a scientifically-verified yet apparently ancient perspective on the gravid uterus. Isolated and detached, these organs float in the space of the page released from their

⁸⁰John Burns, *The Anatomy of the Gravid Uterus* (Glasgow: Glasgow University Press, 1799), 29 and 5–6.

⁸¹John Burns, *The Principles of Midwifery, including the Diseases of Women and Children*, 9th edn (London: Longman, Orme, Brown Green and Longmans, 1837, first published 1809), 195.

⁸²William Hunter, *Anatomical Description of the Human Gravid Uterus, and its contents* (London: J. Johnson and G. Nicol, 1794), 7 and 9.

⁸³William Hunter, *Anatomia uteri humani gravidi tabulis illustrata* (Birmingham: John Baserville, 1774), Preface, unpaginated.

⁸⁴*Ibid.*, e.g. Plate XI.

⁸⁵William Smellie, *A Set of Anatomical Tables* (Edinburgh: Charles Elliot, 1787), Plates V and VI.

⁸⁶On this tradition, see Karen Newman, *Fetal Positions: Individualism, Science and Visuality* (Stanford: Stanford University Press, 1996), 26–33. See also Darren Wagner, 'Visualisations of the Womb through Tropes, Dissection, and Illustration (circa 1660–1774)', in Christina Ionescu, ed., *Book Illustration in the Long Eighteenth Century: Reconfiguring the Visual Periphery of the Text* (Newcastle upon Tyne: Cambridge Scholars, 2011), 541–72, e.g. 560.

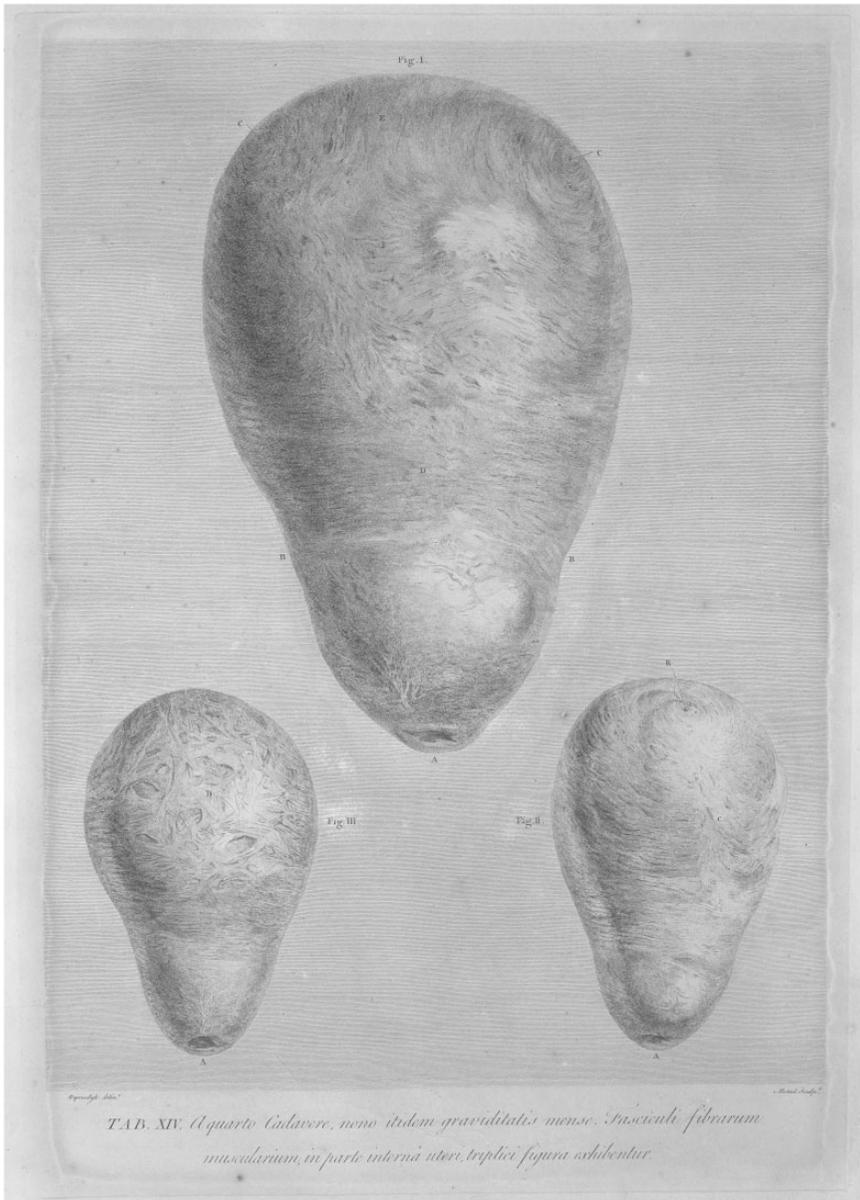


Figure 1. The uterus turned inside out. William Hunter, *Anatomia uteri humani gravidi tabulis illustrata* (Birmingham: John Baserville, 1774), Table XIV. © British Library Board. General Reference Collection 74/1899.r.38.

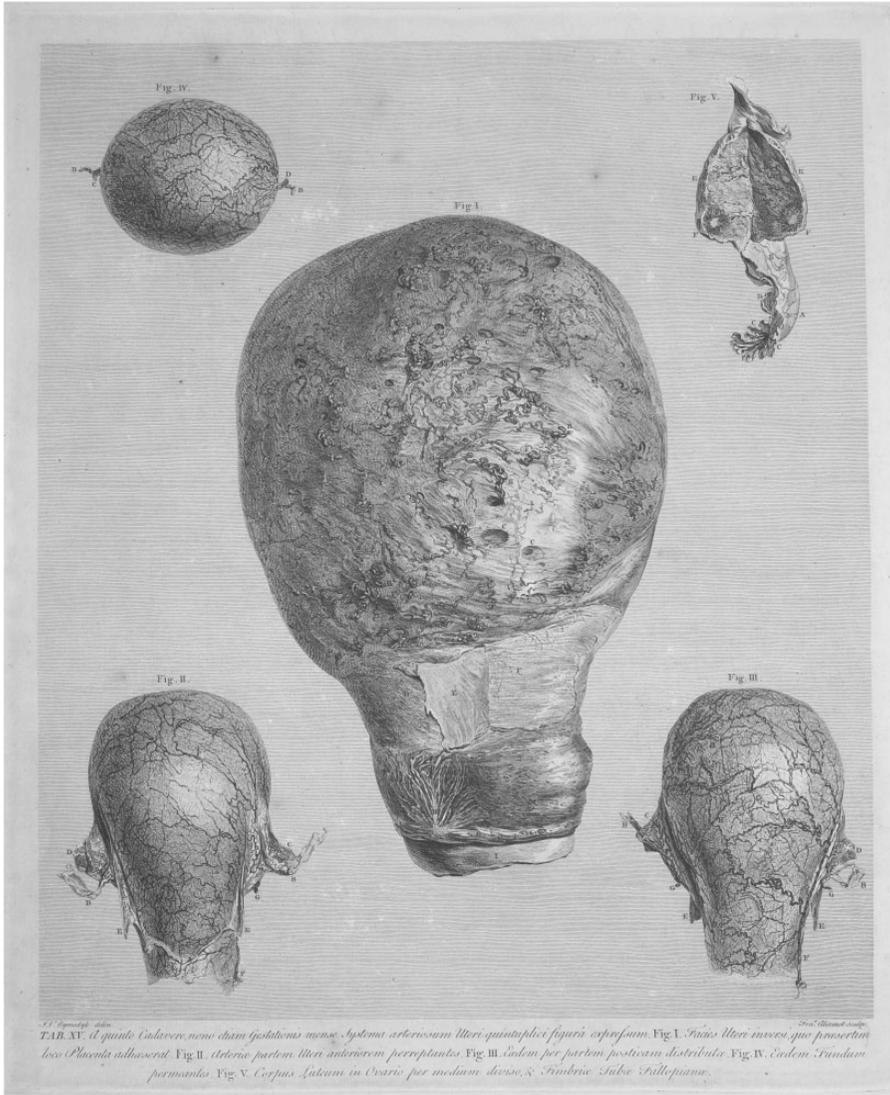


Figure 2. Fig. 1 here shows a uterus turned inside out. William Hunter, *Anatomia uteri humani gravidi tabulis illustrata* (Birmingham: John Baserville, 1774), Table XV. © British Library Board. General Reference Collection 74/1899.r.38.

restraints, rather like the balloons that would take off a decade after these images were published.

If the hot air balloon represented human mastery of the atmosphere, Hunter's work held out the prospect of an equivalent advantage over the female reproductive body. Hunter is the most referred to authority in the Gardner peerage evidence. Those

practitioners who gave evidence that a gestation as long as that proposed for Jadis was impossible, were cross-examined about their respect for Hunter, given that he

observed, that he had *known* a woman bear a living child, in a perfectly natural way, fourteen days later than nine calendar months, and *believed* two women to have been delivered of children alive, in a natural way, above ten calendar months from the hour of conception. (p. xxii)

Witness Charles Mansfield Clarke, for example, argued that Hunter was indeed ‘of great experience and great eminence, much greater than myself’ but that Hunter had ‘never taught that doctrine’ only relaying second-hand accounts of cases of protracted gestation ‘represented to him’ (pp. 6–7). Clarke covered himself further by noting that this ‘branch of medical science’ had considerably ‘matured and improved’ since Hunter’s death, although he offered no examples and was not pressed to by the solicitor for the petitioner, Mr Adams. When he was asked the related question, ‘[w]ithin the last two hundred years, has the stock of medical information upon this branch much increased?’, he was less certain: ‘I hardly know what answer to give to that question’ (p. 8). Another witness, David Davis, whose evidence also supported the petition, was vague in response to a similar question. He was asked: ‘[h]as there been a new light that has burst in upon the world since the old doctors went off?’. His response was non-committal, expressed as a question rather than a statement: ‘[i]n various branches of science there has been, and why should there not be in ours?’ (p. 20) but was unspecific about exactly what light, if any, may have so intervened. The publication of Hunter’s *Anatomia* was some half a century in the past and yet none of the witnesses, whatever their evidence, was prepared to distance themselves from Hunter as ‘a man of experience and more talent than perhaps any body who ever practised midwifery in London’ (p. 19).

The extensive critical literature on Hunter’s *Anatomia* is currently framed by an emphasis upon scientific visuality and naturalism. Martin Kemp, for example, has considered the ‘unvarnished reality’ in Hunter’s work, his ‘unyielding devotion to the “real” object, and to illustrations which carried what Hunter called “the mark of truth”’.⁸⁷ Karen Newman has argued that by removing the drapery which protected the modesty of the female cadaver in anatomical drawings of the foetus in utero, Hunter presented in ‘exorbitant detail’ not so much a woman’s body but, rather, un-mythologised ‘meat’.⁸⁸ Darren N. Wagner, too, has discussed the engravings in Hunter’s *Anatomia* as the culmination of a medico-scientific tradition that was ‘disbanding occultist and folk authority over the womb’, presenting instead ‘[e]mpiricism, objectivity, and technical accuracy’.⁸⁹ In Atlas folio format (25" × 19") to fit its life-size images, the *Anatomia*, as these and other scholars note, made claim to being radically scientific, divested of the baroque aesthetics that had previously attended anatomical representations and the vernacular appeal of secrets literature.

⁸⁷Martin Kemp, “‘The Mark of Truth’: Looking and Learning in Some Anatomical Illustrations from the Renaissance and Eighteenth Century”, in W. F. Bynum and Roy Porter, eds, *Medicine and the Five*

Senses (Cambridge: Cambridge University Press, 1993), 85–121, 116 and 121.

⁸⁸Newman, *Fetal Positions*, 100.

⁸⁹Wagner, ‘Visualisations of the Womb’, 545–6.

Ludmilla Jordanova has discussed the van Rymdyk plates in Hunter's *Anatomia* in relation to anxieties surrounding legitimacy and property rights.⁹⁰ In her reading, 'Hunter's foetuses possessed and confidently inhabited their mother's bodies', taking up all the space of the womb, unlike earlier images of 'preformationist' foetuses which 'lived in a different world, where they seemed lost in the waters of the womb' and 'born into a looser family structure'. Jordanova maintains that the naturalism of Rymdyk's images, with their 'oppressive intimacy between mother and child' insisted on "'correct" blood relationships'. Preformationist depictions aside, lots of other earlier anatomical images of the gravid uterus emphasised attachment between mother and foetus, even if they did so, as Newman notes, in ways which downplayed foetal dependency.⁹¹ Yet, for all their stress on maternal relation, images like these did nothing to change the age-old problem of determining paternity.

Dissection, since its earliest days, had promised to satisfy curiosity about conception and settle anxieties around paternity, but that promise had never been fulfilled. Park, in her study of gender and anatomy in earlier Italian medical writing, has also described this promise:

The precarious nature of fatherhood, and thus of the family itself, centred on the uterus, the dark, inaccessible place where the child's tie with its father was created, its sex determined, and its body shaped.⁹²

It was for this reason that the uterus, she says, took on 'emblematic status as the exemplary object of dissection'; early anatomy was driven, in part, by a desire to solve the mysteries particularly of the female body surrounding conception.⁹³ By the time that Robert Lyall wrote his commentary on the Gardner case, the collision, as Park describes it, between a patriarchal 'emphasis upon paternity' and the 'realities of conception, gestation, and childbirth, all of which foregrounded the mother's contribution to generation and the physical tie between mother and child', was even starker than it had been in quattrocento Italy precisely because of the sophistication of anatomical studies like Hunter's.⁹⁴ Never had that 'dark, inaccessible place', that is the uterus, been so opened to the light of science—to borrow a metaphor from the Gardner evidence—but that light could only illumine what was already uncontested: matrilineage. The moment of conception, the secrets of life or, as the Middle Ages had dubbed them, the secrets of women and any traces of a 'correct' blood relationship between *father* and child were as elusive as ever. The 'oppressive intimacy' between mother and foetus which Jordanova sees in van Rymdyk's *Anatomia* engravings, the sense that the foetus is 'wedged unbearably' into the uterus as Newman describes it, was thus pointedly confounding as much as settling,

⁹⁰Ludmilla Jordanova, *Nature Displayed: Gender, Science and Medicine, 1760–1820* (London: Longman, 1999), 199–200. Other quotations in this paragraph are from the same pages.

⁹¹Newman, *Fetal Positions*, 33. See, for examples of anatomical images which stressed connectedness, Giralamo Fabrizio ab Aquapendente, *Opera anatomica. De formato foetu* (Padua: Meglietti, 1625), fig-

ures 5, 7 and 9. Adriaan van Spiegel and Giulio Caseri, *De formato foetu liber singularis* (Padua: Io. Bap. de Martinis et Livius Pasquatus, 1626). Smellie., *Anatomical Tables*, e.g. Plate IX.

⁹²Park, *Secrets of Women*, 25.

⁹³*Ibid.*, 33.

⁹⁴*Ibid.*, 25.

articulating the limitations of scientific modernity at the very point at which they seemed to have been breached.⁹⁵

James Robert Allard, tracking the rise of medical authority, discusses contemporary observations of the limits of anatomical research, citing Hunter and others on the impossibility of ‘unlocking the mysteries of life’: ‘our Faculties seem confined to certain Limits, beyond which we cannot extend them’.⁹⁶ Indeed, unlike Lyall, Hunter was able, baldly and without demonstrable anxiety, to write a single sentence on the difficulty of identifying conception: ‘[a]t what exact time the foetus of an ovum becomes visible, it is extremely difficult to determine, because it is almost always impossible to ascertain the date of the impregnation’.⁹⁷ Lyall responds to the same impossibility with a contradiction. On the one hand he will not accept it, setting out to ascertain what Hunter could not, making concerted research plans and working towards a single dating convention. On the other, he surrenders to the occultist positions which Wagner suggests were being shaded out by realist anatomical depictions such as Hunter’s.⁹⁸ On meeting the limits of knowledge, Lyall feminises a Burkean concept of sublime Nature, making it a capricious feminine principle, certainly able to eject babies prematurely despite their being ‘loath to resign so snug a situation’ and possibly also to detain them for longer. Nature, he writes:

will not be limited by the opinions of man—she will not recognize human laws—she often delights in secrecy—she triumphs over the physiologist and the philosopher, by the incomprehensibility of her works, and by showing him his nothingness in the scale of her operations. (p. xxiii)

The problem of women’s deceptiveness is writ large in Lyall’s personification: Nature resists the inquiries of masculine medical jurisprudence. ‘The stupendousness and the infinitude of . . . [Nature’s] works’, Lyall writes, ‘are beyond the comprehension of the mind of man’ (p. xxiii). In this way, all his work to agree terminologies and counting practices is potentially purposeless. The word ‘secrecy’ in this quotation sees Lyall implicitly working around the issues *Aristotle’s Masterpiece* purported to have—although evidently had not—resolved, as pointed up by its subtitle *The Secrets of Nature in the Generation of Man*. For all his concern about introducing modern precision calculations, in the end Lyall resigns himself to a more traditional, indeed Gothic position and the impossibility of exactitude in relation to pregnancy.

Lyall’s thoughts on Nature in the quotation above are connected to a reflection on the statement, which he quotes from a textbook of medical jurisprudence, that a ‘physiologist in the time of Avicenna (i.e. c. 980–1037) . . . declared, *that labour came on at the appointed season by the command of God*’ and it is ‘doubtful whether we are prepared with a better solution’ to that offered by this anonymous medieval authority (p. xxi). Indeed, Lyall returns to the same position when he scoffs at a new-fangled theory put forward by the witness Dr John Power, that labour is incited when ‘stimulus is applied to the mouth of the womb’ (p. 83): ‘[w]e incline to the old opinion,’ Lyall writes, ‘“*that*

⁹⁵Jordanova, *Nature Displayed*, 198; Newman, *Fetal Positions*, 100.

⁹⁶Allard, *Romanticism, Medicine, and the Poet’s Body*, 27.

⁹⁷Hunter, *Description*, 86.

⁹⁸Wagner, ‘Visualisations of the Womb’, e.g. 542–3.

labour takes place by a law of nature," which we cannot explain' (p. 84 n.). Indeed, Lyall shares his own defeated axiom: '*Nature abhors a Definition*', which he uses to remind himself of the 'impossibility of defining objects by human language' (p. xxiii). The problem, he concludes, 'has been agitated for hundreds of years, and yet to this day it remains in an unsettled state' (p. xxi); Lyall's writing on the Gardner case is evidence for that unsettlement caused by the intrusion of the past into the present and the hopeless search for modern objectivity. Because the Experimental Conception Hospital is an impossible building, Lyall retracts his solution even as he offers it, undoing a vision of modernity with a dark and unethical Gothicism. The secrets tradition had always promised to exceed the limits of anatomical knowledge; that is what Victor Frankenstein achieves in Mary Shelley's *Frankenstein* (1818), for example, when he finds the principle of life in the alchemical work of Paracelsus and Cornelius Agrippa. Yet, unable to animate his own monstrous experiment, Lyall gives way instead to the imprecision and mystery that had *always* attended understandings of human conception.

Conclusion

All the ancient Pantagruelists . . . have declared that the child born to a woman eleven months after the death of her husband is that husband's legitimate son:

Hippocrates, *Concerning Nourishment*,
 Pliny the Elder, *Natural History*, book 7, chapter 5,
 Plautus, *The Jewel-Box*,
 Marcus Varro, in his satire called *The Testament*, alleging the authority of Aristotle on this matter,
 Censorinus, *Concerning the Days of Birth*, book 6,
 Aristotle, *Concerning the Nature of Animals*, book 7, chapters 3 and 4,
 Aulus Gellius, *Attic Nights*, book 3, chapter 16,
 Servius, *On the Eclogues*, explaining a line in Virgil,
 —and a thousand other fools, the number of which has been vastly swollen because of the increase in lawyers: see Justinian's *Digest*, law 3, paragraph 13, and *Concerning Legal Restitution and the Female who Bears a Child in the Eleventh Month after the Decease of her Husband*.⁹⁹

This is the inimitable commentary on the 11-month gestation of the giant Gargantua in Rabelais' mock-*vita*, *Gargantua and Pantagruel* (1534). It is inserted as a digression and followed by advice to widows and their suitors to exploit their two free months after a husband's death: 'what the hell!', the narrator urges.¹⁰⁰ The joke is enlarged by Rabelais' characteristic turn to ancient authors which, as usual, are a motley crew: the physicians and naturalists one might expect listed alongside grammarians, satirists and miscellanists. Yet no matter their authority, all are instantly dismissed as fools in the sentence following, along with the contemporary lawyers making money from the questions around the length of gestation and rightful paternity. By assigning the widows two months of sexual freedom, Rabelais cuts through his list of authorities with the common-sense view that

⁹⁹François Rabelais, *Gargantua and Pantagruel*, Burton ¹⁰⁰*ibid.*, 15.
 Raffel (trans) (W.W.Norton: New York, 1990), 14–15.

human gestation reliably takes about nine months. In a similar vein but three centuries later, Robert Lyall writes of the Gardner case that, after extensive medical evidence was heard, the best that the Gardner case could confirm was that, as everyone already knew, in 'the general opinion of mankind, . . . the usual term of human utero-gestation is nine calendar months, or about from 270 to 280 days'.

A huge number of authorities were cited in the Gardner case. One deponent, Dr J. Conquest, was cross examined about his attitudes to them thus:

You stated, that before this communication with the female [i.e. a woman whose pregnancy was protracted] you quite laughed at the doctrine contained in these authors?—I did; and my inquiries into the fact, as a fact connected with natural history, certainly arose, in a great measure, out of this case. (p. 45)

In his evidence Conquest described being converted from Rabelaisian scepticism through practice. Conquest listed in court the authorities which he had previously laughed at as: 'Livy and Pliny, Hippocrates, Haller, Hunter, Bordileau, Mauriceau, La Motte, and many others' (p. 42). Some, like Hunter, are from the previous generation but others are much older and are also on Rabelais' list. Yet Conquest told the court that, in time, he stopped laughing, finding that his medical experience concurred with the many authorities, both ancient and modern, who stressed the possibility, even the probability of gestations in excess of 10 or even 11 months. Another witness, Charles Mansfield Clarke, testifying on the other side, was still laughing when he gave his evidence. Asked about the old books, he responded that even if the possibility of protracted gestation were claimed 'in the Book of Moses', he would prefer to give people 'the result of my own experience, rather than I would offer the Mosaic opinion to guide them in their arrangements' (p. 7). The joke, in the sixteenth century as in the nineteenth, is about the mismatch between ancient and revered authority, with its proliferating and fantastic exceptions, and the more humdrum and limited range supposed by common-sense. Rabelais' joke goes a stage further, which the Gardner witnesses came to live out, recognising this gap as the hard-going terrain of medical jurisprudence.

Lyall's laughter is discomfited, unable to relish a legal loophole in quite the way that Rabelais can. No practice, no experiment, no matter how perfect the laboratory conditions, can prove a negative and eradicate the influence on modern science of even the most ancient authority. The paradox of the secrets-of-women tradition was that it promised transparent disclosure, a modern prospect, even as it broke that promise, pulling later understandings of gynaecology and reproduction back into a densely historical citatory form. Lyall's desire for a fully objective understanding is similarly paradoxically retrospective. He styles himself, like Rabelais, as a sceptical reader of women, their phony claims and arts of misdirection; yet his recognition of the problem of dating pregnancy and discussion of possible solutions sees him ineluctably return to the premodern scene and the confusingly permanent power of women's secrets to disrupt proper scientific enquiry and, with it, legitimate property transfer.

Funding

This work was supported by an Institutional Strategic Support Fund grant from Birkbeck and the Wellcome Trust. Grant number: 105628/Z/14/Z.

Acknowledgements

I am grateful to my artist-collaborator on the Conceiving Histories project, Anna Burel. Our discussions about the Experimental Conception Hospital have helped me formulate the argument here and particularly to consider the analogy between the uterus and the hot air balloon. Her visual artwork on the Hospital can be seen here: <http://www.anna-burel.com/conceiving-histories/>, accessed 25 February 2017.

I would also like to thank Emma Cheatle, and Julia Martins for their insight and advice; and Grace Halden, Carolyn Burdett, and the three anonymous reviewers for their detailed reading and constructive comments on drafts of this article.