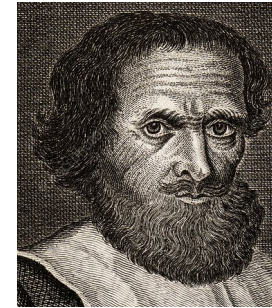


09. Medicine and Magic in Elizabethan London.

I. The Making of an Astrologer-Physician

- Simon Forman (1552-1611): astrologer, medical practitioner in Elizabethan London.



1. Medical Practitioners in Elizabethan London.
2. Forman: Key Events.
3. *The Groundes of the Longitude.*
4. *The Motion of the 3 Superior Heavens.*

Elizabethan Era: (1558-1603)

- Queen Elizabeth I
- Frances Drake, Walter Raleigh, William Shakespeare
- Defeat of Spanish Armada (1588)

- Key Issues:

- *Medical practice: Galenic vs Paracelsian medicine.*
- *Social structures of authority: Forman vs the College of Physicians.*
- *Professional credibility: reputation, expertise, legitimacy.*
- *Dynamics of authority and gender between practitioners and patients.*



1. Medical Practitioners in Elizabethan London

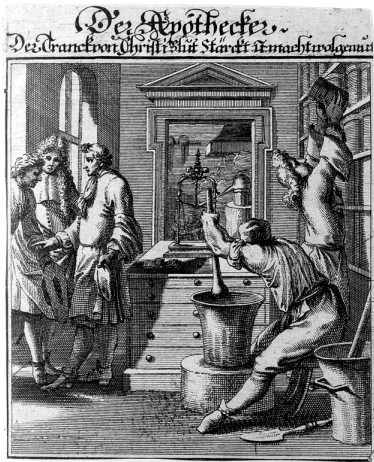
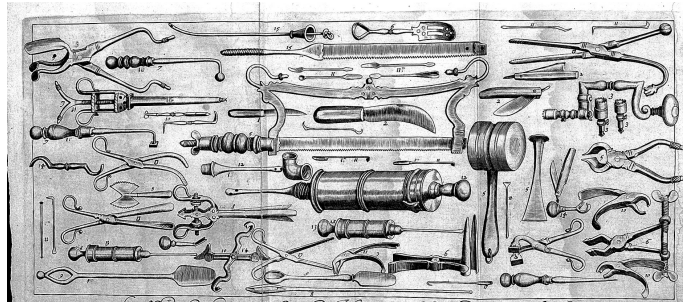
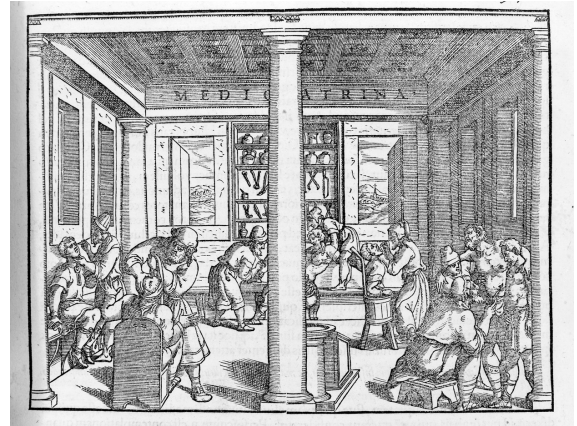
- Three types:
 - *Physicians*: university educated in the theory of medicine ("physic"); diagnosed disease and prescribed courses of therapy.

But note: University study was primarily focused on preparation for a career in the clergy.

- *Surgeons*: performed manual operations (bleeding, setting bones); learned *via* apprenticeship.

- *Apocatheries*: prepared medicines according to physician's prescriptions; learned *via* apprenticeship.

- Rural provincial medical practitioners ("empirics").



Medical needs of City of London vs. rural provinces

- Explicit goal: To regulate medical practices and prevent abuses by "quacks".
- Implicit goal: To maintain privileges and monopoly on patients.
- Formation of royally sanctioned guilds:

- 1429: Royal charter for Worshipful Company of Grocers' (includes apocatheries.)



- 1518: Founding of College of Physicians (royal charter granted in 1674).



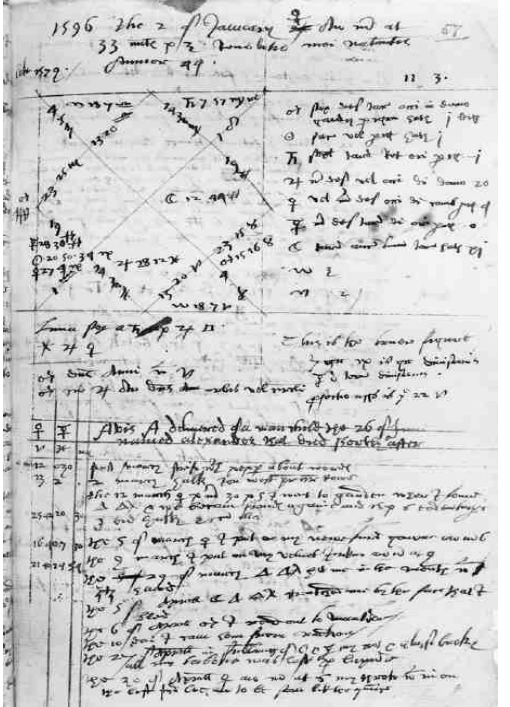
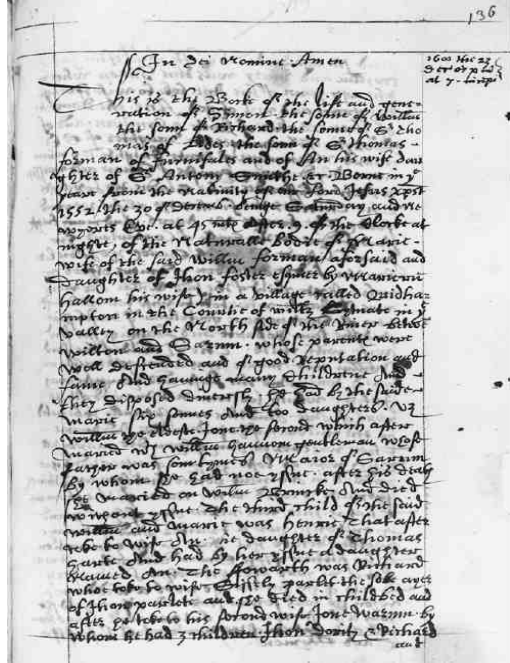
- 1540: Royal charter for Company of Barber-Surgeons (merger of Fellowship of Surgeons with Company of Barbers).



2. Forman: Key Events.

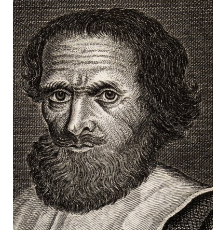
- Six sources of life-writings:

- (1600) *'The bocke of the life and generation of Simon'* (account of life).
- (1604) *'Forman his repetition of the troble he had with the doctors'* (a psalm).
- (1605) *'The firste of the Formans'* (a geneology).
- (1605) *'Of the name of Forman'* (a family history).
- (1606) *'The issue of Simon Forman'* (brief account of life on the occassion of son's birth).
- (1603) Diary. An astrological figure for each year 1562-1601 and a list of corresponding events.

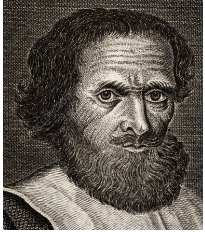


- 1552. Born in Quidhampton, Wiltshire.
- 1573. Studies at Oxford ("poor scholar").
- 1575. Plague in Oxford. 1st loss of books.
- mid-1570s. Claims to have begun practicing medicine.
- 1583. Records a "profit by my pen". Reported to Salisbury authorities for illicitly practicing physic.
- 1579. Imprisoned. 2nd loss of books (stolen).
- 1587. Arrested for bringing a book containing "bad and fond prayers and devises" to morning prayer. 3rd loss of books (confiscated).
- 1590-91. Makes copies of many treatises on alchemy.
- 1591. Moves to London. Publishes *The groundes of the longitude*.
- 1592. Cures self of plague.
- 1594-1603. Conflicts with College of Physicians of London.
- 1596-1601. Casebooks.
- 1598. 4th loss of books (stolen from study).
- 1603. Licensed to practice physic by University of Cambridge.
- 1611. Dies.

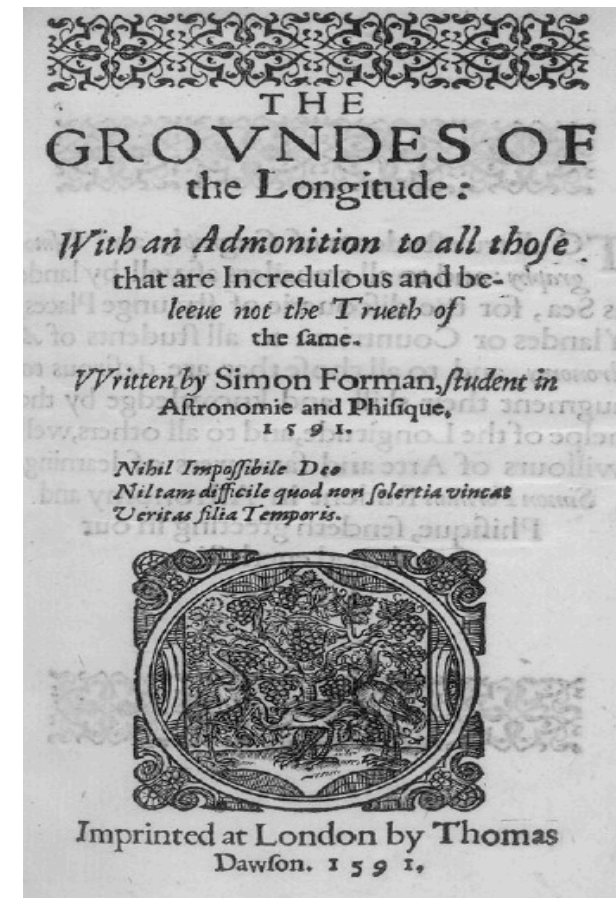
"loste all that ever I had ther, bocks and all"



3. *The Groundes of the Longitude* (1591)



"Masters and Sailors, that entend any long voyages, here shall you finde one of the chiefe pillers of your Arte, here shall you find a Pilate to direct you in a dangerous passage, being driven with a storme be it never so long, here shall you find a Load starre, that shall shewe you where you shall goe forth or backe, East or West."



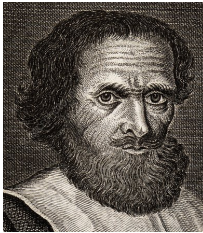
- Problem: How to determine longitude at sea?
 - *Latitude can be determined by calculating the altitude of the sun/stars.*
 - *Longitude could be determined if one has an accurate clock:*

- The earth rotates at 360° of longitude per day, or 15° per hour.
- So: If it's 12 noon ship-time (by position of sun) and 2:00 pm Lisbon-time, then the ship is separated by $(2 \text{ hours}) \times (15^\circ \text{ per hour}) = 30^\circ$ of longitude west from Lisbon.

- But: No accurate clocks worthy of sea travel in the 16th century.

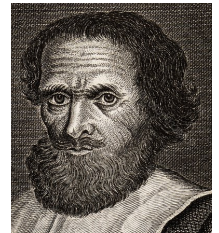
- Forman's *Longitude*:

- *Does not contain information about how to calculate longitude.*
- *Announces that the author has a secret method.*
- *Promises further revelations if this method is rewarded.*



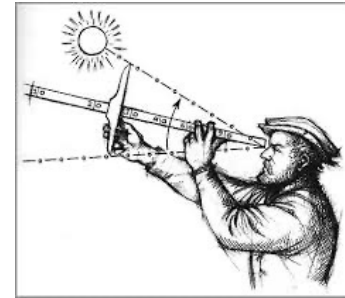
"[I will] perhaps make declaration, of the principles of another science, as much desired as this, of some other sortes of men, who labour continually for the knowledge thereof, and wander in darknesse, in a thing more mysticall and of greater importaunce then this".

"[I promise] certaine other Bookes of Astronomie and Astrologie, as the Booke of the three sortes of houres, Naturall, Artificiall and Magicall, with all the doubttes of Astronomie, and alternations and significations of the Planets, the mooving of the 8 sphere, and the way to errect a figure both by the Eccliptike line, as also by the oblique ascention, wherein the misterie of Arte lieth hid, with divers other Bookes God willing if they may be permitted."



Mathematical Cultures in Elizabethan England

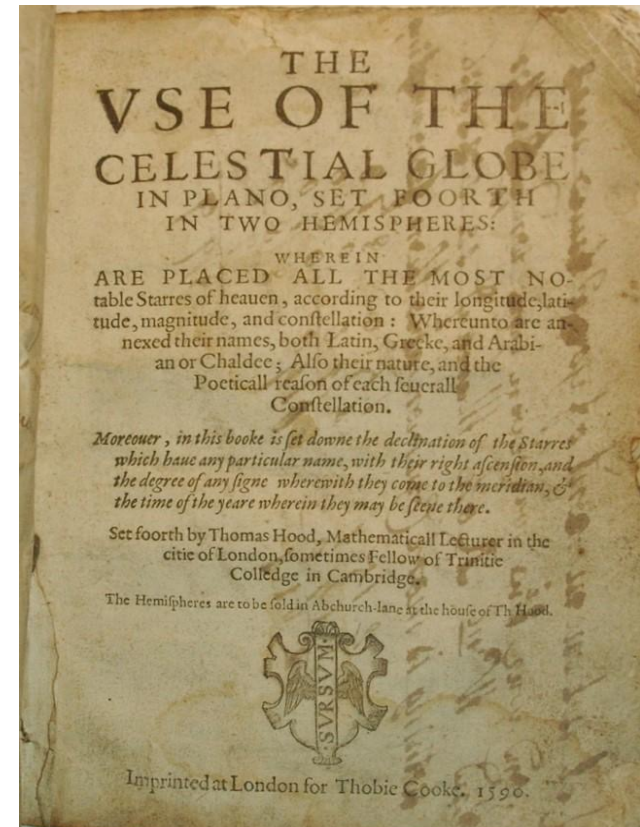
- Mathematicalls = collection of practical arts depending on arithmetic and geometry (surveying, navigation, gunnery, etc.).
 - *Advocated as practical, worldly pursuits.*
 - *Emphasis on instruments (cross-staff, compass, globe).*
 - *Cultural focus on wealthy gentlemen and merchants.*



- Thomas Hood (c.1556-1620).
 - *1581. Graduated Cambridge.*
 - *1584. Licensed by Cambridge to practice medicine. (Good anywhere in England except London.)*
 - *1588. Appointed "Mathematical Lecturer to the City of London".*

Explicit purpose: to provide mathematicalls training to civil militias guarding against Spanish invasion.

Implicit purpose: to bring university-educated mathematicians in closer contact with instrument makers and artisans.



Hood on Forman:

- "I am credible informed of late that certaine men, whereof one (how profoundly soever hee thinketh of his learning) not being hable ether to write true English, or Latine, hath gone about to *form an* outrageous, and most imprudent pamphlet to my disgrace & to commit it to the presse". (Preface to *The use of both the globes, celestial, and terrestriall* 1592).



"The animosity between the mathematical lecturer to the City of London and an impoverished, quasi-itinerant astrologer is evidence both of the lack of structure in the mathematical community in Elizabethan London and the possible rifts within it." (Kassell, pg. 43.)

4. *The Motion of the 3 Superior Heavens*

- Unpublished essays (1606-1608) on project alluded to in *Longitude*.
- Renaissance cosmos: 10 spheres centered on Earth.

- Moon
- Mercury
- Venus
- Sun
- Mars
- Jupiter
- Saturn
- 8th sphere (mobile zodiac of fixed stars)
- 9th sphere (immobile zodiac)
- 10th sphere (Prime mover)



- Forman's version:
 - *10th sphere corresponds to God in purity, eternity, constancy of motion.*
 - *9th sphere corresponds to Christ in stability, similitude, power, virtue, container of souls of men.*
 - *8th sphere corresponds to Holy Ghost and spiritual body of man.*

- Motions of 8th and 9th spheres are important in astrological calculations and magical operations.

- 9th sphere:

- Filled with souls and symbols.
- Governs powers of symbols and angelic revelations.

- 8th sphere:

- Two motions, natural and unnatural.
- Natural motion determines three types of hours:

- *Natural hours*: measured by a clock; used to measure all natural causes and to calculate nativities.
- *Artificial hours*: measured by dividing the period between sunrise and sunset into 12; used to calculate the timing of ordinary actions (the beginning of a journey, setting sail, praying, administering medicines).
- *Magical hours*: measured according to the ascension of the ecliptic line of the 8th heaven; used to determine times to make magical amulets.

Table of the motion of the 8 heaven that I found in an old parchment book. In the which book it was this written. In purpose to make an instrument to know by beginning and ending of the 28 inductions. So find

Manifones phice & sunt 28 que insunt a principio
 Inchois vltima phice & propter que dicitur abutau quatu
 Forophit motus 8 e phice a vltima phice
 3ta Tabula est Tabula Equationis 8 phice super 9
 Inchois dicitur est 2 phice 17 grady So mte Inchois ad
 Anni dni 23.

Anni Collecti	Tabula Equat oms 8 phice motus		Tabula motu cynabiqus 8 phice gr nu 2		Anni Collecti	Tabula motu cynabiqus 8 phice gr nu 2	
	gr	mic	gr	mic		gr	mic
1300	9	27	50	1590	11	58	55
1310	9	31	42	1600	12	01	47
1320	9	36	3	1610	12	5	39
1330	9	40	29	1620	12	9	31
1340	9	44	49	1630	12	13	23
1350	9	49	3	1640	12	17	15
1360	9	53	11	1650	12	21	7
1370	9	57	13	1660	12	24	59
1380	10	1	10	1670	12	28	51
1390	10	50	0	1680	12	32	43
1400	10	51	25	1690	12	36	35
1410	10	55	17	1700	12	40	27
1420	10	59	9				
1430	11	3	1				
1440	11	6	53				
1450	11	10	45				
1460	11	14	37				
1470	11	18	29				
1480	11	22	21				
1490	11	26	13				
1500	11	26	5				
1510	11	26	57				
1520	11	30	49				
1530	11	34	41				
1540	11	38	33				
1550	11	42	25				

10 phice
 Inchois phice
 Inchois dicitur

1700 2 11 29 48
 1710 2 11 23 40
 1720 2 12 16 33
 1730 2 13 9 30
 1740 2 14 1 29
 1750 2 14 55 42
 1760 2 15 18 45
 1770 2 16 31 48
 1780 2 17 34 51
 1790 2 18 27 54
 1800 2 19 20 57
 1810 2 20 14 0
 1820 2 21 7 3
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 1850 2 23 46 12
 1860 2 24 39 15
 1870 2 25 32 18
 1880 2 26 25 21
 1890 2 27 19 24
 1900 2 28 12 27

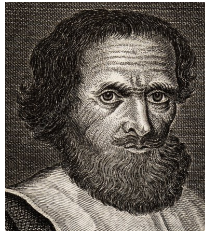
Die Inchois dicitur in vltima phice & hinc dicitur
 Inchois in vltima phice & hinc dicitur
 Inchois in vltima phice & hinc dicitur

Forman on knowledge and authority

- Studies hermetic and alchemical texts during year of publication of *Longitude*.
 - Recall: *prisca sapientia* = knowledge as arcane and divinely inspired.

"A magus's authority was in his credentials as heir to divine and ancient knowledge, credentials that Forman articulated through his experience of true judgements, marrying a language of hermeticism with practical expertise." (Kassell, pg. 56.)

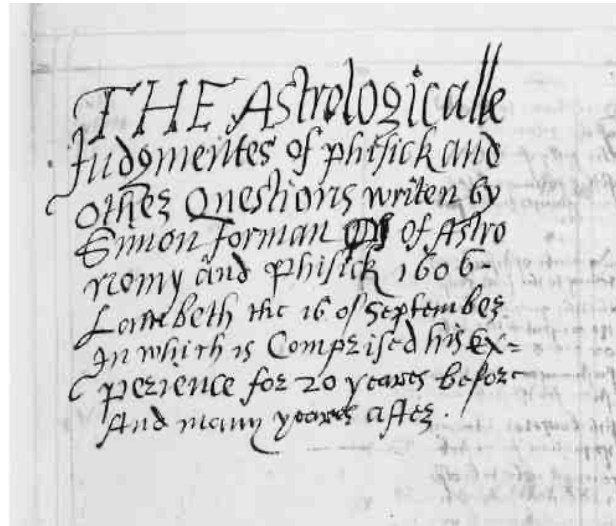
- Forman on book-learning:



"I have reade manie bockes in my daies which have entreated of love, and sene manie experments wryten howe to obtaine the love of maids, wives and wyddows, but I never found any of them true as they ar set downe, but fals and deceighetfulle."

"The page was Forman's arena... He projected himself above all as an authority on astrology, endowed by God with knowledge of the workings of the microcosm. But he did not expose his words on the printed page; the constant motion of his pen, endlessly perfecting his writings and protesting his expertise, did not propel his words into print." (Kassell, pg. 60.)

- Ex: Three unpublished works on astrological medicine:
 - 1594-95. "The grounds of arte gathered out of diverse authors".
 - 1596-99. "The astrologicall judgments of phisick and other questions".
 - 1600. "Liber iuditorum morborum" ("The book of the judgements of diseases").





Richard Napier (1559-1634)

- Intent: Combine into a single text on astrological medicine co-authored with Richard Napier, rector of Great Linford.
- 1602. Napier sends Forman "A treatise touching the defenc of astrologie".
- Project was never completed.

"Defending his reputation, vindicating his practices, preserving his expertise; this was why Forman wrote and planned to print 'Astrologicallye judgementes'." (Kassell, pg. 71.)

