

## Bloom and the Medicals, Ulysses, and Oxen of the Sun

Steven E Raper, MD, JD\*

\*Corresponding author: Steven E Raper, MD, JD, 4 Silverstein Pavilion 3400 Spruce Street Philadelphia, PA 19104. Email: steven.raper@penncmedicine.upenn.edu

Citation: Raper SE (2022) Bloom and the Medicals, Ulysses, and Oxen of the Sun. J Cli Med Re Rev: JCMRR-108

Received Date: 24<sup>th</sup> January, 2022; Accepted Date: 28<sup>th</sup> January, 2022; Published Date: 02<sup>nd</sup> February, 2022

**Introduction:** Two thousand twenty-two is the centenary of the publication of James Joyce's *Ulysses*; acknowledged as one of the greatest of 20<sup>th</sup> century novels and the seminal work of literary modernism. *Ulysses* takes as its model Homer's *Odyssey* and the protagonist, Leopold Bloom's, wanderings through Dublin, Ireland on June 16<sup>th</sup>, 1904. Episode 14, unnamed in the novel but widely known as *Oxen of the Sun* loosely parallels the same episode from Homer's *Odyssey*.

**Methods/Results:** A synopsis of the *Oxen of the Sun* episode from Homer's *Odyssey*, a history of Joyce's short medical career, and the influence of his acquaintance, Dr. Oliver St. John Gogarty are discussed. Next, a straightforward narrative of the actual events taking place in *Oxen*. The episode is meant to convey the crime against fecundity perpetrated by a group of young doctors-in-training and non-medical friends at a maternity hospital. Highlighted are the vestiges of English colonialism on women's healthcare under which the Irish people chafed. Next is a description of the various styles of English prose Joyce used that have made *Ulysses'* *Oxen of the Sun* a difficult read. Lastly, is a description of Joyce's efforts to create a literary description of the development of a human fetus from conception to birth. Short quotes from *Oxen* are placed throughout the paper mostly as 'breadcrumbs' to a reader of *Ulysses* should

they want to use my article to help guide them through the episode.

**Conclusion:** Like *Oxen of the Sun*, this article is a conflation of medicine-specifically women's health-history, and literature. Specifically, the article is meant to help the reader through what is admittedly a challenging but rewarding read.

**Keywords:** James Joyce, Ulysses, Maternity, Fetal abnormalities, Labor and Delivery, Obstetrics, Contraception.

### Introduction

On February 2, 1922, Sylvia Beach arrived at the Paris residence of James Joyce to give him a birthday present; the first of two copies of his landmark novel *Ulysses*. The first edition was published by Beach and her Shakespeare and Company, a legendary Paris bookshop and gathering place for authors and poets. (Figure 1) The physical dimensions were impressive; blue and white printed wrappers, 732 pages, three inches thick, and weighing about 3 ½ pounds [1]. In *Ulysses*—often considered the most important novel of the 20<sup>th</sup> Century if not all time—Joyce recreated a single day in Dublin, June 16, 1904, through the experiences of Leopold Bloom. The events of the day were loosely based on Homer's *Odyssey*.



**Figure 1:** Sylvia Beach and James Joyce sitting in Shakespeare & Co. Photograph believed dated ca. 1921. Image reproduced with permission, The UB James Joyce Collection of the Poetry Collection, University Libraries, University at Buffalo, The State University of New York.

One episode in the *Odyssey* tells of Odysseus and his men who—despite warnings to avoid the island from both blind seer Tiresias and Circe, daughter of the sun god—land on the island of the sun god Helios. Odysseus goes off to pray but falls asleep, leaving his men to forage for food. Eventually, the men give in to hunger and slaughter Helios' beloved cattle for a feast. The gods signified their displeasure at the slaughter with the sounds of cattle lowing, hides twitching, and skewered meat mooing. As Odysseus and his men leave the island, an enraged Helios asks Zeus for revenge or the sun will never again shine on the living. Zeus complies by sinking the ship with a thunderbolt killing all but blameless Odysseus [2].

Of particular relevance to the medical profession, episode fourteen in *Ulysses* is known as *Oxen of the Sun* after the episode just mentioned in the *Odyssey*. Joyce said 'Am working hard at *Oxen of the Sun*, the idea being the crime committed against fecundity by sterilizing the act of coition' [3]. Joyce wrote that he spent 1000 hours writing this single episode [3]. The text chosen for this article is from the Folio

Society chosen because it is nicely laid out and easier to read; there are also intriguing illustrations [4].

One of the ambitions of *Oxen of the Sun* was to show off Joyce's knowledge of medicine. Joyce enrolled briefly at each of two medical schools; first in October 1902 at University College in Dublin, and shortly after l'École de Médecine at the Sorbonne [5]. Joyce's was a very short attempt at medical school; he quit for a variety of reasons not the least of which was finding he had to pay the tuition up front [6]. Why did he not succeed in a career in medicine? Lack of tuition may have been a major factor, but a dislike of chemistry and a passion for literature may have been equally important [6].

One additional important historical point is the relationship between Joyce and the real Malachi 'Buck' Mulligan—Oliver St. John Gogarty. Gogarty entered medical school at Royal University in 1896, but transferred to Trinity College, Oxford, where he graduated. Gogarty likely first met Joyce at the Trinity College National Library [7]. Gogarty did his midwifery at the National Maternity Hospital and it was probably here that Gogarty introduced Joyce to the Holles Street facility [7]. (Figure 2A&B).



**Figure 2:** A. National Maternity Hospital 2021. B. Plaque commemorating the setting of the National Maternity Hospital in *The Oxen of the Sun*. Figures reproduced with permission of Harriet Wheelock, Keeper of Collections, Royal College of Physicians of Ireland.

Gogarty eventually became an ENT surgeon and was also a published author and poet. Joyce and Gogarty were constant companions in 1903-04 and were roommates for a period of time at the Martello Tower, Sandycove, where *Ulysses* begins. The setting of the National Maternity Hospital parallels that of a similar episode in Gogarty's novel and thinly veiled autobiography *Tumbling in the Hay*. [8] Gogarty variably referred to Joyce as 'Kinch', 'Dante', 'wandering Aengus', and 'the virginal kip-ranger' many names that surface in *Ulysses* referring to Stephen Dedalus, Joyce's literary alter ego [6]. Due to Joyce's chronic impecunty, Gogarty gave more materially, in attention, and intellectually than Joyce reciprocated [7] Eventually the relationship soured; perhaps due to professional jealousy. Throughout *Ulysses*, Joyce paints an unflattering portrait of Malachi 'Buck' Mulligan. In 1950 Gogarty, in response to a detailed article by AM Klein (see below) on the prenatal development of a human from conception to birth in the *Oxen of the Sun*, wrote a scathing essay *They Think They Know Joyce* attacking Joyce posthumously. Gogarty called *Ulysses* 'a triumph of ugliness and chaos and ineffectuality' and 'a stink bomb for Dublin' [9].

### Bloom and the Medicals

It is 10:00 PM June 16, 1904. Leopold Bloom, after an already long day's odyssey, is entering the National Maternity Hospital in Holles Street, Dublin. The Maternity Hospital was

stated at the time to have 1500 midwifery cases a year [10]. He is allowed entry by Nurse Callan. Bloom apologizes for not recognizing her when they passed each other earlier. Callan is concerned Bloom is wearing a suit appropriate for mourning. He states he attended Paddy Dignam's funeral earlier in the day. He asks after an acquaintance, a Dr. O'Hare, to learn the physician died of 'belly-crab' (intestinal cancer) three years ago. They pause; Bloom reflects 'everyman, look to that last end that is thy death . . .

Bloom came to the maternity hospital to ask after the health of Mina Purefoy and is told she has been in labor for three days; the hardest Callan has ever seen. Bloom reflects on the pains of labor and Callan's childlessness. Dixon, a doctor in training, enters for his shift and recognizing Bloom as the man he had treated earlier for a bee sting invites Bloom to join him and a group downstairs in a conference room. Initially present are: Joseph Dixon, Vincent Lynch, and William Madden all doctors in training. Non-medical attendees are Francis (Punch) Costello, J. Crotthers, Stephen Dedalus, and Matthew Lenahan. On the table are sardines in oil, bread, and ale perhaps as a parody of the Last Supper of Christ. Dixon pours a glass of ale that Bloom politely accepts but then stealthily pours into the glass of another; wishing to remain clear-headed.

Bloom recognizes Stephen, the most inebriated of the group, and son of Bloom's friend Simon Dedalus. Bloom decides to

stay and look after this young man out of respect for the father. The group is boisterous; Nurse Callan enters and asks for quiet in respect of the women above in labor. The irreverence of the group is meant to show lack of respect for fecundity; an echo of the episode in *The Odyssey*. A heated discussion arises over whether the mother or child should be saved in case of a complicated labor; further evidence of sterilization of coition. Madden discusses a case where the husband asked that the child rather than mother be saved. Stephen, in a soliloquy that has been likened to that of a blasphemous Last Supper, expands the discussion to include the Catholic position on abortion and contraception 'what of the those Godpossibled souls we nightly impossibilise?' He asserts that the human soul enters the fetus at two months. Stephen further reflects (drunkenly) on the Immaculate Conception; either Christ was sired by an earthly father, and became one with God through transubstantiation or Christ was sired by a heavenly father and was consubstantial with God. But Stephen states in no case was Christ sired by a ghost, holy or otherwise subsubstantial (in an unphysical way) [11].

Breaking the progressively serious tone of the discussion, Costello begins a bawdy song, slamming his fist on the table to gain attention. The other attendant, nurse Quigley, enters and also bids the group restrain their frivolity should Andrew Horne, a Master of the Maternity Hospital, arrive to the general clamor.<sup>1</sup> (Figure 3) Dixon, Lenehan and others tease Stephen about his decision not to enter the clergy and his supposed amorous adventures. A passage ensues discussing rites of sexual congress. Stephen responds with another soliloquy on adultery and ends with an observation on the circle of life from birth to death. Costello tries to sing again, but there is a tremendous crack of thunder, lightning, and a storm. Lynch tells Stephen—who is truly frightened by the noise—that the storm is retribution for Stephen's blasphemy. The assembled then talk of their desire for loveless sex with whores but are worried about 'Allpox' (syphilis) and would use contraceptives to prevent catching the disease. This conversation is further meant to be part of the crime committed against fecundity.



**Figure 3:** Sir Andrew Horne. One of the Masters of National Maternity Hospital in 1904. Image reproduced under CC BY-NC-ND 4.0 licence. The Royal College of Physicians of Ireland. [Creative Commons — Attribution-NonCommercial-NoDerivatives 4.0 International — CC BY-NC-ND 4.0](https://creativecommons.org/licenses/by-nc-nd/4.0/)

<sup>1</sup> This is the second warning against frivolity; in *The Odyssey*, there were also two warnings; first by Tiresias and then Circe.

Here, the warnings are first by nurse Callan, then nurse Quigley.

Lenehan speaks of a letter in the local paper describing an outbreak of foot and mouth disease in cattle and that a Dr. Rinderpest will be coming to try and treat and save the herds. A complex parable involving bulls arises between Vincent Lynch<sup>2</sup>, Dixon, and Stephen that turns on a quarrel in which the Catholic Church (Papal bull) and England-as-colonizer (John Bull) conspire ‘as fast friends as an arse and a shirt’ to limit fertility of the Irish people (Irish bulls). English medical practice had been criticized as extending colonial power to retain control over the Irish growth rate [12]. There is a long and tortured debate about contraception, conception, gestation, labor and delivery intended to decry the ‘pathologization and manipulation of Irish fertility through its actions on the Irish female body’ [13].

Enter Malachi ‘Buck’ Mulligan, who, on the way to join his fellow medical students from a meeting of eminent poets (to which Stephen was not invited) was caught out in the thunderstorm, bringing with him an Alec Bannon. Unaware her father is present, Bannon brags of liberties taken with Milly, Bloom’s daughter ‘a skittish heifer, big of her age and beef to the heel’. In light of the parable regarding the causes of Irish infertility, Mulligan presents a card he had made ‘Mr. Malachi Mulligan, Fertiliser and Incubator, Lambay Island.’<sup>3</sup> Mulligan states his goal is to set up a national fertilizing farm so he can offer ‘fecundation’ to women regardless of economic status.<sup>4</sup> Dixon jokes about Mulligan’s large abdomen, and whether he was pregnant (the prostate being at the time considered the male equivalent of the uterus) or merely a glutton. Crothers wants more prurient detail on the encounter with Milly, and Bannon obliges with her picture and a lament that he was caught without a prophylactic hoping instead on the phase of the moon.<sup>5</sup>

Nurse Callan now rings for Dixon as Mrs. Purefoy’s confinement nears the end. On leaving, Costello speculates that Dixon is the father of a pregnant Callan (untrue) and more levity ensues. Comments on doctors having their way with nurses and priests with parishioners are roundly criticized by Dixon before leaving to care for Mrs. Purefoy and there is talk of asking Costello—the ‘low soaker’—to leave. Bloom, in one of his famous interior monologues, is willing to overlook much of the assembled frivolity at the expense of women but considers Costello’s irreverence too

<sup>2</sup> Lynch is based loosely on a Vincent Cosgrave. The portrayal is unflattering, as Cosgrave disingenuously bragged, he had sex with Nora Barnacle, Joyce’s future wife.

<sup>3</sup> A noted bird sanctuary off the Irish coast.

<sup>4</sup> Raises the specter of eugenics and hygiene invoking the now discredited work of Sir Francis Galton on segregating the ‘fit’ from the ‘unfit’.

<sup>5</sup> Rain, wetting, umbrellas, rain coats, French letters, and similar metaphors can all be construed as pertaining to male ejaculation and various forms of contraception.

<sup>6</sup> JB Lyons suggests that impressionable youth, confronting the harshness of nature and biologic uncertainty for the first time is in part responsible for the perception that the medicals were the wildest students.

<sup>7</sup> Thought here to represent Pentecost (New Testament, Acts 2), where tongues of fire (represented also by the Red triangles on bottles of Bass ale further in the episode) allow the Disciples to

much. Bloom says as much to Crothers, sitting next to him. There is respect for Mrs. Purefoy’s husband on siring a twelfth child (nine live) to which Costello crudely claims that another sired the newborn. Bloom wonders what transforms these ‘. . . votaries of levity into exemplary practitioners . . .’ in such a short period of time [6].<sup>6</sup>

Bloom then drifts further into his internal reflections wondering if he has any moral right to criticize the medical students when he himself is guilty of a number of moral lapses including cessation of marital obligations with his wife, Molly, ‘. . . a seedfield that lies fallow for want of a ploughshare? . . .’ The birth of baby Purefoy is accompanied by ‘a strife of tongues’ with Bloom urging restraint [10].<sup>7</sup> There is now a pseudo-scholarly discussion of varied congenital malformations (e.g. foetus in fetu, aprosopia, agnathia, ‘multiseminal, twikindled, and monstrous births’). Challenges of labor and delivery are also discussed; anesthesia, premature rupture of membranes, nuchal cord, and precipitous delivery (Sturzgeburt). Even bestiality; the myth of Pasiphaë and the Minotaur (half bull) is mentioned [10].<sup>8</sup> Similar to the debate about choosing between mother and child, there was debate about what to do for conjoined twins should one predecease the other.

Mulligan now tells a ghost story (Malachias’ tale) in which a Haines appears and admits to murder and opioid abuse [10].<sup>9</sup> The only real reason for this tale is to taunt Stephen into meeting at the Westland Row trolley station at 10 past 11 PM.<sup>10</sup> Bloom again drifts into an internal monologue; reflecting on his early school age life, his job as a door-to-door salesman, and his first sexual encounter—Bridie Kelly, shilling whore in a non-conceptive encounter and another crime against fecundation) ‘In a breath, ‘twas done . . .’. He reflects on the herd of cattle at the Dublin docks shortly to be killed for hoof and mouth disease tramping ghost-like; moaning and tramping to a dead sea.<sup>11</sup> Bloom imagines a failed conquest in his youth and then the apotheosis of his daughter Milly to Mother Mary—queen among the stars.

Costello and Stephen discuss their days together in school and wonder about previous classmates. Stephen ‘the bullock-befriending bard’ places a crown of vine leaves upon his own head (crown of thorns? Dionysus?). Lynch says Stephen hasn’t earned the right to be called a poet having

spread the news of Christ’s resurrection and another hint that Stephen’s monologues are meant to parody the Last Supper. Could also be interpreted as the many different ‘tongues’ of literary style used throughout the episode.

<sup>8</sup> From Ovid’s *Metamorphoses*. Daedalus was the architect of the Minotaur’s labyrinth and also the device allowing Pasiphaë to couple with the Minotaur.

<sup>9</sup> Possibly a version of the French word *la haine* for hate. An English guest staying with Stephen and Mulligan in the Martello Tower. Early in the novel Haines awakens Stephen with screams after a nightmare about a black panther; Stephen wants to know when Haines is leaving the Tower.

<sup>10</sup> Although never explicitly stated, there was apparently a fight with Mulligan. In Nighttown, Stephen’s hand is injured when he arrives at Bella Cohen’s brothel; presumably from the fight.

<sup>11</sup> This reverie may be meant to parallel the resurrection of the slaughtered cattle in *Homer Oxen*.

created only a 'capful of light odes'. Stephen is cruelly reminded of his recently deceased mother and darkly contemplates leaving but the discussion turns to a horse race on which both Lynch and Madden lost money when a horse named Throwaway beat Sceptre. Lynch now brags about a dalliance with his girlfriend that was interrupted by a priest. Lenehan reaches for a bottle of Bass ale but is restrained by Mulligan as Bloom intensely studies the bottle's red triangle (again, Pentecost's tongues of flame).

The discussion turns to questions which perplexed medical science in the early 20<sup>th</sup> century. Bloom wonders how the sex of a fetus is determined; answers include male birth from the right ovary, post-menstrual intercourse, and aged spermatozoa. A 'nisus formativus' in concert with the 'succubitus felix' position was thought important. Here Joyce cites a number of physicians and scientists as embryologists; Culpepper, Spallanzani, Blumenbach, Lusk, Hertwig, Leopold and Valenti [14]. The next question posed was about infant mortality. Bloom seems to ask this as his own son Rudy died at eleven days. Mulligan cites sanitary conditions, Crothers adds heavy manual labor or 'marital discipline in the home'. Other thoughts are retained objects and Lynch (one of the doctors) includes essentially all of 'Nature, we may rest assured, has her own good and cogent reasons for whatever she does . . .'. After another surly reflection on God as an omnivorous being, Stephen's scientific acumen is called into question as unable to distinguish even an acid from a base.

Meanwhile, upstairs, Mina Purefoy has delivered a boy and thoughts turn to the father, Theodore Purefoy (Doady). Bloom returns to an interior monologue and a memory from his past emerges. He meets Molly—his future wife—at Roundtown joined by Stephen at age 4 or 5 in linsey-woolsey and at a distance Stephen's mother [12] Our Lady of the Cherries is meant to evoke both Mother Mary and Bloom's wife Molly; a Nativity scene [10]. Joyce invokes metempsychosis in the transmigration of dead Rudy's soul into Stephen, an act of re-incarnation so Bloom can become Stephen's father (at least for the time being) [13] After a rare moment of quiet contemplation on the miracle of birth, and a lull in the general boisterous nature of the proceedings Stephen, ever the blasphemer, utters the Word: 'Burke's' (not God) [14] As the assembly heads up and out for Burke's, Dixon comes down to report the placenta is out, weighing nearly a pound. The assembled—there are now eleven, the apostolic number, as a Bantam Lyons has joined—leave the Hospital to drink before Burke's pub closes at 11 PM. At this point, out on the streets of Dublin, the revelers are confronted with a polyglot of language on the way to Burke's where Stephen stands all a round (or two) of absinthe. After Burke's closes the assembly disperses with Stephen, Lynch,

and Bloom headed to Nighttown (the red light district) for, presumably, more sterile coition.

### Ontogeny Recapitulates Phylogeny; The Development of Language

Upon reading *The Oxen of the Sun* for the first time, one is immediately confronted with strange language. This is deliberate; as Joyce makes use of a biologic theory that the stages an embryo undergoes during development are a chronological reiteration of the species past evolutionary forms. Ernst Haeckel proposed that ontogeny is the growth and development of an individual organism; phylogeny is the evolutionary history of a species; development of advanced species passes through stages represented by mature organisms of more primitive species. Literally, Joyce tries to recreate the development of the English language by using earlier literary styles [phylogeny] up to the English of 1904 [ontogeny].<sup>15</sup> Joyce, again in his famous letter to Frank Budgen, notes 'a nine-parted episode without division introduced by a Sallustian-Tacitean prelude'. [3] 'Deshil Holles Eamus' is Gaelic for 'Let us go to the National Maternity Hospital'. 'Send us, bright one, light one, Horhorn, quickening and womb fruit' is an invocation to the sun god (in *Oxen*, represented by Sir Andrew Horne) and the sacred horned cattle of Helius. 'Hoopsa, boyaboy, Hoopsa' is a midwife's chant while bouncing a newborn boy to encourage first breaths. Although Homer wrote the *Odyssey* in the eighth century BCE—in Greek—Joyce starts his 'phylogeny' with Tacitus and Sallust, two Latin writers from the first century BCE. There are no Greek quotations in the *Oxen of the Sun*. This stylistic choice is likely due to the fact Joyce did not read or write Greek.

The rest of the chapter progresses through an encyclopedia of English writing styles from 'earliest English alliterative and monosyllabic Anglo-Saxon' [3]. Among others, Joyce parodies Mandeville, Malory (*Morte d'Arthur*), an Elizabethan chronicle style, Milton, Taylor, Hooker, some Latin, Burton, Osler's favorite Sir Thomas Browne, Pepys, Defoe, Swift, Steele, Addison, Sterne, Dr. Johnson, DeQuincey, and Newman. The episode ends in an explosion of early 20<sup>th</sup> century idioms.

Joyce used a number of sources for his parodies of the development of the English language meant to parallel the gestation of an embryo to a fetus. One was *Saintsbury's History of English Prose Rhythm*; a second is Peacock's *English Prose: Mandeville to Ruskin* [15]. One example is early Anglo-Saxon as Bloom seeks entry to the Hospital 'that he would rathe infare under her thatch'. A later example in the style of Malory; 'her name is puissant who aventried the dear corse of our Agenbuyer' [10].<sup>16</sup> And further on, Joyce parodies Sir Thomas Browne "An exquisite dulcet

<sup>12</sup> Bloom's son, Rudy, was buried in linen. Another supporting reference to Stephen as Bloom's 'adoptive' son.

<sup>13</sup> Metempsychosis may be defined as reincarnation, or, transmigration of the immortal soul from one corporeal existence to another.

<sup>14</sup> Meant to blasphemously evoke the New Testament John Chapter 1, verse 1; 'and the Word was God'.

<sup>15</sup> The Atherton chapter is a much more comprehensive analysis of the bewildering array of English styles Joyce used in this episode. I can recommend it as one of several good companions to help you work through the text.

<sup>16</sup> Aventried is play on an old French word meaning to thrust forward a spear; another phallic allusion. Agenbuyer is middle English for Redeemer.

epithalame of most mollicative suadency . . .". With the crack of thunder, the voice becomes that of John Bunyan in the style of *The Pilgrim's Progress* 'But was young Boasthard's [Stephen's] fear vanquished by Calmer's [Bloom's] words? The end of the Bunyan parody also recapitulates the crime against fecundity so evident in this chapter 'O wretched company . . .the voice of the god in grievous rage that he would . . . spill their souls for their abuses and spillings . . .

Mulligan spins a tale in which Haines is the culprit is styled after the gothic horror novel *The Castle of Otranto* [15]. Moving on, the happy delivery of Mrs. Purifoy's baby boy is done in the style of Charles Dickens 'And as her loving eyes behold her babe, she wishes only one blessing more, to have her dear Doady [Mr. Purifoy] there . . .' Carlyle is selected to end the birth scene with ' . . . placentation ended, a full pound if a milligramme.' The word 'Burke's' is uttered and it is time for serious drinking. With a Latin oath the assembled students invoke Partula (goddess of childbirth) and Pertunda (goddess who presides over marriage) [15]. Stephen will stand the assembled a glass or two of absinthe before Burke's last call. The final eleven paragraphs are an explosion of early 20th Century idioms and are intended to place the reader in 'a drunken melee and left in a state of shock' [15]. Although well worth reading, some highlights to pick out include recapitulation of the tale of Milly and Bannon, the Gold Cup race, expressions of emesis, a Leith police statement meant to assess sobriety, Lynch and Sara caught out by Father Conmee (Lynch's earlier braggadocio), and praise for a charismatic sermon by the American missionary Alexander J Christ Dowie.

### The Word Made Flesh

One more important process Joyce takes pains to describe in *Oxen of the Sun*, in addition to plot, character development, and evolution of the English language is that of human fetal growth. From Joyce's letter to Budgen . . . with the natural stages of development in the embryo . . . Bloom is the spermatozoon, the hospital the womb, the nurse the ovum, Stephen the embryo' [3]. Although exhaustive treatment of the process of embryological development and its incorporation into *Oxen of the Sun* is beyond the scope of this paper, one can imagine a drawing Joyce made of nine expanding versions of a uterine shape with embryologic annotations. (Table) [15] Joyce spent very little time learning embryology; his use of the gestational framework would be considered inadequate by modern embryologists. As guides, certain phrases thought to correspond with the months of embryonic gestation are provided here; a more exhaustive treatment is a useful adjunct to the descriptions offered in the authoritative article by AM Klein [16].

The first month begins with 'Some man that wayfaring was' and the zygote develops into the blastula 'wondrously like to a vast mountain'. Using the Table, one might detect other references to the month of gestation. The second month is explicitly stated as entry of the human soul suggesting that

abortion at this point is already a crime against fecundity; 'our holy mother ever foldeth souls' and 'Godpossibled souls'. References to a cup suggests invagination of the gastrula [16]. Costello's song announces the third month; 'The first three months she was not well, Staboo'.

The fourth month can be deduced by 'thou chuff, thou puny' [10].<sup>17</sup> And a Latin phrase that genitalia are forming '*Ut novetur sexus omnis corporis mysterium*' [10].<sup>18</sup> In the fifth month heart tones are detectable "his heart shook within the cage of his breast'. Fetal movement is also obvious by the motions of the fetus; including Pickaback, Topsy-Turvy, and Cheek by Jowl. The most obvious reference to the sixth gestational month is when Bloom's odyssey occurs; June the month, sixteenth is the day. Also, Mulligan's brother intended to stay the month of June. In 1904 a fetus born in the sixth month did not survive.

It is the seventh month that fetal survival was possible but not certain in 1904. The indicators are 'old whoremaster that kept seven trulls', 'a little fume of a fellow', and, 'my Kitty who has been wardmaid . . . these seven months'. And the possibility of a birth is suggested by the appearance of Haines' head crowning through a door during Malachias' (Mulligan's) horror story. And, 'Then though it had poured seven showers.' The eighth month shows 'visual organs . . .commencing to exhibit symptoms of animation' and the progressive growth of the fetus 'put quite a different complexion on the proceedings. Allusions to the senescence of the fetus; 'whose countenance already bore already the stigmata of early depravity and premature wisdom'. The ninth month and birth are signaled by the phrase 'once a woman has let the cat [nine lives] into the bag . . . she must let it out again or give it life . . . to save her own'. The names of the nine living children of the Purefoys are enumerated. As proof the pregnancy is complete is Dixon's report that the placenta is out.

### Concluding Remarks

In the letter to Budgen, Joyce noted two additional purposes in writing *Oxen of the Sun*. One was to link progression of the episode, language, and fetal development back to earlier episodes of the day and the other was to trace evolution in general. Neither of these is germane to the events taking place at the National Maternity Hospital or the medical aspects of the episode and I leave you, the reader, to delve deeper into these topics. Essentially every sentence in *Oxen* was designed to have more than one meaning. The allusions and quotes I have chosen are a small fraction of those found in the episode. Although some commentators have stated *Ulysses* is 'a comic novel', many of the points regarding religion, colonialism, contraception, and other forms of 'sterilizing the act of coition' are serious. Reading *Oxen*-indeed all of *Ulysses*-demands effort as with any worthwhile endeavor. The reward is a deeper understanding of what the English language is capable, and what makes James Joyce one of the greatest authors of all time.

<sup>17</sup> An indirect reference to Shakespeare's good-natured insult contests between Henry the IV and Falstaff.

<sup>18</sup> 'That the mystery of physical sexuality is known'.

**Table:** Joyce’s Embryological Notes (Adapted from JS Atherton [15])

Month of Gestation	Stage of Development
1	Corion, amnion, yolk, punctum, follicle, womb(?)
2	1-3 cm, 2-5 gm, boat shape, big head, sprout limbs, web fingers, eyeless, earless, mouthless, sexless, 1 <sup>st</sup> bone
3	9 cm, 20 gm, lips, ears, sex, fingers, jawbone, tail
4	No entry
5	Nails, iris membrane, 1 <sup>st</sup> hair, 25 cm, 250 gm, cheekbone, fingerbones
6	30-34 cm, 1000gm, scrotum empty, down, skin red, head smaller, pubics, fontanelles
7	Fore fontanelle smaller, old face, testicles in groin, breast bone, heelbones, 40 cm, 1500 gm
8	45 cm, 2000gm, fontanelles almost shut, face younger, cheeks fuller, outer ears, nails longer, testicles lower, clitoris, nipples, sacral bone, caseous gloss in joints
9	50 cm, 3500 gm, tooth sockets, thigh bone nucleus, nails long, sex complete, hair 3 cm dark

**References**

- Birmingham K. The Most Dangerous Book: The Battle for James Joyce’s Ulysses. New York: Penguin Press; 2014: 217.
- Homer. Difficult Choices. In: Wilson E. translator. The Odyssey. New York: WW Norton & Co.; 2018: 309-314.
- Joyce J: To Frank Budgen. In: Gilbert S, editor. Letters Volume 1. New York: Viking Press; 1957: 139-141.
- Joyce J. Episode 14. In: Rose D and O’Hanlon J, editors. Ulysses. London (UK): The Folio Society. 2017: 341-379.
- Ellmann R. James Joyce. Second Edition. New York: Oxford University Press. 1983: 103-128.
- Lyons JB. James Joyce and Medicine. Dublin (IRL): Dolmen Press, Ltd.; 1973: 18ff.
- Lyons JB. OLIVER ST. JOHN GOGARTY. Lewisburg (PA): Bucknell University Press. 1976: 17-84.
- Gogarty OSJ. ChapterXVII: Midwifery. In: Tumbling in the Hay. Dublin: The O’Brien Press. 1996:181-194.
- Gogarty OSJ. They Think They Know Joyce. Saturday Review of Literature. 1950; 33 (11): 8-9, 35-37.
- Gifford D, Seidman RJ. Oxen of the Sun. In: Gifford D, Seidman RJ, editors. Ulysses Annotated: Notes for James Joyce’s Ulysses. 410 New York: EP Dutton. 1974: 407-450.
- Bauerle R. Sober Drunken Speech: Stephen's Parodies in "The Oxen of the Sun". James Joyce Quarterly. 1967; 5(1):40-46.
- Blamires H. The Bloomsday Book: A Guide Through Joyce’s Ulysses. London (UK): Methuen and Co. 1966 157-158.
- Harris SC. Invasive Procedures: Imperial Medicine and Population Control in "Ulysses" and "The Satanic Verses" James Joyce Quarterly, 1998; 359 (2/3):373-399.
- Benzenhofer U. Joyce and Embryology: Giulio Valenti's "Lezioni Elementari Di Embriologia" As A Source for "Oxen of the Sun". James Joyce Quarterly. 1989; 26(4):608-611.
- Atherton JS. The Oxen of the Sun. In: Hart C and Hayman D, editors. James Joyce’s Ulysses: Critical Essays. Berkeley (CA): University of California Press. 1974: 313-340.
- Klein AM. The Oxen of the Sun. Here and Now. 1949; 1(3): 28-48.