

Sept. 12 1919.

My dear Mr. Voynich,

I have no news today about the cipher; I have had little time for work in the last six weeks and although I think I have made some progress it is nothing much. When I see you I'll tell you all about it.

But I have something else of ynterest (that was a slip, but for Bacon's sake I'll let it stand - I know he would spell it so) to tell you. In Aug. I stopped at your office to look at the Tebith MS, thinking I might find in it something to help on the cipher. Looking through it I was struck by some notes much resembling the hand of the Politics notes; I copied one. On getting home I found a parallel in Bacon's works. This you will find on the first / page of the enclosed sheets. This aroused my interest and last Monday I found the time to go to N.Y. and spend the day on the MS. I examined all the notes sufficiently to get an idea of their contents; read those dealing with subjects I remembered seeing in Bacon's works and copied as many of these as time allowed. Time was short (although Miss Nill stayed until six to oblige me and that in a temperature of above 90 degrees), I had to work as fast as I could and of course made many mistakes, which you must forgive.

You will find closed all the notes, except two or three of no interest without bearing on the problem, together with such parallels from Bacon's works as I could find.

You will be able to judge of the significance of the evidence for yourself. It is my opinion that these few extracts, and I have no doubt very many more could be found, make out a strong case for the Baconian authorship of the notes. Mere parallels in astronomical data would not be so significant, for there was but little available material in the 13th century and that little would be common to all. But here we have

- (1) A man writing between 1234 and 12⁹47,
- (2) Rejecting important features of the all-but-canonical Ptolomaic⁴ astronomy
where is this date? (In Tebith - but not in Bacon)
- (3) Accepting the doctrine of "trepidation", that the fixed stars have moved since Ptolemy's time
- (4) Explaining it by Tebith's theory of the tenth sphere
- (5) Attributing this theory to the Indians also
- (6) Attributing to Ptolemy a belief in the ninth and tenth spheres
- (7) Representing him as holding it because of a "diversity of poles"
- (8) Stating explicitly that the ninth and tenth spheres have no stars
- ✓ (9) Urging that the "moderns" ought to reform the calendar
- ✓ (10) Regretting that a decree of a General Council forbids it
- (11) Attributing to Eusebius responsibility for the present calendar
- (12) Acquainted with the calendar of Marseilles
- (13) Ascribing the evil eye and the magic virtue of charms to the influence of the stars

- ✓ (14) Showing knowledge of the laws of reflection and
- ✓ (15) Disposition to turn his scientific knowledge to practical account.
- (16) Referring to the comet of 1264 in proof of the truth of Albumasar's doctrines of comets (the parallel may go further, see my note)

If the book "Speculum Astronomicum" is also Bacon's two others may be added

- (17) Quotation from Albumasar's "Experimenta", rare if not unique (two)

(18) Statement that the Marseilles calendar made the day begin at midnight.

✓ Add that this man was sufficiently skilled in the use of astronomical instruments to make careful observations of the solar eclipse of May 24(13) 1268.

Sixteen of these points are known to apply to Bacon and the other two probably do. To what other man of the thirteenth century would they apply?

Three difficulties present themselves.

(1) The notes differ much in the character of the hand. Most of them are very clear and neat but some are carelessly scrawled. This point will require careful study. It is however my impression that MM all are by the same hand, the differences being due to ink, pen, care and age.

(2) The notes begin seemingly as early as 1234 when Bacon was, as supposed, only 20 years old. But he says himself in 1267 that he had been studying the sciences forty years, so that this no difficulty, however it is to be explained.

(3) The notes seem to extend to the year 1297, while Bacon is supposed to have died in 1292. But this date is accepted only by Little (p.28), Bridges (I xxxiii) Brewer (xvi, n.1) and Charles (41 n.2) say that there is no trustworthy evidence as to his death; we only know that he was living in 1292. If so, your MS supplies information of great interest. Prof. Doolittle tells me also that the observations of the eclipse of May 1268 would be of no little interest to an astronomer.

The question as to the authorship of these notes could probably be settled by comparison with Bacon's "Computus Naturalium" (Little No.7) of which the best MS is in the British Museum. It has not been printed.

Before closing, - have you observed Bridges' note II 203 about the copy of Peter Perigrinus of Maricaut's (Bacon's friend) book (1558) in the B.M. with autograph notes by Dee referring to Bacon?

With all good wishes
yours as ever

Wm. Brewster

Last night I encountered something which may be taken either as pro or con the Baconian authorship of your MS. ff. 116v-117r contain the Toledan tables of longitude and latitude with notes - all in Bacon's (?) hand. Toledo is given long. 110°. On foot of 116v is note "Tabula ista ostendit distantiam regionum positorum ab occidente medi mundi per gradus longitudinum et demonstrat earum remotiorem ab equinoctiali linea." On fol. 117r another note says only one-fourth of the world is habitable and repeats the statement that the longitudes are measured from the western equinoctial circle. Now in Opus Majus, Vol. I, pp. 290-300 Bacon controverts at length the prevalent view that only one-fourth is habitable and also the practice, exemplified in the Toledan tables, of reckoning longitude from an arbitrary western limit. It ought, he says, to be reckoned from the western equinoctial line. He writes precisely as though he had the notes in question before him; e.g. the note on fol. 117r with his words:

MS. 117r:

"Unde hec est tabula longitudinis civitatum ab equatore, id est circulo equinoctiali per occidentem."

Bacon p. 299

"Tabula vero latitudinum et longitudinum non accipit longitudes ab occidente sub aequinoctiali, ut certum est. Nam sic longitudo Toleti est XXIX graduum ab occidente, et secundum tabulam non est nisi XI (So it is in the MS. table). Et auster illius tabulae sumpsit occidentem ei notum et certum et respectu situs suae regionis."

In view of this contradiction three theories are possible:

(1) The author of the MS. notes throughout was not Bacon.

~~(2) These particular notes were written by him before he adapted the views expressed in the Opus Majus. MS. in which he found the Table and are criticized in the Opus Majus.~~

(2). These particular notes were written by him before he adopted the views expressed in the Opus Majus.

(3) These particular notes were copied by him from the MS. in which he found the Table and are criticized in the Opus Majus.

The third seems to me most likely, for the author has done it in other cases, e.g. 116r "Ista tabula offendit per" etc. 119r "hanc tabulam ... sic credo debere emendari." (and others).

p. 78v. foot. Quotation from Geber; opposite, on foot of 79r, three criticisms of Geber's statements, concluding "Istam glosam inveni scriptam in quadam cedula nescio si est de isto opere." So the author copied items with which he did not agree; sometimes he records his ~~dis~~ disagreement, but there is no reason to assume he did so in every case. Have you a copy of the Toledo tables? If so, are these notes there?

(From letter of Prof. Newbold
dated June 23, 1921).

I have found several other parallels but I need not recount them for I've run across something which is evidence of the strongest kind.

You will remember that in the passage of the Op. Majus to which I referred yesterday Bacon gives the longitude of Toledo from the West as 29° thus correcting the Toledan Tables which give it as 11° .

Duhem Tom. III, pp. 499-529, gives an account of certain "Canones" or rules for using the Toledan Tables which he found in 3 MSS in France. They are addressed to a "care Johannes" and are of interest especially because they give instructions for the observation of a solar eclipse by the camera obscura. Duhem attributes them to Bacon and one of his proofs is the fact that the author gives the long. of Toledo as $28\frac{1}{2}^{\circ}$.

Now both your MS. and Bacon (Op. Majus) name the town of Arym or Arim (= Assorean) as "medius mundi," distant from the west 90° of longitude.

If Toledo is $28\frac{1}{2}^{\circ}$ the difference would be $61\frac{1}{2}^{\circ}$ degrees, which would represent a difference in time of 4 hours 6 minutes, for every 15° = 1 hr. and every minute of longitude = 4 m. of time. With this compare the following note in your MS. f. 85v. "longitudo tolleti a medio mundi est 4 h. et 6 minutorum."

Exact correspondence! The 29° of the Opus Majus is either a round number or represents a less exact calculation.

I think this is very nearly conclusive. But to clinch the proof your MS. must be compared with the "Canones."

(From letter of Prof. Newbold,
dated June 29, 1928).

It is not possible that the author of the MS. is quoting Bacon (This is
reply to suggestion on the part of Mr. Voynich that perhaps author of our
astronomical MS. was quoting from Bacon.) Two of the dates in it, 1266, 1270,
are certainly contemporary and one cannot suppose the *Opus Majus* public
property then. The *Spec. Astro.* in which also these parallels are found, was
written 1277. Moreover the author is extremely scrupulous in quoting his
authorities, naming no less than 34. Frater Albertus, Albategin, Alchabitius,
Albunassar, Angelus Viterbiensis, Alfraganus, Augustinus, Arzachelis, Algorismus,
Abileasim de Hecherit qui dicitur Almacherita, Mag. Bonagratius, Campanus,
Dionysius Ysopus, Dorotheus, Guilielmus Anglicus, (Guil. Marilliensis, same
as preceding), Guil. de Latusa, Girardus, Guido, Geber, Habraam Judaeus,
Renner = Ammonius (writing of Prof. Newbold not clear at this point) Homenis
Magister filie tholomei, Jorgis, Joh. Cardin. Joh. Damascenus, "Iste qui hoc
opus fecit (= Bona di Lucca), Lypuldas, Messahalla, Masus, Mich. Scotus,
Petrus Anfulinus, Ptolomaeus, Rufinus, Thebit. If he were using Bacon he would
have named him. (Note by Professor Newbold "I have underlined those I cannot
identify.")

I have found more parallels since I wrote but I cannot now enumerate them.

Sarton has
John Damascenus
I p. 507

The author seems to have been
extremely scrupulous in quoting his
authorities, ~~among~~ of whom there
are no less than 34!

1) Frater Albertus [Albertus Magnus?]
Albunassar etc

lypuldus -
Dr. this

lypuldus
Sarton
I p. 996

Petrus Anfulinus
=

Sarton I 200.

under translated from Arabic into Latin, a
compiled
Carissus
tabularum

Petrus Anfulinus 200

Alfraganus

I 109

Copy sent to Garland Nov. 23/28

for Mr. Steele

Re M-7111

(From letter of Prof. Newbold,
dated June 21, 1928.)

New parallels.....

Fol. 80v contains 9 of the 100 maxims of Ptol. Centiloquium. I have found in R B eight of which six are identical (except for minor verbal variations) with six of the 9 in the MS. and one of those in the MS not quoted by R B (or not found by me) is quoted in the Spec. Astr. of Pseud. Albert who is certainly R.B.

Fol. 62v contains a list of the decans to which Opus Majus I, 260-1 Metaph. ed. Steele, 48-49, is exactly parallel except for verbal changes.

Note This letter begins: "Just a note to cheer you up. The Baconian origin of the Astron. MS. seems to me certain...."

(I can find nothing earlier than this in the correspondence on the subject, which would imply that Prof. Newbold's first communication was verbal - probably during one of Mr. Voynich's frequent visits to Philadelphia).