

Valerius Terminus: of the Interpretation of Nature  
by Francis Bacon

Preface by Robert Leslie Ellis

The following fragments of a great work on the Interpretation of Nature were first published in Stephens's Letters and Remains [1734]. They consist partly of detached passages, and partly of an epitome of twelve chapters of the first book of the proposed work. The detached passages contain the first, sixth, and eighth chapters, and portions of the fourth, fifth, seventh, ninth, tenth, eleventh, and sixteenth. The epitome contains an account of the contents of all the chapters from the twelfth to the twenty-sixth inclusive, omitting the twentieth, twentythird, and twenty-fourth. Thus the sixteenth chapter is mentioned both in the epitome and among the detached passages, and we are thus enabled to see that the two portions of the following tract belong to the same work, as it appears from both that the sixteenth chapter was to treat of the doctrine of idola.

It is impossible to ascertain the motive which determined Bacon to give to the supposed author the name of Valerius Terminus, or to his commentator, of whose annotations we have no remains, that of Hermes Stella. It may be conjectured that by the name Terminus he intended to intimate that the new philosophy would put an end to the wandering of mankind in search of truth, that it would be the TERMINUS AD QUEM in which when it was once attained the mind would finally acquiesce.

Again, the obscurity of the text was to be in some measure removed by the annotations of Stella; not however wholly, for Bacon in the epitome of the eighteenth chapter commends the manner of publishing knowledge "whereby it shall not be to the capacity nor taste of all, but shall as it were single and adopt his reader." Stella was therefore to throw a kind of starlight on the subject, enough to prevent the student's losing his way, but not much more.

However this may be, the tract is undoubtedly obscure, partly from the style in which it is written, and partly from its being only a fragment. It is at the same time full of interest, inasmuch as it is the earliest type of the INSTAURATIO...

Note to Preface by James Spedding:

The manuscript from which Robert Stephens printed these fragments was found among some loose papers placed in his hands by the Earl of Oxford, and is now in the British Museum; Harl. manuscripts 6462. It is a thin paper volume of the quarto size, written in the hand of one of Bacon's servants, with corrections, erasures, and interlineations in his own.

The chapters of which it consists are both imperfect in themselves (all but three),--some breaking off abruptly, others being little more than tables of contents,--and imperfect in their connexion with each other; so much so as to suggest the idea of a number of separate

papers loosely put together. But it was not so (and the fact is important) that the volume itself was actually made up. However they came together, they are here fairly and consecutively copied out. Though it be a collection of fragments therefore, it is such a collection as Bacon thought worthy not only of being preserved, but of being transcribed into a volume; and a particular account of it will not be out of place.

The contents of the manuscript before Bacon touched it may be thus described.

1. A titlepage, on which is written "VALERIUS TERMINUS of the Interpretation of Nature, with the annotations of HERMES STELLA."
2. "Chapter I. Of the limits and end of knowledge;" with a running title, "Of the Interpretation of Nature."
3. "The chapter immediately following the Inventory; being the 11th in order."
4. "A part of the 9th chapter, immediately precedent to the Inventory, and inducing the same."
5. "The Inventory, or an enumeration and view of inventions already discovered and in use, together with a note of the wants and the nature of the supplies; being the 10th chapter, and this a fragment only of the same."
6. Part of a chapter, not numbered, "Of the internal and profound errors and superstitions in the nature of the mind, and of the four sorts of Idols or fictions which offer themselves to the understanding in the inquisition of knowledge."
7. "Of the impediments of knowledge; being the third chapter, the preface only of it."
8. "Of the impediments which have been in the times and in diversion of wits; being the fourth chapter."
9. "Of the impediments of knowledge for want of a true succession of wits, and that hitherto the length of one man's life hath been the greatest measure of knowledge; being the fifth chapter."
10. "That the pretended succession of wits hath been evil placed, forasmuch as after variety of sects and opinions the most popular and not the truest prevaleth and weareth out the rest; being the sixth chapter."
11. "Of the impediments of knowledge in handling it by parts, and in slipping off particular sciences from the root and stock of universal knowledge; being the seventh chapter."
12. "That the end and scope of knowledge hath been generally mistaken, and that men were never well advised what it was they sought" (part of a chapter not numbered).
13. "An abridgment of divers chapters of the first book;" namely, the

12th, 13th, and 14th, (over which is a running title "Of active knowledge;") and (without any running title) the 15th, 16th, 17th, 18th], 19th, 21st, 22nd, 25th, and 26th. These abridgments have no headings; and at the end is written, "The end of the Abridgment of the first book of the Interpretation of Nature."

Such was the arrangement of the manuscript as the transcriber left it; which I have thought worth preserving, because I seem to see traces in it of two separate stages in the developement of the work; the order of the chapters as they are transcribed being probably the same in which Bacon wrote them; and the numbers inserted at the end of the headings indicating the order in which, when he placed them in the transcriber's hands, it was his intention to arrange them; and because it proves at any rate that at that time the design of the whole book was clearly laid out in his mind.

There is nothing, unfortunately, to fix the DATE of the transcript, unless it be implied in certain astronomical or astrological symbols written on the blank outside of the volume; in which the figures 1603 occur. This may possibly be the transcriber's note of the time when he finished his work; for which (but for one circumstance which I shall mention presently) I should think the year 1603 is likely a date as any; for we know from a letter of Bacon's, dated 3rd July 1603, that he had at that time resolved "to meddle as little as possible in the King's causes," and to "put his ambition wholly upon his pen;" and we know from the ADVANCEMENT OF LEARNING that in 1605 he was engaged upon a work entitled "The Interpretation of Nature:" to which I may add that there is in the Lambeth Library a copy of a letter from Bacon to Lord Kinlosse, dated 25th March, 1603, and written in the same hand as this manuscript.

Bacon's corrections, if I may judge from the character of the handwriting, were inserted a little later; for it is a fact that about the beginning of James's reign his writing underwent a remarkable change, from the hurried Saxon hand full of large sweeping curves and with letters imperfectly formed and connected, which he wrote in Elizabeth's time, to a small, neat, light, and compact one, formed more upon the Italian model which was then coming into fashion; and when these corrections were made it is evident that this new character had become natural to him and easy. It is of course impossible to fix the precise date of such a change,--the more so because his autographs of this period are very scarce,--but whenever it was that he corrected this manuscript, it is evident that he then considered it worthy of careful revision. He has not merely inserted a sentence here and there, altered the numbers of the chapters, and added words to the headings in order to make the description more exact; but he has taken the trouble to add the running title wherever it was wanting, thus writing the words "of the Interpretation of Nature" at full lengths not less than eighteen times over; and upon the blank space of the titlepage he has written out a complete table of contents. In short, if he had been preparing the manuscript for the press or for a fresh transcript, he could not have done it more completely or carefully,--only that he has given no directions for altering the order of the chapters so as to make it correspond with the numbers. And hence I infer that up to the time when he made these corrections, this was the form of the great work on which he

was engaged: it was a work concerning the Interpretation of Nature; which was to begin where the NOVUM ORGANUM begins; and of which the first book was to include all the preliminary considerations preparatory to the exposition of the formula.

I place this fragment here in deference to Mr. Ellis's decided opinion that it was written before the ADVANCEMENT OF LEARNING. The positive ground indeed which he alleges in support of that conclusion I am obliged to set aside, as founded, I think, upon a misapprehension; and the supposition that no part of it was written later involves a difficulty which I cannot yet get over to my own satisfaction. But that the body of it was written earlier I see no reason to doubt; and if so, this is its proper place.

The particular point on which I venture to disagree with Mr. Ellis I have stated in a note upon his preface to the NOVUM ORGANUM, promising at the same time a fuller explanation of the grounds of my own conclusion, which I will now give.

The question is, whether the "Inventory" in the 10th chapter of VALERIUS TERMINUS was to have exhibited a general survey of the state of knowledge corresponding with that which fills the second book of the ADVANCEMENT OF LEARNING. I think not.

It is true indeed that the title of that 10th chapter,--namely, "The Inventory, or an enumeration and view of inventions already discovered and in use, with a note of the wants and the nature of the supplies",--has at first sight a considerable resemblance to the description of the contents of the second book of the ADVANCEMENT OF LEARNING,--namely, "A general and faithful perambulation of learning, with an inquiry what parts thereof lie fresh and waste, and not improved and converted by the industry of Man;... wherein nevertheless my purpose is at this time to note only omissions and deficiencies, and not to make any redargutions of errors," and so on. But an "enumeration of INVENTIONS" is not the same thing as "a perambulation of LEARNING;" and it will be found upon closer examination that the "Inventory" spoken of in VALERIUS TERMINUS does really correspond to one, and one only, of the fiftyone Desiderata set down at the end of the DE AUGMENTIS; viz. that INVENTARIUM OPUM HUMANARUM, which was to be an appendix to the MAGIA NATURALIS. See DE AUG. iii. 5. This will appear clearly by comparing the descriptions of the two.

In the ADVANCEMENT OF LEARNING Bacon tells us that there are two points of much purpose pertaining to the department of Natural Magic: the first of which is, "That there be made a calendar resembling an Inventory of the ESTATE OF MAN, containing ALL THE INVENTIONS, BEING THE WORKS OR FRUITS OF NATURE OR ART, which are now extant AND OF WHICH MAN IS ALREADY POSSESSED; out of which doth naturally result a note what things are yet held impossible or not invented; which calendar will be the more artificial and serviceable if to every reputed impossibility you add what thing is extant which cometh the nearest in degree to that impossibility: to the end that by these optatives and essentials man's inquiry may be the more awake in deducing direction of works from the speculation of causes."

The Inventory which was to have been inserted in the 10th chapter of

VALERIUS TERMINUS is thus introduced:—"The plainest method and most directly pertinent to this intention will be to make distribution of SCIENCES, ARTS, INVENTIONS, WORKS, and their portions, ACCORDING TO THE USE AND TRIBUTE WHICH THEY YIELD AND RENDER TO THE CONDITION OF MAN'S LIFE; and under those several uses, being as several offices of provisions, to charge and tax what may be reasonably exacted or demanded,... and then upon those charges and taxations to distinguish and present as it were in several columns what is extant and already found, and what is DEFECTIVE AND FURTHER TO BE PROVIDED. Of which provisions because in many of them, after the manner of slothful and faulty accomptants, it will be returned by way of excuse that no such are to be had, it will be fit to give some light OF THE NATURE OF THE SUPPLIES; whereby it will evidently appear that they are to be compassed and procured." And that the calendar was to deal, not with knowledge in general, but only with arts and sciences of invention in its more restricted sense--the PARS OPERATIVA DE NATURA (DE AUG. iii. 5.)--appears no less clearly from the opening of the 11th chapter, which was designed immediately to follow the "Inventory." "It appeareth then what is now in proposition, not by general circumlocution but by particular note. No former philosophy," etc. etc. "but the revealing and discovering of NEW INVENTIONS AND OPERATIONS,... the nature and kinds of which inventions HAVE BEEN DESCRIBED as they could be discovered," etc. If further evidence were required of the exact resemblance between the Inventory of VALERIUS TERMINUS and the Inventarium of the ADVANCEMENT and the DE AUGMENTIS, I might quote the end of the 9th chapter, where the particular expressions correspond, if possible, more closely still. But I presume that the passages which I have given are enough; and that the opinion which I have elsewhere expressed as to the origin of the ADVANCEMENT OF LEARNING,--namely, that the writing of it was a by-thought and no part of the work on the Interpretation of Nature as originally designed,--will not be considered inconsistent with the evidence afforded by these fragments.

That the VALERIUS TERMINUS was composed before the ADVANCEMENT, though a conclusion not deducible from the Inventory, is nevertheless probable: but to suppose that it was so composed EXACTLY IN ITS PRESENT FORM, involves, as I said, a difficulty; which I will now state. The point is interesting, as bearing directly upon the developement in Bacon's mind of the doctrine of Idols; concerning which see preface to NOVUM ORGANUM, note C. But I have to deal with it here merely as bearing upon the probable date of this fragment.

In treating of the department of Logic in the ADVANCEMENT, Bacon notices as altogether wanting "the particular elenches or cautions against three false appearances" or fallacies by which the mind of man is beset: the "caution" of which, he says, "doth extremely import the true conduct of human judgment." These false appearances he describes, though he does not give their names; and they correspond respectively to what he afterwards called the Idols of the Tribe, the Cave, and the Forum. But he makes no mention of the fourth; namely, the Idols of the Theatre. Now in VALERIUS TERMINUS we find two separate passages in which the Idols are mentioned; and in both all four are enumerated, and all by name; though what he afterwards called Idols of the Forum, he there calls Idols of the Palace; and it seems to me very unlikely that, if when he wrote the ADVANCEMENT he had already formed that classification he should have omitted all

mention of the Idols of the Theatre; for though it is true that that was not the place to discuss them, and therefore in the corresponding passage of the DE AUGMENTIS they are noticed as to be passed by "for the present," yet they are noticed by name, and in all Bacon's later writings the confutation of them holds a very prominent place.

To me the most probable explanation of the fact is this. I have already shown that between the composition and the transcription of these fragments the design of the work appears to have undergone a considerable change; the order of the chapters being entirely altered. We have only to suppose therefore that they were composed before the ADVANCEMENT and transcribed after, and that in preparing them for the transcriber Bacon made the same kind of alterations in the originals which he afterwards made upon the transcript, and the difficulty disappears. Nothing would be easier than to correct "three" into "four," and insert "the Idols of the Theatre" at the end of the sentence.

And this reminds me (since I shall have so much to do with these questions of date) to suggest a general caution with regard to them all; namely, that in the case of fragments like these, the comparison of isolated passages can hardly ever be relied upon for evidence of the date or order of composition, or of the progressive developement of the writer's views; and for this simple reason,--we can never be sure that the passages as they now stand formed part of the original writing. The copy of the fragment which we have may be (as there is reason to believe this was) a transcript from several loose papers, written at different periods and containing alterations or additions made from time to time. We may know perhaps that when Bacon published the ADVANCEMCNT OF LEARNING he was ignorant of some fact with which he afterwards became acquainted; we may find in one of these fragments,--say the TEMPORIS PARTUS MASCULUS,--a passage implying acquaintance with that fact. Does it follow that the TEMPORIS PARTUS MASCULUS was written after the ADVANCEMENT OF LEARNING? No; for in looking over the manuscript long after it was written, he may have observed and corrected the error. And we cannot conclude that he at the same time altered the whole composition so as to bring it into accordance with the views he then held; for that might be too long a work. He may have inserted a particular correction, but meant to rewrite the whole; and if so, in spite of the later date indicated by that particular passage, the body of the work would still represent a stage in his opinions anterior to the ADVANCEMENT OF LEARNING.

I have felt some doubt whether in printing this fragment, I should follow the example of Stephens, who gave it exactly as he found it; or that of later editors, who have altered the order of the chapters so as to make it agree with the numbers. The latter plan will perhaps, upon the whole, be the more convenient. There can be little doubt that the numbers of the chapters indicate the order in which Bacon meant them to be read; and if any one wishes to compare it with the order in which they seem to have been written, he has only to look at Bacon's table of contents, which was made with reference to the transcript, and which I give unaltered, except as to the spelling.

of the Interpretation of Nature with the Annotations of a few fragments of the first book, viz.

1. The first chapter entire. {Of the ends and limits of knowledge.}
2. A portion of the 11th chapter. {Of the scale.}
3. A small portion of the 9th chapter {being an Inducement to the Inventory.}
4. A small portion of the 10th chapter {being the preface to the Inventory.}
5. A small portion of the 16th chapter {being a preface to the inward elenches of the mind.}
6. A small portion of the 4th chapter. {Of the impediments of knowledge in general.}
7. A small portion of the 5th chapter. {Of the diversion of wits.}
8. The 6th chapter entire. {Of}
9. A portion of the 7th chapter.
10. The 8th chapter entire.
11. Another portion of the 9th chapter.
12. The Abridgment of the 12. 13. 14. 15. 16. 17. 18. 19. 21. 22. 25. 26th chapters of the first book.
13. The first chapter of {the} a book of the same argument written in Latin and destined {for} to be {traditionary} separate and not public.

None of the Annotations of Stella are set down in these fragments.

[The title] is written in the transcriber's hand: all that follows in Bacon's. The words between brackets have a line drawn through them. For an exact facsimile of the whole [see Contents pages 1 and 2].

[13.] refers to the first chapter of the TEMPORIS PARTUS MASCULUS; which follows in the manuscript volume, but not here. It is important as bearing upon the date of that fragment.

VALERIUS TERMINUS: OF THE INTERPRETATION OF NATURE

(by Sir Francis Bacon)

The first chapter of VALERIUS TERMINUS by Francis Bacon

An annotated version compiled and edited by Dr. Gisela Engel (Johann Wolfgang Goethe-Universitaet Frankfurt am Main with the assistance of Dr. Harvey Wheeler (Ret. USC, Martha Boas Distinguished Research Professor at USC) and aided by Melek Hasgün, Simone Wirthmann, Antje Peters, Martina Glebocki, Carsten Jägler, Katja Morawek, Cora Hartmann (students at Johann Wolfgang Goethe-Universitaet Frankfurt am Main).

Original Text	Annotations
Valerius Terminus:	
Of the Interpretation{1} of Nature	1A. The word "interpretation"
occurs	also e.g. in the title of
the essay	DE INTERPRETATIONE NATURAE
PROEMIUM	(1603; in Spedding vol.
III) and in	his definition of man as
"the servant	and interpreter of Nature"
(IV,47).	This definition of man is
the same	definition that we find in
the	magico-alchemical
tradition which is	in general refuted by
Bacon. Paolo	Rossi ("Bacon's idea of
science", in:	THE CAMBRIDGE COMPANION TO
BACON, ed.	by Markku Peltonen [1996],
25-46)	gives the following
comment:	
alchemy on	"Bacon condemned magic and
accused them of	ethical grounds. He
megalomania. He	imposture and of
participatory	refuted their non-

intentional  
attempt to  
few drops of  
from the  
tradition the idea  
make himself  
Bacon  
as  
recognition, but as  
exploration of  
of the  
transformed  
Bacon's  
servant and  
the same  
magico-  
instance in  
Agrippa von  
of magic  
the texts of  
form of  
secrets  
decipher The  
past and in  
dealing with  
necessary  
THE LETTER,

| method and their  
| unintelligibility, their  
| replace human sweat by a  
| elixir. But he borrows  
| magico-alchemical  
| that man can attempt to  
| the master of nature.  
| understands knowledge not  
| contemplation or  
| VENATIO, a hunt, an  
| unknown lands, a discovery  
| unknown. Nature can be  
| from its foundations.  
| definition of man as "the  
| interpreter of Nature" is  
| definition we find in the  
| alchemical tradition, for  
| the texts of Cornelius  
| Nettesheim.  
| But for all the exponents  
| and alchemistic culture,  
| ancient wisdom take the  
| sacred texts which include  
| that only a few men can  
| truth is hidden in the  
| the profound. Like when  
| sacred texts, it is  
| continuously to go BEYOND

which is more  
message  
at the  
always the same.

as in the  
the natural  
image or  
God.

reveal the  
divine ideas  
rejection of  
founded on  
interpretations of  
withdrawal from

both  
mediaeval  
flourishing in  
As all works  
power and  
but not his  
shew the  
the maker  
350). The  
will and  
subtly  
is very  
declare the  
firmament

| in search of a message  
| and more hidden. The secret  
| expresses a Truth which is  
| Origins and which is  
|  
| In the Hermetic tradition,  
| tradition of Platonism,  
| world is conceived as the  
| living manifestation of  
| Understanding nature can  
| presence in the world of  
| and archetypes. Bacon's  
| any natural philosophy  
| allegorical  
| Scriptures meant a  
| exemplarism and symbolism,  
| common features of  
| philosophy and still  
| the seventeenth century.  
| --says Bacon--show the  
| ability of their maker,  
| image, so God's works "do  
| omnipotency and wisdom of  
| but not his image" (III,  
| distinction between the  
| power of God, so fully and  
| present in Baconian texts,  
| important. "The heavens  
| glory of God, and the

this verse  
quoted by  
image of the  
the Word, is  
wisdom and  
Scriptures do not  
of God,"  
work of  
they speak of  
than man.

knowing  
God, natural  
book of God's  
Scripture reveals  
of nature,  
nature has  
essence or

European  
view of  
had a  
collaborative  
efforts  
general success.  
conceives it,  
(not the  
magicians  
attained only

| showeth his handworks":  
| from the Psalms (18,2) is  
| Bacon several times. The  
| world, immediately after  
| a sign of the divine  
| power, and yet the  
| call the world , "the image  
| but regard it only as "the  
| his hands," neither do  
| any image of God other  
| Theology is concerned with  
| the book of the word of  
| philosophy studies the  
| works. The book of  
| the will of God, the book  
| his power. The study of  
| nothing to say about God's  
| his will (IV; 340-3).  
|  
| Bacon proposed to the  
| culture an alternative  
| science. For him science  
| public, democratic, and  
| character, individual  
| contributing to its  
| In science, as Bacon  
| truly effective results  
| illusory achievements of  
| (and alchemists) can be

among  
of results,  
Scientific  
individual  
of man's  
the work  
who keeps  
the fruit  
financed by  
bodies. Every  
always a reform  
institutions and  
  
science, but  
"natural  
Bacon's  
differed both  
philosopher  
of the  
university  
the perfect  
values and the  
composite  
and artisans  
early  
  
were different  
individual sanctity  
and from the

through collaboration  
researchers, circulation  
and clarity of language.  
understanding is not an  
undertaking. The extension  
power over nature is never  
of a single investigator  
his results secret, but is  
of an organized community  
the state or by public  
reform of learning is  
also of cultural  
universities.  
  
Not only a new image of  
also a new portrait of the  
"philosopher" took shape in  
writings. This portrait  
from that of the ancient  
or sage and from the image  
saint, the monk, the  
professor, the courtier,  
prince, the magus. The  
ends theorized for the  
groups of intellectuals  
who contributed in the  
seventeenth century to the  
development of science  
from the goals of  
or literary immortality

"demonic"

natural modesty,  
manners, a smiling  
characteristics of the  
portrait of  
PHILOSOPHIARUM

Paris a  
and  
gathering, 'the  
'would  
the  
life'.  
there, all  
young man  
the stamp of  
his entry  
among  
rows as if  
long after  
man of  
save that  
habituated to the  
took his  
pulpit,  
and  
address...

| aims of an exceptional and  
| personality.  
| A chaste patience, a  
| grave and composed  
| pity are the  
| man of science in Bacon's  
| him. In the REDARGUTIO  
| Bacon wrote:  
| Then he told me that in  
| friend had taken him along  
| introduced him to a  
| sight of which', he said,  
| rejoice your eyes. It was  
| happiest experience of my  
| There were some fifty men  
| of mature years, not a  
| among them, all bearing  
| dignity and probity... At  
| they were chatting easily  
| themselves but sitting in  
| expecting somebody. Not  
| there entered to them a  
| peaceful and serene air,  
| his face had become  
| expression of pity... he  
| seat, not on a platform or  
| but on level with the rest  
| delivered the following

translation).

resembles  
than it does  
or the  
Cornelius  
bearing of the  
supplanted  
similar to  
"conversations" of the  
in Galileo's  
RECHERCHE  
same  
  
[Descartes  
frankly and  
the best  
other." But  
Bacon, the quiet  
knowing  
available to man  
collaboration. The  
which Bacon  
away from  
arbitrary  
summaries.  
on the  
scientific research  
ends, places

| (III, 559; Farrington's  
| Bacon's portrait doubtless  
| Galileo or Einstein more  
| the turbulent Paracelsus  
| unquiet and skittish  
| Agrippa. The titanic  
| Renaissance magus is now  
| by a classical composure  
| that of the  
| earliest Humanists. Also  
| DIALOGO and in Descartes's  
| DE LA VERITÉ we find the  
| familiar tone and style of  
| conversation in which  
| wrote] "several friends,  
| without ceremony, disclose  
| of their thoughts to each  
| there is besides, in  
| confidence that comes from  
| the new powers made  
| by technology and  
| new kind of learning, for  
| is searching, must get  
| touches of genius,  
| conclusions, chance, hasty  
| The emphasis laid by Bacon  
| social factor in  
| and in determining its

radically  
of the  
tradition."

Bacon  
mythical  
philosopher ("Orpheus  
646-649).

"interpretation: "that  
from facts  
methodological process,  
NATURE" (IV,  
means a  
Aristotelianism,  
Michel

characteristic  
epistemology is  
single method,  
must help  
way toward  
knowledge will go  
a higher  
liberty to a  
on. This  
principle of  
prepared

| his philosophy on a  
| different plane from that  
| followers of Hermetic

| In DE SAPIENTIA VETERUM  
| describes Orpheus as the  
| prototype of the  
| sive Philosophia", VI,

| 1B.  
| Bacon gives the following  
| definition of  
| reason which is elicited  
| by a just and  
| I call INTERPRETATION OF  
| 51). Now, this definition  
| harsh critique of  
| Scholasticism and Ramism.

| Malherbe comments on this:  
| "The main and most  
| feature of Bacon's  
| that it rests upon a  
| which is INDUCTION... It  
| the understanding on its  
| truth... Thus, true  
| from a lower certainty to  
| liberty and from a lower  
| higher certainty, and so  
| rule is the basic  
| Bacon's theory of science;

experimental  
relationship  
presence, it  
axioms and  
and

sciences  
of

known that this  
originates in  
more

POSTERIOR  
the nature  
for the

demonstrations,  
three

must be true  
subject; it

essential nature  
must be

related to the  
itself.

first  
essential  
referred

and

These  
commented  
scholastic

| in the natural and  
| history, determining the  
| between the tables of  
| governs the induction of  
| the abstraction of notions  
| ordains the divisions of  
| within the general system  
| knowledge. It is well  
| rule of invention  
| Ramus's methodology and,  
| formerly, in Aristotle's  
| ANALYTICS. To characterize  
| of the premises required  
| foundation of true  
| Aristotle had set down  
| criteria: the predicate  
| in every instance of its  
| must be part of the  
| of the subject; and it  
| universal, that is,  
| subject by itself and QUA  
| Aristotle was defining  
| propositions as being  
| propositions; and he  
| universality to necessity  
| extension to comprehension  
| three criteria were much  
| upon during the whole

transformed, or  
and others  
Whereas in  
expressed the  
conclusive  
became the  
systematic art:  
methodically  
exhibiting of  
must be  
extension, it must  
necessarily  
equivalent to  
rules for  
art in  
rules for  
Bacon: and  
different.  
and  
directiy  
infected by  
formalism.

ORGANUM makes  
replace  
which has  
until the end  
with an  
instrument, a

| period, and were  
| rather extended, by Ramus  
| in the sixteenth century.  
| Aristotle they had  
| initial conditions of any  
| syllogism, in Ramus they  
| conditions of every  
| within a system,  
| organized for the  
| knowledge, any statement  
| taken in its full  
| join things which are  
| related and it must be  
| a definition. But these  
| syllogistic or dialectic  
| Aristotle or Ramus become  
| inductive invention in  
| their meaning is quite  
| With the rule of certainty  
| liberty, Bacon aims at  
| opposing the old logic,  
| syllogistic or rhetoric  
|  
| By its title, the NOVUM  
| Bacon's ambition clear: to  
| the Aristotelian organon,  
| governed all knowledge  
| of the sixteenth century  
| entirely new logical

progress and

And the

he has

posterity

he has

truths or

have built

truths or

(III, 520). He

has nothing

does it

puts out

two ways of

discovering truth.

senses and

general

principles,

takes to

proceeds to

discovery of

way is now in

axioms

particulars,

unbroken

at the

of all. This

yet untried.

| new method for the  
| profit of human science.

| Chancellor proclaims that  
| achieved his aim, if  
| acknowledges that, even if  
| failed to discover new  
| produce new works, he will  
| the means to discover such  
| to produce such works  
| insists that his method

| to do with the old one nor  
| try to improve it. And he  
| the choice in these terms:

| There are and can be only  
| searching into and

| The one flies from the  
| particulars to the most  
| axioms, and from these  
| the truth of which it  
| settled and immovable,  
| judgment and to the  
| middle axioms. And this

| fashion. The other derives  
| from the senses and  
| rising by a gradual and  
| ascent, so that it arrives  
| most general axioms last  
| is the true way, but as

| (IV, 50)

the  
first way,  
reality and  
NATURE.

elicited  
call  
(IV, 51).

critique  
formal point of  
syllogism is  
deductive  
the  
consequences, from  
conclusions. And,  
reasoning,  
conclusions is  
the truth of  
knowledge will  
that are  
and  
essential. Now,  
mind acquire  
primary  
allowed by  
knowledge  
which  
contingent and

When it is left to itself,  
understanding follows the  
hastily applies itself to  
generates ANTICIPATIONS OF

But "that reason which is  
from facts by a just and  
methodological process, I  
INTERPRETATION OF NATURE"

Taken as a whole, Bacon's  
comes to this: from a  
view, Aristotle's  
essentially a logic for  
reasoning, which goes from  
principles to the  
the premises to the  
of course, in this kind of  
the truth of the  
necessarily derived from  
the premises, so that  
start with primary truths  
supposed to be necessary  
universal, that is,  
Bacon asks, how does the  
the knowledge of these  
truths, since, as it is  
Aristotle himself, all  
starts with experience,  
experience is always

mind go from facts or (phenomena) to the nature of necessity of the reasoning) the pre- we set up. Therefore, any valid form of the inquiry truth.

critique, it is various organon. First, a kind of empirical one and since it knowledge with is condemned empirical principles (or and to required gradually lead other. This empirical essential dogmas

| particular? How does the | the empirical knowledge of | sensible effects | knowledge of the very | things? The formal | syllogism (or deductive | makes the old logic forget | judicial question of how | first principles. | attempt to define the | theories must go through | upon how we establish | | From this general | easy to understand Bacon's | comments on the old | since such a logic induces | double start, the | the rational one, and | confuses the origin of | its foundation, the mind | to jump immediately from | particulars to first | axioms, in Bacon's terms) | render superfluous the | induction which would | from one point to the | instantaneous slip from | data to rational and

very nature  
itself,  
certainty; it  
and consent;  
with idols,  
it is this  
prejudice which  
themselves,  
most general  
experience,  
quickly as  
deduction of  
however  
the old  
and unduly  
of  
the  
premises without  
of the  
by the  
the human  
disposed that it  
which provide  
all  
Bacon argues,  
information about  
senses, and

| is made possible by the  
| of the human mind. Left to  
| the mind hurries toward  
| is prone to gain assent  
| it fills the imagination  
| untested generalities. And  
| natural haste and  
| gives mental activity its  
| anticipative form. By  
| anticipations draw the  
| principles from immediate  
| in order to proceed, as  
| possible, to the formal  
| consequences. Therefore,  
| paradoxical it may appear,  
| logic is unduly empirical  
| logical. And the critique  
| formalism [formalism draws  
| conclusions from the  
| inquiring upon the truth  
| premises] must be attended  
| critique of the nature of  
| mind.  
|  
| The human mind is so  
| relies on the senses,  
| it with the rudiments of  
| knowledge. Of course,  
| we cannot get any  
| things except with the

questioning  
into  
greatest  
of the human  
from the  
deceptions  
On the one  
and too  
subtle parts  
observation:  
the most  
On the other  
by a  
offer  
according to the  
"For it is a  
sense of man  
On the  
as well of  
are  
of the  
according to the  
(IV, 54). In  
reality, we  
information and  
the  
qualities  
real

| skeptics are wrong when,  
| them, they plunge the mind  
| despair. "But by far the  
| hindrance and aberration  
| understanding proceeds  
| dulness, incompetency, and  
| of the senses" (IV, 58).  
| hand, they are too dull  
| gross, and let the more  
| of nature escape our  
| their range is limited to  
| conspicuous information.  
| hand, they are misleading,  
| fundamental illusion: they  
| things to the mind  
| measure of human nature.  
| false assertion that the  
| is the measure of things.  
| contrary, all perceptions  
| the sense as of the mind  
| according to the measure  
| individual and not  
| measure of the universe"  
| order to have access to  
| have to rectify their  
| reduce a double delusion:  
| illusion that the sensible  
| offered by them are the

and the  
divided  
sensibility

third  
method: the  
upon a  
that  
the human  
are, with  
and that  
satisfied with  
for the  
thanks to a  
erases the  
of  
empirically  
not to be  
themselves.  
undoubtedly a  
that the  
reality and  
empirical  
the matter  
  
the old  
He agrees

| determinations of things  
| illusion that things are  
| according to our human  
| (IV, 194 et sq.).  
| Thus we can understand a  
| critique against the old  
| Aristotelian logic rests  
| metaphysics which believes  
| sensible experience gives  
| mind the things as they  
| their essential qualities,  
| philosophy can be  
| taking empirical phenomena  
| true reality of nature,  
| mere generalization that  
| particular circumstances  
| existence. Nevertheless,  
| qualified existences are  
| mistaken for the things  
| So far, Bacon is  
| modern, since he claims  
| object of knowledge is  
| that reality, if it can be  
| inductively known from  
| data, cannot be reduced to  
| of experience.  
| Bacon's fourth censure of  
| logic follows from this.  
| with the sixteenth-century

Aristotle was

without the

from what is

senses to

principles

wanted to know

explain the

the other

giving up

first

the

gave up any

truth. They only

systematic

introduce order

maintained

reduced to

arguments, that

invented to

promote the

science and

mistake

form. In the

fifth book of

develops a

sylllogism

| dialecticians that

| wrong when he thought that  
| understanding could skip,

| hard work of induction,

| immediately given to the

| what is posed in the first

| of science. Aristotle

| the truth, but did not

| method of invention. On

| hand, the dialecticians,

| the attempt to set up the

| principles (and thereby

| traditional Aristotelian  
| demonstrative science),

| attempt to reach the

| retained the deductive and

| form of discourse to

| into men's opinions, and

| that invention could be

| the mere search for

| is, for probable reasons

| persuade or convince.

| Bacon, however, wants to

| idea of an inductive

| argues that Aristotle's

| affects the syllogistic

| fourth chapter of the

| the DE AUGMENTIS, Bacon

| remarkable critique of the

for the  
formal logic  
eighteenth

all  
good or  
action of the  
judgeth" (III,  
without  
finding.

in the  
being not  
invention  
and the  
consequence is  
only, the  
392). The  
(the middle  
conclusion  
since the  
inventing  
have been  
words,  
the invention  
natural  
to good  
because of its  
that the

| and is partly responsible  
| widespread disregard of  
| in the seventeenth and  
| centuries.

| According to Bacon, "in  
| inductions, whether in  
| vicious form the same  
| mind which inventeth,  
| 392). One cannot find  
| proving, nor prove without

| But this is not the case  
| syllogism: "for the proof  
| immediate but by mean, the  
| of the mean is one thing,  
| judgement of the  
| another, the one exciting  
| other examining" (III,  
| syllogism needs the means  
| term) so that the derived  
| amounts to a proof. But  
| syllogism is incapable of  
| the middle term, it must  
| known before. In other  
| syllogistic form leaves  
| of the middle term to the  
| shrewdness of the mind or  
| fortune. Thus, it is  
| own demonstrative form

provide a  
useless for  
  
old logic  
built on it  
works or why the  
chance and  
sciences"  
practical effects,  
causes or laws  
method does  
the means of  
not set up  
intermediate  
needed to reduce  
reach the real  
rightly and by  
from the  
surprising that  
and not  
lives. Thus,  
experience  
deduction,  
use. And an  
proposed,  
carry the human  
to the real  
the means of

| syllogism is unable to  
| method of truth and is  
| science.  
  
| By now it is clear why the  
| and the knowledge which is  
| are unable to produce  
| extant works "are due to  
| experience rather than to  
| (IV, 48). To deduce  
| the mind must know real  
| of nature. Since the old  
| not supply the mind with  
| inventing causes and does  
| the scale of the  
| propositions that are  
| sensible experience and  
| science, or to derive  
| degrees the consequences  
| principles, it is not  
| invented works are too few  
| very useful for men's  
| from the start in sensible  
| to the end in practical  
| this old method is of no  
| entirely new one must be  
| which will be able to  
| mind from empirical data  
| causes, to supply it with

position of  
a secure  
consequences.  
the old logic  
whole, so  
nature has to be  
attempt,  
successive  
and to derive  
science",  
COMPANION TO BACON.  
[1996], 76-82).

philosophy of science  
Bacon's transformation  
of juridical  
empiricist  
finding is not to  
finding in modern

he matured. In  
writing in  
groundwork for  
existence of Religion  
treatises--like  
experimental and of

| invention, to justify the  
| first truths and to manage  
| deduction of practical  
| And, as the critique of  
| has to be understood as a  
| the interpretation of  
| conceived as a continuous  
| proceeding by degrees, by  
| stages, to invent truth  
| works. ("Bacon's method of  
| in: THE CAMBRIDGE  
| ed. by Markku Peltonen

| 1C.  
| Harvey Wheeler comments:  
| Most historians of the  
| are unfamiliar with  
| of his innovative theory  
| lawfinding into scientific  
| lawfinding. Baconian law-  
| be confused with cause-  
| "classical" physics.  
| Bacon's quest changed as  
| VALERIUS TERMINUS he is  
| English, trying to lay the  
| the validity of the co-  
| and Science.  
| Bacon's early experimental  
| Dense and Rare--are

of the philosophy  
trouble in disposing  
experimentalist efforts of Bacon.

somewhat better--

It is a  
harmonics and  
analyzed.

like to quote

NEW ATLANTIS

today's approach

Organum Bacon

"general theory of  
machine' (Hooke) was  
all

interpreters evaluate  
the prior  
and in comparison  
of Bacon's day.

Bacon and  
in contrast to the  
Newtonian Optics  
sequence prediction.

type of

He was seeking

| limited value. Historians  
| of science have little  
| these early  
| His work on sound was  
| experimental-theoretical.  
| post-pythagorean theory of  
| still not appropriately  
| Contempoary musicologists  
| the passages on sound in  
| for being compatible with  
| to music.

| By the time of the Novum  
| was seeking a more  
| science." Its 'logic  
| designed to be relevant to  
| non-theological domains.

| However, most Bacon  
| his science in contrast to  
| Aristotelian approaches  
| to the Ramist approaches  
| He rejected them both.

| Scholars then look beyond  
| evaluate his logic machine  
| "classical mechanics" of  
| (physics): linear time-

| Bacon was not seeking that  
| "cause/prediction"science.

of nature,

Pasteur than of

to interpret

the light of what

"science" will

and achievement.

interpretation of

square with the

the application of

"Salomon's House" in

viewed with

applicable to what

hermeutics than to

(Patrick Heelan is

hermeneutics.)

conclude that his

produce

the form of

not linear

Most

of Bacon

comparison with

one interprets

classical mechanics,

| hidden, "unwritten" "laws"

| more on the model of

| Newton.

| Any treatment that tries

| Bacon's Logic Machine in

| classical physics called

| distort Bacon's meaning

| Note: if a scholar's

| Bacon's Science does not

| detailed description of

| Bacon's science in

| NEW ATLANTIS, it should be

| scepticism.

| Bacon's science is more

| we call post-modern neo-

| Newtonian mechanics.

| good on post-modern neo-

| Consider: why did Bacon

| New Logic Machine would

| scientific knowledge in

| aphorisms and apothegms--

| time-sequence predictions?

| To summarize the above::

| contemporary interpreters

| evaluate his science by

| Newtonian mechanics. If

| Bacon on the basis of

reflect Bacon's

model is the "science" illustrated double helix. Their carefully in Watson's lifted from Bacon. It that it tells of a empiricist (in of empiricism) approach to "unwritten genetics.

instructive to study why dsiscover the genetic the physics of quantum theory theory of the Laureate.

of why Pauling genetic code.

molecular biologist of Kantian cracking the genetic science is application of contemporary biology.

| the result will not truly  
| science.

| A more fruitful modern  
| Watson-Crick type of  
| by their discovery of the  
| process, as described  
| book, could have been  
| was not. But the point is  
| highly successful, highly  
| Bacon's and Kant's meaning  
| phenomenological  
| the "understanding" of the  
| laws" of cell theory and

| NOTE: It is very  
| Linus Pauling failed to  
| code. He was an expert in  
| biochemistry and applied  
| to molecular biology. His  
| molecular bond won a Nobel

| Read Watson's explanation  
| failed to crack the

| Guenther Stent, the  
| U.C. Berkeley is an avowed  
| who narrowly missed  
| code, His philosophy of  
| highly relevant to the  
| neo-hermeneutics to

physics, as developed  
Bohm  
idea of the  
universe" to account  
empirically for the  
modern physics.

may not persuade  
relevance of  
phenomenological  
Bacon's Nov Org  
contrasted with his early  
second is the  
evaluating Bacon's  
the model of  
social sciences  
19th and mid  
essentially a model based  
physics--argue that  
"science."

20th century  
"hard" and "soft"  
called "second  
The results, in  
produced a  
empiricism  
compatible with the  
Bacon.

| Today's philosophy of  
| by John Wheeler and David  
| describes a "Baconian"  
| "participant-observer  
| "scientifically" and  
| evidence produced in post-

| I hold to two points that  
| others. The first is the  
| "law-finding" to the  
| empiricism at the heart of  
| logic machine--as  
| experimentalism. The  
| standard for us to use in  
| science. Those who apply  
| science widespread in the  
| and humanities during the  
| 20th centuries--  
| upon pre-Einsteinian  
| Bacon's science is not

| In the last half of the  
| "science" in both the  
| sciences underwent the so-  
| scientific revolution."  
| physics and biology,  
| phenomenology and an  
| that were both quite  
| pre-Newtonian science of

research in  
scientists of  
follows remarkably  
explained by  
described in  
taskforce  
quite as well  
by Bacon in

philosophy of science  
features in the Latin of  
Schematismus,  
operations, which  
"case method" of  
unwritten law  
rulings, cannot be  
of the Ellis  
works from that  
nor do justice to,  
with the Annotations of  
Hermes Stella{2}  
the  
Harley MSS.6463  
Stella"  
"Der Titel des  
entscheidend  
(Vorwort,  
ascertain  
determined

| About 80% of the actual  
| laboratories done today by  
| all fields, (unaware)  
| closely to the process  
| Bacon in Novum Organum and  
| New Atlantis--except that  
| research is not today  
| organized as was described  
| New Atlantis.  
| In thinking of Bacon's  
| remember the three  
| Novum Organum:  
| Processus, Form. These  
| have counterparts in the  
| searching for the implicit  
| behind a series of judge  
| understood from a reading  
| translation. Nobody who  
| version can understand,  
| Bacon's science.  
| 2. Franz Träger sums up  
| discussion on "Hermes  
| and "Valerius Terminus"  
| Fragments wurde zweimal  
| interpretiert. Ellis  
| 201/2):  
| "It is impossible to  
| the motive which

Valerius

remains,

may

name

end to

in

would

attained

text

of

wholly, for

the

commends the

knowledge

to the

but

and

was

of

student's

much

Bacon to give the supposed  
author the name of

Terminus, or to his  
commentator, of whose  
annotations we have no

that of Hermes Stella. It  
may be conjectured that by the

Terminus he intended to  
intimate that the new  
philosophy would put an

the wandering of mankind  
in search of truth, that it

be the TERMINUS AD QAEM in  
which when it was once

the mind would finally  
acquiesce.

Again the obscurity of the

was to be in some measure  
removed by the annotations

Stella; not however

Bacon in the epitome of

eighteenth chapter

manner of publishing

'whereby it shall not be

capacity nor taste of all,

shall as it were single

adopt his reader.' Stella

therefore to throw a kind

starlight on the subject,  
enough to prevent the

losing his way, but not

more."

Die andere klassische

Anderson | Interpretation gibt  
probably | (op.cit.16/17):  
end' | "The word 'terminus'  
of | indicates the 'limits and  
in | to which investigation may  
a | proceed. The ANNOTATIONS,  
hand, are | which 'none are set down  
star | this fragments'--to quote  
the | statement written on the  
the | manuscript by Bacon's  
ADVANCEMENT | to throw a light as by a  
significance | (STELLA). Now 'star' is  
word | symbol used by Bacon in  
his | GESTA GRAYORUM, the  
the | OF LEARNING, and the DE  
ADVANCEMENT | AUGMENTIS to represent the  
in | sovereign. And the  
'a | which he attaches to the  
of | 'Hermes' is evident from  
literature as | address to King James in  
as | Introduction to the  
invested | OF LEARNING. 'There is met  
in | your Majesty, says Bacon,  
ascribed | rare conjunction as well  
King, | divine and sacred  
| of profane and human; so  
| your Majesty standeth  
| of that triplicity which  
| great veneration was  
| to the ancient Hermes; the  
| power and fortune of a

illumination  
learning

learning:

says, 'of  
learning,  
fountain of  
king,  
always a  
appear  
beginning  
before

obtain a

by  
enabled to  
king of  
of  
importance,  
the  
he has

operation of  
knowledge  
helpers  
author's

| the knowledge and  
| of a Priest, and the  
| and the universality of a  
| Philosopher.' Bacon is, or  
| pretended to be, greatly  
| impressed by James's

| 'To drink indeed', he  
| the true fountains of  
| nay to have such a  
| learning in himself, in a  
| and in a king born, is  
| miracle.' And it would  
| that he hopes at the  
| of James's reign--long

| he suffers disillusionment  
| respecting his sovereign's  
| interest in the advance of  
| 'solid' knowledge--that,  
| whether or not he can

| greater position of state  
| beyond that allotted to him

| Elizabeth, he may be  
| have the modern Hermes,  
| the realm and head of the  
| church, and a literary man  
| no mean fame and  
| annotate a subject's work on  
| new science. James, when

| done this, may well be  
| prevailed upon to make  
| provision for the  
| the new method of  
| either by subsidizing  
| or by placing at the

foundations | disposal old or new  
175, | of learning (Works, II,  
396, | 180; VI, 90, 172; VIII,  
| 401)."  
klare | Brandt (op.cit., 54) lehnt  
den | diese Interpretation ab:  
Texten | "1. findet sich keine  
Stella als | Bezeichnung des Königs als  
gelten | eines Sterns, es läßt sich  
als | von Anderson angegebenen  
| nicht entnehmen, daß  
VIII, | Symbol für Jakob I. zu  
der | hat. 2. kann nur ein König  
263), | Hermes-Trismegistos  
von | angesprochen werden (so  
König | 335 und I, 432, nicht in  
unserer | englischen Fassung III,  
und | weil im Namen die Einheit  
eme | Priester, Philosoph und  
Hermes | liegt, aber im Titel  
wird | Schrift steht nur Hermes,  
'Terminus' | die Figur des Hermes hat  
weiter | vielfältige Bedeutung;  
der | ist der Grenzgott, auf ihn  
Interpret-- | schon in dem Wort  
sich | des Titels angespielt;  
| ist Hermes der Götterbote,  
| 'hermeneus' oder  
| die Hermesmythologie ist  
| hineingesponnen in die  
| interpretatio naturae, die

und in | Bacon zur Aufgabe stellt  
und | seine Rolle als 'keryx'  
wird | 'buccinator', als Bote des  
eine | Friedens (I, 580-581). Man  
sein | also lieber Hermes Stella  
zugleich | der vielen Masken Bacons  
Vorstellung | lassen und sich damit  
Titel | von der peinlichen  
König | befreien, Bacon kündigt im  
(eben | seines Werkes an, daß der  
von | die Fußnoten dazu verfaßt  
urn | das folgt aus der Annahme  
eine | Anderson)."  
halte | Dieser Auseinandersetzung  
für | die Bedeutung des Titels  
sei | neue Erklärung anzufügen,  
mit | ich, solange keine neuen  
peinlichen | Dokumente gefunden werden,  
Bacons | wenig sinnvoll. Allein, es  
befreien, | angemerkt, wollten wir uns  
Valerius | Brandt von dieser  
| Vorstellung bezüglich  
| Denken und Trachten  
| so blieben noch genug  
| Peinlichkeiten der Hybris  
| Bacons."  
in: The Works of Francis Bacon. Faksimile- | Franz Träger (Hg.),  
Neudruck der Ausgabe von Spedding, Ellis | Terminus. Von der  
| Interpretation der Natur  
| Würzburg: Königshausen und  
| Neumann, 1984, 25-26.

und Heath, London 1857-1874, in vierzehn  
Bänden (Stuttgart/Bad Cannstadt: Friedrich  
Fromann, Verlag Günther Holzboog, 1963),  
vol. 3.{3}  
that the  
is not  
MS6463. In  
Terminus was  
Advancement of  
Farrington  
opinion  
1603.  
1734  
Bacon's text.  
Spedding  
which  
order  
index.  
chapter  
Guisepppe  
UND DAS  
METHODE in:  
33.  
47. (1.  
the  
translations:  
Elisabeth  
1970;

| 3. Franz Träger discovered  
| Spedding & Ellis as MS6462  
| correct, in fact it is  
| his opinion Valerius  
| written before The  
| Learning. Anderson,  
| and Rossi also have the  
| that it was written in  
| Stephens in his edition of  
| uses the same order as the  
| handwritten copy of  
| Later editors, including  
| and Ellis, choose an order  
| corresponds to Bacon's new  
| of chapters given in his  
| Franz Träger compared the  
| translation of the 11th  
| with the translation of  
| Furlani, DIE ENTSTEHUNG  
| WESEN DER BACONISCHEN  
| Archiv für Geschichte der  
| Philosophie, ed. L. Stein,  
| Bd., Berlin, 1921, S.23-  
| Teil, 32. Bd., S. 189 ff).  
| Träger has also checked  
| following Bacon  
| ESSAYS, übers. von  
| Schücking, Stuttgart,  
|

WISSENSCHAFTEN,

Brück,

der

Rudolf

Gertraud Korf,

Berlin (DDR),

| NEUES ORGANON DER

| übers. von Anton Theobald

| Darmstadt, 1981 (Nachdruck

| Ausgabe, Leipzig, 1830);

| NOVUM ORGANON, übers. von

| Hoffmann, bearb. von

| hrsg. von Manfred Buhr,

| 1982.

OF THE INTERPRETATION OF NATURE.

CAP. 1.

Of the limits and end of knowledge.

In the divine nature both religion and philosophy hath acknowledged goodness in perfection, science or providence comprehending all things, and absolute sovereignty or kingdom. In aspiring to the throne of power the angels transgressed and fell<sup>{4}</sup>, in presuming to come within the Old the oracle of knowledge man transgressed Testament on the and

| 4. Antje Peters checked

| Testament and the New

| fall of the angels:

| Jesaja 14, 14

| Das Judentum ist geprägt

| antithetisch parallelen

| von Dämonen und Engeln als

| bzw. Helfer des Menschen.

| der Erzählung vom

| Das Buch Jesaja (Jes

| Ach, du bist vom Himmel

| strahlender Sohn der

von der

Vorstellung

Schädiger

Sie wird in

Engelfall entfaltet.

14,12ff)14:12

gefallen, du

Morgenröte. Zu

geschmettert, du

| Boden bist du

deinem

| Bezwinger der Völker.

ersteige den

| 14:13 Du aber hattest in

ich meinen

| Herzen gedacht: Ich

Sternen Gottes;

| Himmel; dort oben stelle

(Götter)versammlung

| Thron auf, über den

äußersten Norden.

| auf den Berg der

über die Wolken

| setze ich mich, im

gleichen.

| 14:14 Ich steige weit

Unterwelt wirst du

| hinauf, um dem Höchsten zu

äußerste Tiefe.

| 14:15 Doch in die

"Söhnen

| Im AT gehörte Satan zu den

Hofstaat, wie

| Gottes" im himmlischen

Ijob 1,6

| die wohl alte Vorstellung

1,6)1:6 Nun

| zeigt.

kamen die

| Das Buch Ijob (Ijob

Herrn

| geschah es eines Tages, da

kam auch der

| Gottessöhne, um vor den

und

| hinzutreten; unter ihnen

ursprünglich Gott

| Satan.

abgefallene und

| Er gilt als Diener Gottes

Himmel

| verkörpert eine

zum Gegner

| zugeschriebene Funktion.

| Der von dann von Gott

| mit seinem Diener aus dem

| gestürzte Engelsfürst wird

Menschen.

| Gottes und Verführer der

Teufel als ein  
gefallenen bösen

| Auch im NT findet der  
| oder der Fürst der  
| Engel Erwähnung.

(Lk  
ihnen: Ich  
Blitz vom

| Das Evangelium nach Lukas  
| 10,18)10:18 Da sagte er zu  
| sah den Satan wie einen

Korinther (2  
Wunder, denn auch  
Engel des

| Himmel fallen.  
| Der zweite Brief an die  
| Kor 11,14)11:14 Kein  
| der Satan tarnt sich als  
| Lichts.

Bacon auch  
Gottesstaat)  
dem größten  
des  
vorgelegten  
Engelfall  
verschiedenen  
wird.

| Neben den Bibeltexten wird  
| "De Civitate Dei" (Der  
| von Aurelius Augustinus,  
| lateinischen Kirchenlehrer  
| christlichen Altertums,  
| haben, in der das Thema  
| mehrfach unter  
| Gesichtspunkten erwähnt

Situation  
beleuchtet.

| So wird im elften Buch die

haben sich  
und sich die  
und seligen  
zweifellos

| der Engel besonders

| Buch XI, 11  
| ... Von dieser Erleuchtung  
| gewisse Engel abgewendet  
| Auszeichnung eines weisen  
| Lebens nicht bewahrt, das

Ewigkeit sichere  
sein kann. Sie  
Vernunftleben,  
einsichtsloses und  
wenn sie  
können. ...

die durch ihre  
Lichtes verlustig  
schlüssig  
sie fielen,

(zwischen  
konnte nur er  
bevor sie  
Fall  
sie, des  
verlustig, im  
verharren würden.

die gesündigt  
Tiefe dieser  
ihnen zu  
wurde, darin sie  
letzten  
Gerichtes zu  
offenbart ganz

| nur das ewige, seiner  
| und vergewisserte Leben  
| besitzen nur noch ein  
| wenn auch ein  
| derart, daß sie es, selbst  
| wollen, nicht verlieren

| Buch XI, 13  
| ... Die sündigen Engel,  
| Schlechtigkeit jenes  
| gingen, haben sie (die  
| Glückseligkeit), wie wir  
| folgern müssen, auch bevor  
| nicht gehabt. ...

| Buch XI, 19  
| ... Denn diese Scheidung  
| Licht und Finsteris)  
| allein treffen, der auch,  
| fielen, ihren künftigen  
| vorauswissen kont, und daß  
| Lichtes der Wahrheit  
| finsteren Hochmut

| Buch XI, 33  
| Daß es aber Engel gibt,  
| haben und in die tiefste  
| Welt verstoßen sind, die  
| einer Art von Kerker  
| bis zur bevorstehenden  
| Verurteilung am Tage des  
| bleiben haben: das

Petrus. Er sagt,  
Engel nicht  
die finsteren  
hinabgestoßen hat,  
im Gerichte  
...  
geschrieben  
widersteht, den  
(Jak 4,6; 1

Himmel der  
von dort  
untersten  
ruhelos in und her  
freiwilligen  
gerechte  
verknüpft  
Engeln, die im  
sind, als Lohn  
Sicherheit  
Verbleiben

Erkenntnisse zieht  
Leben der  
Buch:  
standhaft in dem

| deutlich der Apostel  
| daß Gott die sündigen  
| geschont, sondern sie in  
| Abgründe der Hölle  
| wo die bis zur Bestrafung  
| gefangen gehalten werden.  
| ... Und da ja Gott, wie  
| steht, "den Stolzen  
| Demütigen aber Gnade gibt"  
| Petr 5,5), wohnt die eine  
(Engelsgenossenschaft) im  
| Himmel und ist die andre  
| hinabgestürzt in diesen  
| Lufthimmel, um hier  
| zu schwirren.  
|  
| Buch XXII,1  
| Gott ist es, der mit dem  
| Sturz der Engel die völlig  
| Strafe ewiger Unseligkeit  
| hat und den übrigen  
| höchsten Gut verblieben  
| für ihr Verbleiben die  
| gewährt hat, daß dieses  
| kein Ende haben wird.  
|  
| Aufgrund dieser  
| Augustin Parallelen zum  
| Menschen, besonders im 12.  
|  
| Buch XII,1  
| ... Während die einen

für sie | allen gemeinsamen Gut, das  
seiner | Gott selbst ist, und in  
Liebe | Ewigkeit, Wahrheit und  
anderen, von ihrer | verharren, sind die  
als wären sie | eigenen Macht berauscht,  
höheren, | sich selbst ihr Gut, vom  
beseligenden Gut | allen gemeinsamen,  
abgefallen. ... | zum eigenen Selbst  
fell{5}: but in pursuit towards the | 5. Spedding's  
footnote: This clause is | repeated in the margin, in  
similitude of God's goodness or love | transcriber's hand.  
the |  
(which is one thing, for love is nothing |  
else but goodness put in motion or |  
applied) neither man or spirit ever |  
hath transgressed, or shall transgress.{6} | 6. similarly in: : I.M.  
Praefatio Sp. | I,132, 19-22; AL Sp. III,  
12 seq. | (D.A. Sp. I, 742, 19 seq.  
The angel of light that was, when he | taken from the French  
(footnote | Valerius Terminus by  
presumed before his fall, said within | Meridiens Klincksieck,  
translation of |  
himself, I WILL ASCEND AND BE LIKE UNTO |  
Francois Vert, |  
1986) | 7. Isaiah 14, 14:  
THE HIGHEST{7}; not God, but the highest. | Authorized Version: I will  
To be like to God in goodness, was no part | above the heights of the  
ascend | will be like the most  
of his emulation; knowledge, being in |  
clouds; I |  
creation an angel of light, was not the |  
high. |  
want which did most solicit him; only |  
because he was a minister he aimed at a |  
supremacy; therefore his climbing or |  
ascension was turned into a throwing down |  
or precipitation. |  
Man on the other side, when he was tempted |  
before he fell, had offered unto him this |  
suggestion, THAT HE SHOULD BE LIKE |  
UNTO GOD{8}. But how? Not simply, but in |  
this part, KNOWING GOOD AND EVIL. For |  
God does know |  
being in his creation invested with |  
thereof, then | 8. Genesis 3, 5:  
Authorized Version: For |  
that in the day ye eat

sovereignty of all inferior  
and ye

good and

the Geneva

in

Cambridge

XI:2 (1997),

in the

probably, Lancelot

Dr.

Boke of Moses,

3,4+5: Then the

Ye shal not

knowe, that

your eyes

as gods

[footnote c: As

doeth not

frute, save

you shulde eat

like to him]

the serpent

shall not

know that in

then your eyes

shall be as

evil.

| your eyes shall be opened,

| shall be as gods, knowing

| evil.

| For Bacon's alleged use of

| Bible see Henri Durel-Leon

| Transactions of the

| Bibliographical Society,

| p. 160 and n. 74, modified

| direction of AV by,

| Andrewes in AL. (Thanks to

| Leedham-Green)

| Geneva Bible: The First

| called Genesis, Chap

| serpent said to the woman,

| dye at all, But God doeth

| when ye shall eat thereof,

| shalbe opened, & ye shalbe

| knowing good and evil.

| thogh he shulde say, God

| forbid you to eat of the

| that he knoweth that if

| thereof, you shulde be

| Authorized Version: And

| said unto the woman, Ye

| surely die: For God doth

| the day ye eat thereof,

| shall be opened, and ye

| gods, knowing good and

serpens ad	Vulgata: dixit autem
moriemini /	mulierem nequaquam morte
quocumque die	scit enim Deus quod in
aperientur oculi	comederitis ex eo
scientes	vestri et eritis sicut dii
creatures{9}, he was not needy of power or dominion; but again, being a spirit newly God said,	bonum et malum 9. Genesis I, 1,26 Geneva Bible: Furthermore
inclosed in a body of earth, he was image according	Let us make man in our
fittest to be allured with appetite of them rule	to our likeness, and let
light and liberty of knowledge; therefore and over the	over the fish of the sea,
this approaching and intruding into God's over the	foule of the heaven, and
secrets and mysteries was rewarded with a earth, and	beastes, & over all the
further removing and estranging from God's crepeth & moveth	over everiething that
presence. But as to the goodness of God, there is no danger in contending or advancing towards a similitude thereof, as God said, Let	on earth.
that which is open and propounded to our after our	Authorized Version: And
imagination. For that voice (whereof the have dominion	us make man in our image,
heathen and all other errors of religion and over the	likeness: and let them
have ever confessed that it sounds not the cattle,	over the fish of the sea,
like man), LOVE YOUR ENEMIES; BE YOU LIKE and over every	fowl of the air, and over
UNTO YOUR HEAVENLY FATHER, THAT SUFFERETH creepeth upon the	and over all the earth,
HIS RAIN TO FALL BOTH UPON	creeping thing that
hominem ad	earth.
nostram et	Vulgata: Et ait faciamus
volatilibus	imaginem et similitudinem
universaeque terrae	praesit piscibus maris et
movetur in terra	caeli et bestiis
THE JUST AND THE UNJUST{10}, doth well	omnique reptili quod
	10. Matthew 5, 44-45

declare, that we can in that point commit | Geneva Bible: Love your  
enemies... |  
no excess; so again we find it often | That you may be the  
children of your | Father that is in heaven:  
repeated in the old law, BE YOU HOLY AS I | maketh his sunne to arise  
for he | evil, and the good, and he  
AM | raine on the iuste, &  
on the |  
sendeth | Authorized Version: Love  
unjuste. | enemies:... That you may  
your | children of your father  
be the | heaven: for he maketh his  
which is in | on the evil and on the  
sun to rise | sendeth rain on the just  
good, and | unjust.  
and on the | Vulgata: Ego autem dico  
vobis diligite | inimicos vestros ... ut  
sitis filii | Patris vestri qui in  
caelis est qui | solem suum oriri facit  
super bonos et | malos et pluit super  
iustos et | iniustos.  
HOLY{11}; and what is holiness else but | 11. Leviticus 11,44:  
goodness, as we consider it separate and | Authorized Version: For I  
am the Lord |  
guarded from all mixture and all access of | your God: ye shall  
therefore sanctify | yourselves, and ye shall  
evil? | I am holy: neither shall  
be holy; for |  
ye defile | yourself with any manner  
Wherefore seeing that knowledge is of the | thing that creepeth upon  
of creeping |  
number of those things which are to be |  
the earth. | 1 Peter 1, 16:  
accepted of with caution and |  
is written, | Authorized Version: For it  
and 20,26 | Be ye holy; for I am holy.  
| see also Leviticus 20,7

distinction{12}; being now to open a  
1.18 (D.A.)

fountain, such as it is not easy to  
discern where the issues and streams  
thereof will take and fall; I thought it  
good and necessary in the first place to  
make a strong and sound head or bank to  
rule and guide the course of the waters;  
by setting down this position or  
firmament{13}, namely, THAT ALL KNOWLEDGE  
IS TO BE LIMITED BY RELIGION, AND TO BE  
from the arch  
REFERRED  
overhead, in which

appear, in  
sense a firm  
the  
Bacon sets  
theories.  
important not  
secrets and  
desire to be  
in the Fall  
Angels. Thus it  
these limits,  
and its  
because God  
dominion over  
earth..."(Gen.I, 1,26).  
knowledge is  
this  
any suspicion  
arise because  
and  
TO USE AND ACTION{14}.  
vitae", Works,

| 12. cf. A.L. Sp.III, 264,  
| Sp. I, 433, I. 29,30)

| 13. Melek Hasgün comments:  
| 'Firmament' means, apart  
| or vault of heaven  
| the clouds and the stars  
| the literal etymological  
| support or foundation. At  
| beginning of his text  
| the basis for his further  
| According to Bacon it is  
| to try to find out the  
| mysteries of God or to  
| like God, as was the case  
| of Man and the Fall of  
| is forbidden to exceed  
| but to inquire into nature  
| creatures is legitimate,  
| has "...let man have  
| (...) all the  
| He maintains that all  
| limited by religion and by  
| statement he also avoids  
| on heresy, which could  
| of his desire for progress  
| knowledge.

| 14. "Ad meritum et usus

in order to  
For if any man shall think by view and  
probably not a  
inquiry into these sensible and material  
things, to attain to any light for the  
revealing of the nature or will of God, he  
shall dangerously abuse himself. It is  
true that the contemplation of the  
creatures of God hath for end (as to the  
natures of the creatures themselves)  
knowledge, but as to the nature of God, no  
knowledge, but wonder; which is nothing  
else but contemplation broken off, or  
losing itself. Nay further, as it was  
aptly said by one of Plato's school THE  
SENSE OF MAN RESEMBLES THE SUN, WHICH  
OPENETH AND REVEALETH THE TERRESTRIAL  
GLOBE, BUT OBSCURETH AND CONCEALETH THE  
CELESTIAL{15}; so doth the sense discover  
Des Songes,  
natural things, but darken and shut up  
taken from the  
divine. And this appeareth sufficiently in  
that there is no proceeding in invention  
of knowledge but by similitude; and God is  
only self-like, having nothing in common  
with any creature, otherwise than as in  
shadow and trope. Therefore attend his  
will as himself openeth it, and give unto  
faith that which unto faith belongeth{16};  
for more worthy it is to believe than to  
Then saith he  
think or know, considering that in  
therefore unto  
knowledge (as we now are capable of it)  
are Caesar's;  
the mind suffereth from inferior natures;  
that are  
but in all belief it suffereth from a  
spirit which it holdeth superior and  
more authorised than itself.{17}  
III,478,1.8 sq. (D.A.

To conclude, the prejudice hath been  
infinite that both divine and human  
knowledge hath received by the  
intermingling and tempering of the one  
with the other; as that which hath filled  
the one full of heresies, and the other  
full of speculative fictions and  
Sp.III, 350,I.24  
Vanities{18}.  
I.35 swq.)

( " "Bacon's

| vol. I, p. 132 ; Italics

| stress the importance;  
quotation.

15. Philo d'Alexandrie,

| Livre I, 83-4 (footnote  
Vert translation)

16. St. Matthew 22, 21:  
Authorized Version: ...

| unto them, Render  
| Caesar the things which  
| and unto God the things  
| God's.

17. cf. A.L. Sp.

| Sp. I, 830, I. 24 seq.

18. similarly: A.L.

| seq. (D.A. Sp. I, 545,  
| John Channing Briggs

But now there are again which in a  
THE  
contrary extremity to those which give to  
BACON, ed. by  
contemplation an over-large scope, do  
1996)  
offer too great a restraint to natural and  
separation of  
lawful knowledge, being unjustly jealous  
philosophy  
that every reach and depth of knowledge  
text are from  
wherewith their conceits have not been  
LEARNING):  
acquainted, should be too high an  
elevation of man's wit, and a searching  
in Bacon  
and ravelling too far into God's secrets;  
notion that  
an opinion that ariseth either of envy  
of learning  
(which is proud weakness and to be  
separation of  
censured and not confuted), or else of a  
philosophy. In  
deceitful simplicity. For if they mean  
passages Bacon  
that the ignorance of a second cause doth  
of the dire  
make men more devoutly to depend upon the  
divinity  
providence of God, as supposing the  
combine  
effects to come immediately from his hand,  
confound them.  
I demand of them, as Job demanded of his  
Plato and the  
friends, WILL YOU LIE FOR GOD AS MAN WILL  
Bacon  
FOR MAN TO  
learning  
acceptable  
philosophy," when it  
with natural  
heretical  
and  
350).  
strand of  
religion that

| science and religion", in:  
| CAMBRIDGE COMPANION TO  
| Markku Peltonen, Cambridge  
| comments on Bacon's  
| divinity and natural  
| (quotations in Briggs'  
| THE ADVANCEMENT OF  
|  
| A longstanding commonplace  
| scholarship has been the  
| the Baconian advancement  
| depends upon a strict  
| divinity and natural  
| a number of memorable  
| indeed warns his readers  
| consequences of confusing  
| with natural science: to  
| them, he says, is to  
| This is supposedly what  
| scholastics did, and what  
| explicitly designs the new  
| to overcome. Even the  
| hybrid "divine  
| is "commixed together"  
| philosophy, leads to "an  
| religion, and an imaginary  
| fabulous philosophy" (III,  
| According to this emphatic  
| Baconian doctrine,

nature is in  
atheistic, or an  
true  
that  
divinity  
fakery.

abuses in a  
the divine  
Paracelsian school,  
all natural  
Scriptures." The  
reverse the  
pantheism by  
(mortal or  
"living"  
divinity, when  
the Spirit  
matters of  
otherwise  
application  
matters  
6). If we  
word, the  
on  
principles. The  
knowledge, he  
Egyptians'  
sacred

| joins with the study of  
| danger of becoming  
| enthusiastic rival of the  
| church. Natural philosophy  
| traffics unwisely with  
| collapses into idolatry or  
|  
| Bacon's exemplum of these  
| modern proto-science is  
| philosophy of the  
| which seeks "the truth of  
| philosophy in the  
| Paracelsians mirror and  
| heresies of pagan  
| seeking what is "dead"  
| natural) from among the  
| (eternal) truths of  
| "the scope or purpose of  
| of God is not to express  
| nature in the Scriptures,  
| than in passage, and for  
| to man's capacity and to  
| moral or divine" (ut 485-  
| take Thomas Sprat at his  
| Royal Society was founded  
| generally similar  
| first corruption of  
| argues, resulted from the  
| concealment of wisdom "as

age of  
"the  
whereby  
into the  
industrious Mens  
warring  
religions (the  
College,  
soldiers in  
Royal  
Sprat's  
arm'd" not  
Catholicism,  
"inchantments of  
Frenses"  
characterized the  
revolutionaries.

is an  
for the  
he carefully  
work. Reason  
conception and  
mysteries of God  
"the inferring  
and  
479). In  
stirs  
illustrate

| Mysteries." The current  
| inquiry benefitted from  
| dissolution of the ABBYES,  
| their Libraries came forth  
| light, and fell into  
| hands." Surrounded by the  
| forces of contrary  
| society's rooms at Gresham  
| London, were occupied by  
| 1658), the founders of the  
| Society--according to  
| account--were "invincibly  
| only against scholastic  
| but against the  
| ENTHUSIASM" and "spiritual  
| that sometimes  
| Protestant  
  
| In Bacon's project, there  
| explicit, delineated role  
| study of divinity, which  
| separates from his own  
| is at work "in the  
| apprehension of the  
| to us revealed" and in  
| and deriving of doctrine  
| direction thereupon" (III,  
| the first instance reason  
| itself only to grasp and

inquire. This

Bacon's

natural

into the

manifestation of his

theology,

the

meaning of

The natural

but not

Reason's power

"consisteth of

lt

insofar as

or wholly

it possible.

[graft) his

doctrine upon

and

to open our

(pp. 172-

GRATIFY HIM?{19} But if any man without  
any sinister humour doth indeed make doubt  
ye speak  
that this digging further and further into

deceitfully  
his person?

Is it good

out? as one

so mock

| revelation; it does not  
| is the foundation of  
| distinction between true  
| philosophy, which inquires  
| world as God's  
| GLORY or power, and true  
| which piously interprets  
| scripturally revealed  
| God's inscrutable will.  
| world declares God's glory  
| his will (III, 478).  
| in theology therefore  
| probation and argument."  
| formulates doctrine only  
| God's revelation, largely  
| through Scripture, makes  
| The Lord "doth grift  
| revelations and holy  
| the notions of our reason,  
| applieth his inspirations  
| understanding" (III, 480).  
| 173)  
19. Job 13, 7-9:  
Authorized Version: Will  
wickedly for God? and talk  
for him? Will ye accept  
will ye contend for God?  
that he should search you  
man mocketh another, do ye  
him?

the mine of natural knowledge{20} is a used in A.L. Sp. thing without example and uncommended in Bacon refers to the Scriptures, or fruitless; let him (footnote) remember and be instructed; for behold it was not that pure light of natural knowledge, whereby man in paradise was able to give unto every living creature a name according to his propriety{21}, which gave occasion to the fall; but it was an God formed aspiring desire to attain to that part of the moral knowledge which defineth of good and the heaven, evil, whereby to dispute God's to se how commandments and not to depend upon the howsoever the revelation of his will, which was the creature, so was original temptation. And the first holy therefore records, which within those brief cattle, and to the memorials of things which passed before to everie the flood entered few things as worthy to for Adam found be registered but only him.

out of the every beast fowl of the Adam to see and every living name thereof. cattle, and and to every for Adam there for him.

| 20. This image is also III, 351, I, 16 where Democritus (Vert's

| 21. Genesis 2,19-20 Geneva Bible: So the Lord of the earth everie beast field, and everie foule of & broght them unto the man he wolde call them: for man named the living the name thereof. The man gave names unto all foule of the heaven, and beast of the field: but he not an help mete for

| Authorized Version: And ground the Lord God formed of the field, and every air; and brought THEM unto what he would call them: whatsover Adam called creature, that WAS the And Adam gave names to all to the fowl of the air, beast of the field; but was not found an help meet

Deus de humo  
et  
caeli adduxit ea  
vocaret ea /  
Adam animae  
eius /  
nominibus suis  
universa  
terrae /  
adiutor  
lineages{22} and propagations, yet  
LINAGES in  
nevertheless honour the remembrance  
148  
of the inventor both of music{23} and  
his brother's  
father of  
harp and organ.

eius Iuabal  
cithara et  
works in metal{24}. Moses again (who was  
the reporter) is said to have been seen in  
Zillah, she  
all  
instructor of  
and iron...

genuit  
fuitmalleator et faber  
ferri...  
the Egyptian learning{25}, which nation  
was early and leading in matter of  
Moses was  
of the

| Vulgata: Igitur Dominus  
| cunctis animantibus terrae  
| universis volatilibus  
| ad Adam ut videret quid  
| omne enim quod vovavit  
| viventis ipsum est nomen  
| appellavitque Adam  
| cuncat animantia / et  
| volatilia et omnes bestias  
| Adam vero non inveniebatur  
| similis eius  
| 22. Spedding's footnote:  
| original. See note 3, p.  
| 23. Genesis 4,21:  
| Authorized Version: And  
| name was Jubal: he was the  
| all such as handle the  
|  
| Vulgata: et nomen fratribus  
| ipse fuit pater canentium  
| organo  
| 24. Genesis, 4,22:  
| Authorized Version: And  
| also bare Tubalcain, an  
| every artificer in brass  
|  
| Vulgata: Sella quoque  
| Thubalcain qui  
| in cuncta opera aeris et  
| 25. The Acts 7,22:  
| Authorized Version: And  
| learned in all the wisdom

in words and

knowledge. And Salomon the king,{26} as 298,I.38; N.A. Sp. out of a branch of his wisdom extraordinarily petitioned and granted from God, is said to have written a natural history of all that is green from the cedar to the moss{27}, (which is but a rudiment between putrefaction and Salomon

exceeding

even as the

shore. And

the wisdome

East and

For he was

and he was

nacions rounde

thre thousand

were a

spake of

that is in

hyssope that

he spake

foules, and of

fishes. And

to heare the

all Kings of

of his

gave

understanding

| Egyptians, and was mighty

| deeds.

| 26. cf. A.L. Sp.III,

| III, 145, I seq.

| 27. 1 Kings 4, 29-34

| Geneva Bible: And God gave

| wisdome, und understanding

| muche, and a large heart,

| sand that is on the sea

| Salomons wisdome excelled

| of all the children of the

| all the wisdome of Egypt.

| wiser than anie man....

| famous throughout all

| about. And Salomon spake

| proverbes: and his songs

| thousand and five. And he

| trees, from the cedar tre

| Lebanon, even unto the

| springeth out of the wall:

| also of beastes, and of

| creping things, and of

| there came all the people

| wisdome of Salomon, from

| the earth, which had heard

| wisdome.

| Authorized Version:And God

| Salomon wisdom and

largeness of  
that is on the  
wisdom  
the  
country, and all  
he was wiser  
fame was in all  
he spake  
and his  
five. And he  
cedar tree  
unto the  
of the wall:  
and of fowl,  
and of fishes.  
to hear the  
all kings of  
of his

29-34:

sapientiam Salomoni  
et  
harenam quae  
praecedebat  
sapientiam omnium  
/ et erat  
hominibus.. Et erat  
gentibus per

| exceeding much, and  
| heart, even as the sand  
| sea shore. And Salomon's  
| excelled the wisdom of all  
| children of the east  
| the wisdom of Egypt. For  
| than all men...and his  
| nations round about. And  
| three thousands proverbs;  
| songs were a thousand and  
| spake of trees, from the  
| that is in Lebanon even  
| hyssop that springeth out  
| he spake also of beasts,  
| and of creeping things,  
| And there came all people  
| wisdom of Salomon. From  
| the earth, which had heard  
| wisdom.  
|  
| Vulgata: Liber Malachim 4,  
| Dedit quoque Deus  
| et prudentiam multam nimis  
| latitudinem cordis quasi  
| est in litore maris / et  
| sapientia Salomonis  
| orientalium et Aegyoptorum  
| sapientia cunctis  
| nominatus inuniversis

quoque Salomon  
fuerunt  
mille / et  
cedro quae  
hysopum quae  
disseuit de  
reptilibus  
de cunctis  
sapientiam  
regibus  
sapientiam eius  
9-14

hyssop is  
OTHELLO  
hyssop and  
thyme were  
of each  
the other  
used moss  
that moss  
he chose an  
general or  
an herb{28},) and also of all that liveth  
the Bible is  
and moveth. And if the book of Job be  
OFFICINALIS  
turned over; it will be found to have much  
KIRCHENSEPPL,  
aspersion of natural  
plant name  
derived from

| circuitum / locutus est  
| tria milia parabolas et  
| carmina eius quinque et  
| disputavit super lignis a  
| est in Libano usque ad  
| egreditur de pariete et  
| iumentis et volucribus et  
| et piscibus / et veniebant  
| populis ad audiendam  
| Salomonis et ab universis  
| terrae qui audiebant  
| Luther Bible: 1. Könige 5,  
| Melek Hasgün comments: The  
| mentioned in Shakespeare's  
| I,3: "Sow lettuce, set  
| weed up thyme". Hyssop and  
| believed to aid the growth  
| other, one being moist and  
| dry. The reason why Bacon  
| instead of hyssop could be  
| is also a moist plant and  
| expression which is more  
| known.  
| 28. The plant mentioned in  
| not "moss", but HYSOPPUS  
| [in German: JOSEFSKRAUT,  
| EISOP, YSOP)]. "The Greek  
| HÝSSOOPOS is probably

the  
not clear  
the plant  
Another  
AZZOF "holy  
name (cf.  
(Gernot Katzer  
Katzer in  
pomegranate  
  
ang.kfunigraz.ac.at/~katzer/germ/index  
problem of the  
Bible:  
  
an ancient  
it is  
part of the  
Pentateuch).  
is not a  
recipes, it  
everyday or  
Israel; the  
less  
plants are,  
less  
  
"collection  
must not  
three millennia

| Hebrew ESOB (mentioned in  
| Bible...), although it is  
| whether ESOB referred to  
| called hyssop today.  
| explanation gives Arabic  
| herb" as the source of the  
| French HERBE SACRÉ)  
| Website on Spices). Gernot  
| his entry on the  
| (<http://www->  
|  
| .html) considers the  
| names of plants in the  
|  
| "The pomegranate tree is  
| cultigen in Western Asia;  
| mentioned in the oldest  
| Old Testament (the  
| Although the Old Testament  
| collection of cooking  
| names many plants of  
| cultic usage in ancient  
| New Testament, though, has  
| descriptive character, and  
| consequently, named much  
| frequently.  
| If one wants to set up a  
| of biblical spices", one  
| forget that there are

the Old  
therefore, exact  
impossible.

(Isaiah 28,27) may  
difficulties of

with a  
rolled over  
out with a  
stick.'

structure, we  
plants are  
details of  
KAMMON

Greek KÝMINON  
behind English  
difficult to  
NIGELLA,  
BLACK CUMIN,  
closed capsule,  
opened.

Bible, botanic  
than general  
cumin" is  
and  
English word at  
Bible

| between the language of  
| Testament and ours;  
| translations are sometimes  
| The following quote  
| illustrate the  
| translation:  
| 'QETSACH is not threshed  
| sledge, nor is a cartwheel  
| KAMMON; QETSACH is beaten  
| rod, and KAMMON with a  
|  
| Because of the dialectic  
| may infer that the two  
| similar, but differ in  
| their harvest. The term  
| obviously is related to  
| (cumin), but also lies  
| CARAWAY; QETSACH is more  
| analyze. Probably it means  
| sometimes also called  
| whose seeds ripen in a  
| which must first be  
|  
| Yet in translating the  
| accuracy is less an aim  
| matters of style. "Black  
| less elegant than "cumin",  
| "nigella" is not an  
| all. Therefore, English

QETSACH as DILL,  
word that is  
dictionary.  
other hand,  
traditional, elegant  
translate  
is almost  
to resort  
translations of  
find some or  
(Hebrew terms are  
garlic (shuwm),  
(qetsach, also  
dill, quite  
also  
caper  
translated "desire"),  
cassia (qiddah,  
synonym of  
hyssop  
obscure),  
(shemen and  
juniper  
"fir" or  
pomegranate  
obscure) and

| translations render  
| CARAWAY or "fitches", a  
| missing from every modern  
| German translators, on the  
| who don't have a  
| word for CUMIN, commonly  
| KAMMON as CARAWAY (which  
| certainly wrong), and have  
| to DILL for QETSACH.  
| Comparing different  
| the Old Testament, one  
| all of the following  
| given in parenthesis):  
| onion (b@tsel), nigella  
| rendered as caraway oder  
| obscure), cumin (kammon,  
| caraway), coriander (gad),  
| (abiyownah, also  
| cinnamon (qinnamown),  
| also interpreted as a  
| cinnamon or cassia buds),  
| (ezowb, frequent but very  
| myrtle (hadac), olive  
| zayith, very frequent),  
| (b@rowsh, also given as  
| "pine"), almond (shaqed),  
| (rimmown or rimmon), rose  
| (chabatstseleth, very  
| saffron (karkom).  
|

Testament has not biologists--the birds to live (*sínapi*). Other Testament (Greek given in (*heedýosmon*, this mint in also (*áneethon*, (*peéganon*, cinnamon (*hýssoopos*, word in the (*agriélaios* "olive oil").

BIBLE (ed. by Selbie, says about the sprinkling the ritual of (Lv 14,4, Nu insignificant plant K 4,33); it strong enough to 19,29). It is references are Among many

| Similarly, the New  
| been translated by  
| latter had not suspected  
| in mustard plants  
| plant names from the New  
| include the following  
| (parenthesis): mint  
| is not the common name of  
| Greek), cumin (*kýminon*,  
| translated caraway), anis  
| (also rendered dill), rue  
| (not the common term),  
| (kinnámoomon), hyssop  
| referring to the obscure  
| Old Testament) and olive  
| "olive tree" and *elaíon*  
|  
| The DICTIONARY OF THE  
| James Hastings and John A.  
| Edinburgh, 3rd ed.1914)  
| HYSSOP: "It was used for  
| blood (Ex. 12,22) and in  
| the cleansing of lepers  
| 19,6); it was an  
| growing out of the wall (1  
| could afford a branch  
| support a wet sponge (Jn  
| possible that all these  
| not to a single species.

probable is  
majoran, e.g.,  
common caper-  
which may be  
crevices in walls  
(E.W.G.Masterman).

about the  
Grimm in  
seq.) give

eisop; hysop, m.  
L., KLEINER  
BLÄTTERN und  
GELEGENTLICH WIRD  
PFLANZEN  
SATUREJA  
WB. D. DT.  
PRITZEL-JESSEN  
FISCHER

züfā; HEBR. .;  
F., hyss\_pum  
SG.); AGS.  
M. NEBEN  
M.; MHD.  
MEIST  
12, 22;

| suggested plants the most  
| either a species of  
| ORIGANUM MARU, or the  
| plant (CAPPARIS SPINOSA),  
| seen growing out of  
| all over Palestine"  
|  
| For the German traditions  
| hyssop Jacob and Wilhem  
| DEUTSCHES WÖRTERBUCH (1854  
| the following information:  
| YSOP, isop, ispe(n),  
| (F.), HYSSOPUS OFFICINALIS  
| BUSCH MIT STARK DUFTENDEN  
| VIOLETTEN BLÜTEN.  
| DER NAME AUF VERWANDTE  
| ÜBERTRAGEN, VOR ALLEM AUF  
| HORTENSIS L., VGL. MARZELL  
| PFLANZENN. 2, 966 ff.;  
| PFLANZEN (1882) 363 f.;  
| SCHWÄB. 4, 53.  
| HERKUNFT UND form.  
| ASS. zūpu; SYR.-ARAB.  
| GRIECH. ; ; LAT. hyss\_pus  
| N.; GOT. hwssopon (DAT.  
| ysope f.; AHD. hysop ST.  
| SPÄTEREM ISOPO, isipo 5W.  
| ysope M. (NOCH BEI LUTHER  
| SCHWACH FLEKTIERT: EXOD.

HEBR. 9,  
AUCH ALS FEM.  
GL. 3, 264,  
der ispen  
von der  
MEGENBEEG  
VGL. 420;  
LIEDERBUCH D.  
NHD. (h)ysop,  
TRADITION  
EINFÜHRUNG DES  
SÜDEUROPÄISCHEN YSOPS ALS  
(2) BERUHT  
IN NAHEZU  
SPRACHEN. NEUER-  
DES  
HYSSOPUS  
BEZWEIFELT MARZELL  
UM JOAN. 19,  
WB. ZUM  
1541). DER NAME  
DURCHWEG  
BIS INS 14.  
(S. U.  
ysopo TRIERER  
SG.. ysopum  
AUCH SPÄTER

| LEVIT. 14, 52; PS. 51, 9;  
| 19); SPÄTAHD.-FRÜHNHD.  
| (YSOPUS *îspa* [12. JH.] AH.  
| 53 ST.-S.; DE ISOPO von  
| [12.JH.] EBDA 4, 365, 46;  
| ispen [UM 1350] KONRAD V.  
| BUCH D. NATUR 405 PF.;  
| yspen, die nit felt  
| HÄTZLERIN 234 HALTAUS).  
| isop, WEITERES S.U.  
| AUF DER BIBELSPRACHLICHEN  
| (1) UND AUF DER FRÜHEN  
| ORIENTALISCH-  
| HEIL- UND GEWÜRZPFLANZE  
| SEINE REICHE BEZEUGUNG  
| ALLEN EUROPÄISCHEN  
| DINGS WIRD DIE IDENTITÄT  
| BIBLISCHEN ysop MIT  
| OF/ICINALIS WIEDER  
| A. A. O. (ZUR DISKUSSION  
| 29 VGL. BAUER GRIECH.-DT.  
| NEUEN TESTAM. [4 1952]  
| ERSCHEINT BIBEL-SPRACHLICH  
| ALS MASK., GELEGENTLICH  
| JH. IN LAT. FLEXIONSFORM  
| DAT. SG. *isupo* NOTKER,  
| PS., ysopo PASSIONAL; AKK.  
| WERNHER MARIENLEBEN) UND

ANLAUT: hyssop  
 alle (1699) 1,  
 SCHR. (1864)  
 NEUES TEST.  
 IN SEINER  
 VERWENDUNG (2):  
 MITTELSILBENVOKALS S... OB.  
 GL. 4, 235,  
 EBDA 3, 542,  
 JH.  
 isp(e) FISCHER  
 ABWEICHENDE  
 zwispe 6,  
 BAYER. 1, 168.  
 ALBERTUS  
 FÄBRICUS  
 eysopwein  
 365; eisop M.  
 31. DIE  
 NEBENFORMEN  
 A. A. O.;  
 SP. 380,  
 4, 2, 1579  
 12, 22;  
 49fl.; num. 19,  
 9, 19

| NOCH MIT SPIRANTISCHEM  
 | ABR. A S. CLARA etw. f.  
 | 98; hysop BRENNER ERZ. U.  
 | 1, 20; hyssop TILLMANN  
 | (LPZ. 6 1958) 625. WEITER  
 | EINGEDEUTSCHT IST DAS WORT  
 | VOLKSSPRACHLICHEN  
 | SYNKOPE DES  
 | SOWIE isp (12. JH.) AHD.  
 | 38 ST.-S.; yspe (14. JH.)  
 | 25; ispe (U. Ä.) 14./16.  
 | DIEFENBACH GL. 310b ;  
 | SCHWÄB. 4, 53 (STÄRKER  
 | MISCHFORMEN zispe EBDA,  
 | 1472), SCHMELLER-FR.  
 | NICHT SELTEN DIPHTHONGIERT  
 | garteneisop, zwibeleisop  
 | dict. (1540) FF la ; eisop  
 | RER. MISNIAC. (1569) 246;  
 | ZEHNER NOMENCL. (1643)  
 | BÖHME VIEHARTZNEY (1682)  
 | ZAHLREICHEN MUNDARTLICHEN  
 | S. IM ÜBRIGEN BEI MARZELL  
 | VGL. NOCH eisop TEIL 3,  
 | eisewig 3, 377, hispe F.,  
 | SOWIE isop 4, 2, 2182.  
 | GEBRAUCH.  
 | 1) BIBELSPRACHLICH. EXOD.  
 | LEVIT. 14, 4 U. 6; 14,  
 | 6 u. 18; PS. 50 9 U. HEBR.

ZUSAMMENHANG | ERWÄHNEN DEN YSOP IM  
REINIGUNGSZEREMONIEN. 3. | KULTISCHER  
VERGLEICH | REG. 4, 33 DIENT ER EINEM  
WEISHEIT | ZUR VERANSCHAUUNG DER  
29 WIRD DEM | SALOMOS (S.U.). JOAN. 19,  
ESSIGSCHWAMM UM EINEN | GEKREUZIGTEN DER  
(HIERZU VGL. | YSOP GEWICKELT GEREICHT  
NEUEN | BAUER GRIECH.-DT. WB. ZUM  
DIESEN | TESTAM. [4 1952] 1541). AN  
ALLEN | STELLEN IST DAS WORT IN  
BIBELÜBERSETZUNGEN BIS IN | DEUTSCHEN  
GEBRAUCH: | DIE GEGENWART IN FESTEM  
wairpandans | afaruh þan þo in wato  
wullai raudai | hrain jah hwssopon jah  
(SKEIREINS 3, 16) | ufartrusnjandans  
STREITBERG; | GOT. BIBEL 21, 461  
hysopes | FASCICULUM HYSOPI uuadal  
JH.) AHD. GL. | (EXODUS 12, 22) (8./9.  
chumet, so | 1, 335, 38 ST.-S.; so er  
isopo (ASPERGES | besprenget er mih mit  
die | ME YSOPO, PS. 50, 9) also  
uuirdo ih | miselsuhtigen, unde danne  
gepoten in | gereinet; uuunda so ist  
miselsuhtigen | demo puoche, daz die  
uurten mit | siben stunt besprenget  
opferpluote | gedunchetemo isopo in demo  
49ff.) NOTKER 3, | (VGL. LEV. 14, 4ff.;  
du | 172 PIPER (VGL. 2, 195f.);

dem isipen | besprenges mih, herro, mit  
 (12. JH., | unde ih wirde gereinet  
 INTERLINEARVERSION), du | WINDBERGER  
 demo ysopo | solt besprengen mich mit  
 (13. JH., | unde ih wirde gereinet  
 INTERLINEARVERSION) (PS. 50, | TRIERER  
 INTERLINEARVERSIONEN D. PSALMEN | 9) DT.  
 fulten ein | (1839) 232 GRAFF; wann sy  
 vmbgaben in mit | schwamp mit essig sy  
 seinen mund | ysopp: sy brachten in  
 BIBEL 1, 415 | (JOAN. 19, 29) ERSTE DT.  
 redet | KURR.; vnd er (SALOMO)  
 seyner liede | dreytausent spruch, vnd  
 vnd er redet | waren tausent vnd funffe.  
 zu Libanon | von bewmen, vom ceder an  
 der wand | bis an den isop, der aus  
 LUTHER DT. | wechst (3. REG. 4, 33)  
 1, 408f. AUS | BIBEL 1, 150 W., VGL. 9,  
 TRADITION ERWACHSEN | BIBELSPRACHLICHER  
 50, 8: | FOLGENDE BELEGE, ZU PS.  
 kumen | Maria sunderinne,  
 wesent vro | du bist in gutem sinne  
 mit ysopo | vf einen burnen alda  
 alleme sne | ...  
 371, 22 HAHN; | betouche dich zv male  
 | des du macht Immer  
 | der besprenget dich  
 | des bistu wiz ob  
 | (UM 1300) PASSIONAL

mit ysop gut,  
verderbet  
(1649) 35;

ferner,  
gewaschen werden,  
der ich über  
gesungen BRENNER  
20. ZU JOAN.

er och dar na.  
essich da,  
ysopum  
schwum:  
selben stunt  
sinen munt  
MARIENIEBEN

UMDEUTUNG DER  
JOAN. 19, 29  
. . . dem  
vor den  
würde  
(1834) 1 5, 98;

war, o pabst,  
den tropen  
scepter gabst,  
ysopen

| nun spreng mich herr  
| so wird all sünd  
| SPEE GÜLD. TUGENDBUCH  
| und so, meint der meister  
| werde ich auch bald  
| und mit hysop besprengt,  
| so viele das miserere  
| ERZ. U. SCHR. (1864) 1,  
| 19, 29:  
| 'mich durstet', sprach  
| do stünd ain vas mit  
| dar in lait ainer  
| und fuitent sin ainen  
| den bot er zù der  
| mit ainem sper an  
| (HS. 1182) WERNHER  
| 10 607 PÄPKE-HÜBNER.  
| IN NEGATIVIERENDER  
| HILFREICHEN TRÄNKUNG AUS  
| (VGL. MATTH. 27, 34): wie  
| volk...der ysop der furcht  
| ewigen strafen dargereicht  
| SCHLEIERMACHER S. W.  
| nur gift und galle  
| was du vom pol bis zu  
| der welt mit deinem  
| mit deinem scepter von

(21841) 116.

zeder bis zum  
ÜBERSETZUNG),

GRÖSZE DER

... von dem

berg Libano

so aus der

ABR. A S.

1, 48;

königs van

worte von der

1 37, 295

ÜBERTRAGEN:

der kräuter

vom ysop an,

bis auf die

VOLKSMÄRCHEN

PHYSIOGN.

habe die

gelehrten zu

weiss und

zum ysop

(1827) 1,

WEITE DER

BEZEICHNEND: jedes

zum ysop

sonnenschein HERDER

der nahme

| HERWEGH GED. E. LEBENDIGEN

| ZU 3. REG. 4, 31 von der

| ysop (S 0. LUTHERS

| ZUNÄCHST NUR VON DER

| WEISHEIT SALOMOS: Salomon

| ceder baum, so auf dem

| ist, bisz auf den hyssop,

| wand wächst, disputieret

| CLARA ETWAS F. ALLE (1699)

| (ÜBERSCHRIFT:) Salomons

| Israel und Juda güldne

| ceder biss zum issop GÖTHE

| W.; AUF ANDERE PERSONEN

| weil du (RÜBEZAHL) aber

| und pflanzen kundig bist,

| der auf der mauer wächst,

| ceder zu Libanon MUSÄUS

| 1, 34 HEMPEL, VGL. DERS.,

| REISEN (1778) 1, 171; ich

| ehre, ihnen einen

| präsentieren, dar alles

| kennt, van der ceder bis

| KOTZEBUE SÄMMTL. DRAM. W.

| 314. SCHLIESZLICH DIE

| SCHÖPFUNG ÜBERHAUPT

| gewäche von der ceder bis

| hängt an erde und

| 20, 73 S.; VGL. 22, 237;

gut: ABC  
orden  
gestalt, von  
zum ysop  
(1793) 1, 3;  
die erste von  
die andern,  
milbe, von der  
sind in dar  
J. G.  
319.

PFLANZE. IN  
REZEPTEN SEIT DEM  
BEZEUGT; DIE  
BIS IN DIE  
UND ZUM  
HALSBESCHWERDEN BENUTZT;  
PFLANZE 'VOR  
BESTANDTEIL  
(BESONDERS VON  
MITGENOMMENEN  
WB. D.  
isopo ist g\_t  
stirbet in demo  
warmem wazzer, sô  
g\_t vur den  
den der mage  
GERMANIA 8, 300;

meines helden ist kurz und  
bis XYZ, ... ritter vieler  
trauriger und fröhlicher  
der ceder auf Libanon bis  
HIPPEL KREUZ- U. QUERZUGC  
die menschengattung ist  
alless diesen einheiten;  
vom elephanten bis zur  
ceder bis an den ysop,  
zweiten und dritten linie  
FORSTER S. SCHR. (1843) 4,  
2) ALS GEWÜRZ- UND HEIL  
DEN VERSCHIEDENSTEN  
11./12. JH. SEHR REICH  
BLÄTTER WERDEN VEREINZELT  
GEGENWART ALS SOSZENWÜRZE  
GURGELN GEGEN  
DARÜBER HINAUS IST DIE  
ALLEM IN DER SCHWEIZ EIN  
DER IN DIE KIRCHE  
ÄLTEREN FRAUEN)  
RIECHSTRÄUSZLEIN' MARZELL  
DT. PFLANZENN. 2, 069:  
chrût, obe diu geb\_rt  
wîbe; trinche iz mit  
vert iz vone ire. er ist  
stenken vnte hilfet och  
swirt (11./12. JH.)

VERZ. D. | ÄHNLICH (13. JH.) MENHARDT  
 46; von der | ALTDT. LIT. HSS. 1 (1960)  
 isp...wenn man | ispen. isopus haizt  
 ist der | ispen kocht mit honig, daz  
 ander | lungel guot . und genuog  
 1350) KONRAD | tugent hât si an ir (UM  
 NATUR 405 PF.; | V. MEGENBERG BUCH der  
 ist bitter | vgl 420; der ysope . . .  
 herzen und der | und idoch ges\_nt dem  
 da siech ist | I\_ngen und der br\_st die  
 hoven sweret . . | (14 JH.) ALTDT.PRED.  
 ysopen unde | SCHÖNBACH SO WEME dat  
 »MND. ARZNEIB. | de scal nemen eyn bunt  
 vgl. 3, 10, | seden de (Bremen 1352)  
 gefügett daz | des A. DONELDEY 14 Windler  
 ysop z.B. dem | 19, 26, 49; und alz ist  
 der harpfen (so | pinlin z.B. dem honge, der  
 (HS. von | balsam, dû nahtegal z.B.  
 1303) , ST. | wie DIE seele ZU CHRISTUS)  
 RIEDER, VGL. 294; | 1357 NACH VORLAGE VON  
 polay, | GEORGENER PRED. 287  
 vnd | saluay, rawtten vnd  
 nit felt, | der krautt stünd pogen  
 wunn | gezindelt;  
 | dryment, yspen, die  
 vertreiben, | grunten da in reicher  
 | LIEDERBUCH DER HÄTZLERIN  
 | 234 HALTAUS:  
 | dem rind den husten zu

. einzugeben | pflegt man jnen...ysop..  
majoran, poley und | SEBIZ feldbau (1579) 128;  
wehrtes, gewachsen | mit lavendel, isop,  
ausgeziehret NEUMARK | anderen geringeres  
(1668) 171; | und blurnenwerke  
pflanzen sah ich | newspross. teut. palmb.  
unter gärten | unter wild wachsenden  
ysop bewachsen | die dunkelrote scabiose  
| und ein ganzes feld mit  
| STOLBERG  
| GES.W. (1820) 8, 360.  
| 3) ZU BEIDEN  
ANWENDUNGSGRUPPEN | STELLEN SICH  
ZUSAMMENSETZUNGEN: | ysopbitter:  
zecher | dieweil der königliche  
zügen gafft. | umsonst nach ihren  
ysopbittren becher | leert sie den  
leidenschaft | zurückgewiesener  
(VGL.. | FONTANE GED. 7176  
1); | JOAN. 19, 29 u. ysop  
| --busch:  
19, 18) | nimm einen ysoppusch,  
1956) 1, 165; - | entsündige mein Leben  
hissopkraut, | FLEMING, dt. ged. 1,8  
GÄBELKOVER ARTZNCYB. | lit.ver.;  
safft | VGL. ysopbüschel (NURN.  
| ZÜRCHER BIBEL (BERLIN  
| kraut: nimm rosinlin ein  
| handvoll...salbeyblätter,  
| jedes 1 hand voll  
| (1595) 1, 182; -saft: ysop

waychet den | getruncken mit oximel,  
KREÜTERBUCH OD. | verstopften bauch DAS  
144b ; -sirup: | HERBARIOS (AUGSB. 1534)  
stengel: sie | \STAUB-TOBLER 7, 1270; -  
essig gefüllten | steckten nun einen mit  
ysopstengel (JOAN | schwamm auf einen  
(BERLIN 1956) | 19,29). ZÜRCHER BIBEL  
19,29) | 2,148; hysopstengel (J.  
(LPZ. 6-1959) | TILLMANN NEUES TESTAM.  
SP. 2182; - | 325; -strauch,  
man allwegen | s. isopstrauch TEIL 4,2,  
distilliren: | wasser: hysopwasser soll  
gut für den | in heysser aeschen  
zän ist SEBIZ | welches (U. A.) trefflich  
zerschmeltz den | grausamen schmertzen der  
oder | feldbau (1580) 413;  
artzneybuch | zucker in brandlattich  
RÄDLEIN T.- | issopwasser GÄBELKOVER  
wein, . VGL. | (1595) 1, 193, GEBUCHT bei  
2182 SOWIE: | IT.-FRZ.(1711) 1080;b; -  
warm, | isopwein TEIL 4. 2. sp.  
gute däwung | von ysopwein. ysopwein ist  
HERR FELDBAU | reiniget die brust, machet  
ZEHNER | vnd weicht den bauch M.  
KIRSCH CORNU | (1551) 112a; eysop wein  
translate "hyssop" | NOMENCL. (1645) 365;  
known and | COPIAE 2 (1775), 908.  
| Why then did Bacon  
| as "moss"? The hyssop was

OED; e.g.

etc.). What

dictionaries

that it is not

was meant by

to use the

is probably

Salomon knows

noblest (=cedar

(=hyssop), "moss"

mean plant

between

This does

consideration

tested in

the Old and

above).

philosophy{29}. Nay, the same Salomon the  
I.5 (D.A.

king affirmeth directly that the glory of  
N.O. I, 65

God IS TO CONCEAL A THING, BUT THE GLORY  
OF THE KING IS TO FIND IT OUT{30}, as if  
according to the innocent play of children  
of God is to

the divine Majesty took delight to hide  
but the Kings

his works, to the end to have them found  
thing.

out; for in naming the king he intendeth  
man, taking such a condition of man as  
the glory of

hath most excellency and greatest  
but the honour

commandment of wits and means, alluding  
a matter.

also to his own person, being truly one of  
those clearest burning lamps, whereof  
verbum et

used in England (compare

Skakespeare OTHELLO I,3

appears from all the

consulted is, however,

so very clear which plant

the name. What led Bacon

word "moss" for "hyssop"

the sense of 1 K 4,33:

every plant from the

tree) to the meanest

obviously signifying a

"which is but a rudiment

putrefaction and an herb".

obviously leave out of

the holiness of the hyssop

various other contexts of

the New Testament (see

29. cf. A.L. Sp. III, 298,

I.467, I.1) ; Cf. also

30. Proverbs 25,2

Geneva Bible: The glorie

conceile a thing secret:

honour is to searche out a

Authorized Version: It is

God to conceal a thing:

of kings is to search out

Vulgata: Gloria Dei celare

himself speaketh in another place, when he | gloria regum investigare  
sermonem |  
saith THE SPIRIT OF MAN IS AS THE LAMP OF |  
GOD, WHEREWITH HE SEARCHETH ALL |  
INWARDNESS{31}; which nature of the soul |  
the same Salomon holding precious and |  
the Lord is |  
inestimable, and therein conspiring with |  
sercheth all the |  
the affection of Socrates who scorned the |  
pretended learned men of his time for |  
spirit of man |  
raising great benefit of their learning |  
Lord, searching |  
(whereas Anaxagoras contrariwise and |  
the belly. |  
divers others being born to ample |  
spiraculum |  
patrimonies decayed them in |  
omnia secreta |  
  
Herrn ist des |  
durch alle |  
contemplation){32}, delivereth it in |  
Major. 282 b - |  
precept yet remaining, BUY THE TRUTH, AND |  
SELL IT NOT; |  
AND SO OF WISDOM AND KNOWLEDGE{33}. |  
  
trueth, but sel |  
And lest any man should retain a scruple |  
and |  
as if this thirst of |  
understanding. |  
knowledge were rather an humour of the |  
mind than an emptiness or want in nature |  
the truth and |  
and an instinct from God, the same author |  
and |  
defineth of it fully, saying, GOD HATH |  
understanding. |  
MADE EVERY THING IN BEAUTY ACCORDING TO |  
SEASON; ALSO HE HATH SET THE WORLD IN |  
noli vendere |  
MAN'S HEART, YET CAN HE NOT FIND OUT THE |  
WORK WHICH GOD WORKETH FROM THE |  
  
verkaufe |  
und |  
| 31. Proverbs 20, 27  
| Geneva Bible: The light of  
| the breth of man, and  
| bowels of the bellie.  
| Authorized Version: The  
| is the candle of the  
| all the inward parts of  
| Vulgata: lucerna Dominis  
| homminis quae investigat  
| ventris  
| Luther: Eine Leuchte des  
| Menschen Geist; die geht  
| Kammern des Leibes.  
| 32. see Platon, Hippias  
| 283 b  
| 33. Proverbs 23, 23  
| Geneva Bible: Bye the  
| it not: likewise wisdome,  
| instruction, and  
|  
| Authorized Version: Buy  
| sell it not; also wisdom,  
| instruction, and  
|  
| Vulgata: veritatem eme et  
| sapientiam et doctrinam et  
| intelligentiam  
|  
| Luther: Kaufe Wahrheit und  
| sie nicht, Weisheit, Zucht  
| Verstand.  
|

in Bacon | on the mercantilist spirit  
Objectivity | see: Julie Robin Salomon,  
Hopkins | in the Making. The John  
University Press, 1998.  
BEGINNING TO THE END{34}: declaring not  
obscurely that God hath framed the mind of  
hath made every  
man as a glass capable of the image of the | thing beautiful in his  
time: also he  
universal world, joying to receive the | hath set the world in  
their heart, so  
signature thereof as the eye is of light | that no man can find out  
the work that  
yea not only satisfied in beholding the | God maketh from the  
beginning to the  
variety of things and vicissitude of | end.  
times, but raised also to find out and  
discern those ordinances and decrees which | Vulgata: cuncta fecit bona  
in tempore  
throughout all these changes are | suo et mundum tradidit  
disputationi  
infallibly observed. And although the | eorum / ut non inveniat  
homo opus quod  
highest generality of motion or summary | operatus est Deus ab  
initio usque ad  
law of nature God should still reserve | finem.  
within his own curtain, yet many and noble | Luther Bible: Prediger  
are the inferior and secondary operations  
Salomo 3,11:  
which are within man's sounding. This is a | Er aber tut alles fein zu  
seiner Zeit  
thing which I cannot tell whether I may so | und lässt ihr Herz sich  
ängstigen, wie  
plainly speak as truly conceive, that as | es gehen solle in der  
Welt; denn der  
all knowledge appeareth to be a plant of | Mensch kann doch nicht  
treffen das  
God's own planting, so it may seem the | Werk, das Gott tut, weder  
Anfang noch  
spreading and flourishing or at least the | Ende.  
bearing and fructifying of this plant, by  
a providence of God, nay not only by a  
general providence but by a special  
prophecy, was appointed to this autumn  
of the world{35}: for to my understanding  
Bacon sees  
it is not violent to the letter, and safe | his time as "...autumn of  
the  
now after the event, so to interpret that | world...". As in  
Shakespeare's King  
place in the prophecy of Daniel where | Lear (IV/6) 'autumn'  
implies the time  
speaking of the latter times it is said, | shortly before the end of  
the world,

MANY SHALL PASS TO AND FRO, AND SCIENCE  
to Bacon. The  
the increase  
12,4) and again  
legitimate

SHALL BE INCREASED{36}; as if the opening  
of the world by navigation and commerce  
Daniel, shut  
and the further discovery of knowledge  
the boke til  
should meet in one time or age.  
shal runne

shalbe  
But howsoever that be, there are besides  
("til the end  
the authorities or Scriptures before  
time that God  
recited, two reasons of exceeding great  
ful revelation  
weight and force why religion should  
many shal  
dearly protect all increase of natural  
the  
knowledge: the one, because it leadeth to  
mysteries, which  
the greater exaltation of the glory of  
the light  
God; for as the

thou, o  
and seal  
of the end:  
and  
increased.

clude  
usque ad  
pertransibunt  
scientia  
on the

| this can also be applied  
| Apocalypse is preceded by  
| of knowledge (Daniel  
| Bacon uses the Bible to  
| progress in science.  
| 36. Daniel 12, 4;  
| Geneva Bible: But thou, o  
| up the wordes, and seale  
| the end of the time: many  
| to and fro, and knowledge  
| increased [explanation f  
| of the time"): Til the  
| hathe appointed for the  
| of these things: and then  
| runne to and fro to search  
| knowledge of these  
| things they obteine now by  
| of the Gospel]  
|  
| Authorized Version: But  
| Daniel, shut up the words,  
| the book, EVEN to the time  
| many shall run to and fro,  
| knowledge shall be  
|  
| Vulgata: Tu autem Danihel  
| sermones et signa librum  
| tempus statutum /  
| plurimi et multiplex erit  
|  
| This quotation is repeated

ORGANUM. Together  
content of the  
passage

interpreted in an  
time has come  
construction of  
dominion over the  
Hercules can  
typological  
pillars of

Charles Whitney):

of the  
"Jachin" and

NOVA  
explained as

around with  
contracting them into

Salomo's Temple  
centre of

Psalms{37} and other Scriptures do often  
19,1  
invite us to consider and to magnify the  
great and wonderful works of God, so if we  
should rest only in the contemplation of  
those shews which first offer themselves  
to our senses, we should do a like injury  
to the majesty of God, as if we should  
judge of the store of some excellent  
jeweller by that only which is set out to  
the street in his shop. The other reason  
is, because it is a singular help and a  
preservative against unbelief and error;  
for, saith our Saviour, YOU ERR, NOT  
KNOWING THE SCRIPTURES NOR THE  
POWER OF GOD;{38} laying before us two  
books or volumes to study if we will be  
answered and

| title page of NOVUM  
| with the allegorical  
| pillars of Hercules, this  
| clearly is to be  
| apocalyptic sense: The  
| and is ripe for a re-  
| Adams's paradisical  
| world.--The pillars of  
| also be understood as a  
| allusion to the two  
| Salomo's temple (cf.  
| In 1 Kings 7, 21 the names  
| pillars are given as  
| "Boas". The Jew's name in  
| ATLANTIS, Joabin, can be  
| the result of playing  
| these names and  
| one. In NOVA ATLANTIS  
| is resurrected and is the  
| knowledge and power.  
37. for example Psalms

38. St. Matthew 22, 29:  
Authorized Version: Jesus

secured from error; first the Scriptures not knowing revealing the will of God, and then the power of God. creatures expressing his power; for that latter book will certify us that nothing which the first teacheth shall be thought impossible. And most sure it is, and a true conclusion of experience, that a little natural philosophy inclineth the mind to atheism, but a further proceeding bringeth the mind back to religion.

To conclude then, let no man presume to check the liberality of God's gifts, who, as was said,  
HATH SET THE WORLD IN MAN'S HEART. So as whatsoever is not God but parcel of the world, he hath fitted it to the comprehension of man's mind, if man will open and dilate the powers of his understanding as he may.{39} glass" above

But yet evermore it must be remembered that the least part of knowledge passed to man by this so large a charter from God must be subject to that use for which God hath granted it; which is the benefit and relief of the state and society or man; for otherwise all manner of knowledge becometh malign and serpentine, and therefore as carrying the quality of the serpent's sting and malice it maketh the mind of man to swell; as the Scripture saith excellently, KNOWLEDGE BLOWETH UP, BUT CHARITY BUILDETH UP{40}. And again the same author doth notably disavow both touching

power and knowledge such as is not we know dedicated to goodness or love, for saith knowledge. Knowledge he, IF I HAVE ALL FAITH SO AS I COULD edifieth.

REMOVE MOUNTAINS, (there is power active,) IF I RENDER MY BODY TO THE FIRE, (there is power passive,) IF I SPEAK WITH THE TONGUES OF MEN AND ANGELS, (there is knowledge, for language is but the conveyance of knowledge,) ALL WERE NOTHING{41}.

I speak  
And therefore it is not the pleasure of and of angels,

| said unto them, Ye do err, the Scriptures, not the see also St Mark 12, 24

39. Compare to "mind of

40. 1 Corinthians 8, 1  
Authorized Version: Now as

| things offered unto idols,  
| that we all have  
| puffeth up, but charity

41. 1 Corinthians 13, 1-3:  
Authorized Version: Though

| with the tongues of men

become as

tinkling cymbal.

of

all

knowledge; and

so that I

and have not

though I

feed the poor,

to be

charity, it

curiosity{42}, nor the quiet of  
"curiosity"

resolution, nor the raising of the spirit, | with "thirst of knowledge"  
(p. 220).

nor victory of wit, nor faculty of speech, | "Curiosity" is used in a  
traditional

nor lucre of profession, nor ambition of | sense (see St. Augustine  
on curiositas

honour or fame, nor inableness for | in Confessiones X,35). He

speaks of  
business, that are the true ends of | curiositas also in

"Actaeon et

knowledge; some of these being more worthy | Pentheus, sive Curiositas"  
in: De

than other, though all inferior and | sapentia veterum", VI: The  
Theban king

degenerate: but it is a restitution and | Pentheus is punished with  
madness

reinvesting (in great part) of man to the | because out of curiosity

he has dared

sovereignty and power (for whensoever he | to observe certain  
mysteries which are

shall be able to call the creatures by | dedicated to Dionysos,

that is: he

their true names be shall again command | applied (scientific)

observation to

them) which he had

respect the

NATURALE and

draws the same

of

| and have not charity, I am

| sounding brass, or a

| And though I have the gift

| prophecy, and understand

| mysteries, and all

| though I have all faith,

| could remove mountains,

| charity, I am nothing. And

| bestow all my goods to

| and though I give my body

| burned, and have not

| profiteth me nothing.

| 42. Bacon here contrasts

| with "thirst of knowledge"

| "Curiosity" is used in a

| sense (see St. Augustine

| in Confessiones X,35). He

| curiositas also in

| Pentheus, sive Curiositas"

| sapentia veterum", VI: The

| Pentheus is punished with

| because out of curiosity

| to observe certain

| dedicated to Dionysos,

| applied (scientific)

| divine things, he did not

| division between LUMEN

| LUMEN DIVINUM.--Bacon

| conclusions from the myth

sive Status | Prometheus ("Prometheus,  
 Blumenberg, "Der hominis").  
 Neugierde", on curiosity see Hans  
 NEUZEIT | Prozeß der theoretischen  
 in his first state of creation{43}. And in: DIE LEGITIMITÄT DER  
 Paradise Lost (Frankfurt, 1966).  
 to speak plainly and clearly, it is a 43. compare with Milton's  
 discovery of all operations and pos- Book XII  
 sibilities of operations from immortality  
 (if it were possible) to the meanest  
 mechanical practice. And therefore  
 knowledge that tendeth but to satisfaction  
 is but as a courtesan, which is for  
 pleasure and not for fruit or generation.  
 And knowledge that tendeth to profit or  
 profession or glory is but as the golden  
 ball thrown before Atalanta{44}, which  
 treated by  
 while she goeth aside and stoopeth to take 44. The Atalanta myth is  
 VETERUM (Works, | Bacon in DE SAPIENTIA  
 up she hindereth the | vol. VI)  
 translation by | This is the German  
 Weisheit der Alten, | Marina Münkler in:  
 (Frankfurt | hrsg. von Philipp Rippel  
 Gewinnsucht | a.M: Fischer, 1991):  
 Schnelligkeit | XXV. Atalanta oder die  
 Hippomenes mit | Atalanta, die für ihre  
 Wettlauf heraus, | berühmt war, forderte  
 Sieges zur | dem Versprechen zum  
 Falle seiner | daß er sie im Falle seines  
 verwirke. | Frau nehmen dürfe, im  
 es keinen | Niederlage aber sein Leben  
 da ihre | An Atalantas Sieg schien  
 Schnelligkeit bereits | Zweifel geben zu können,  
 Freier unter | unübertreffliche  
 | durch den Tod zahlreicher

war. Hippomenes  
List. Er  
goldene Äpfel,  
Das Rennen  
Führung. Als  
zurückfiel,  
zurück und  
vor sie  
mußte. Er warf  
sie, sondern  
sie sich  
auch ihre  
Erfüllt von  
angezogen von der  
verließ sie ihre  
und hielt  
der  
Hippomenes weiter  
Aufgrund ihrer  
machte  
jedoch bald  
ihn erneut.  
jedoch in  
zweites und  
abbrachte,  
Wett! auf,  
Fähigkeit,

| Beweis gestellt worden  
| griff deshalb zu einer  
| beschaffte sich drei  
| die er mit sich führte.  
| begann, Atalanta ging in  
| Hippomenes sah, daß er  
| griff er auf seine List  
| warf einen seiner Äpfel so  
| hin, daß sie ihn sehen  
| ihn aber nicht direkt vor  
| ein wenig abseits, damit  
| nicht nur bücken, sondern  
| Bahn verlassen mußte.  
| weiblicher Gier und  
| Schönheit der Frucht,  
| Bahn, lief dem Apfel nach  
| an, um ihn aufzuheben. In  
| Zwischenzeit lief  
| und ging in Führung.  
| natürlichen Schnelligkeit  
| Atalanta den Rückstand  
| wieder wett und überholte  
| Nachdem Hippomenes sie  
| derselben Weise noch ein  
| ein drittes Mal vom Weg  
| gewann er schließlich den  
| freilich nicht durch seine  
| sondern durch seine List.  
|

hervorragende  
Wettstreit von  
Denn die  
repräsentiert  
ihr nichts im  
schneller als  
man sagen  
und  
schneller. Das zeigt  
Dingen: Man  
nur langsam  
viel schneller  
Zweigen  
langsam zu  
sehr schnell zu  
kann. Auch die  
beobachten,  
bis durch  
ein Schmerz  
gefunden werden  
Philosophie (die  
leben ist), den  
sondern ihn  
führt. Dann  
und die  
unendlichen  
durch jene  
Denn es gibt

| Diese Sage scheint eine  
| Allegorie über den  
| Kunst und Natur zu sein.  
| Kunst, die von Atalanta  
| wird, ist an sich, wenn  
| Wege steht, sehr viel  
| die Natur, sie ist, wie  
| könnte, der bessere Läufer  
| erreicht ihr Ziel  
| sich an nahezu allen  
| sieht, daß sich Obstbäume  
| aus dem Kern, aber sehr  
| durch das Aufpfropfen von  
| entwickeln, daß Lehm sehr  
| Stein wird, während er  
| Stein gebrannt werden  
| Sitten betreffend kann man  
| daß es sehr lange dauert,  
| die Wohltaten der Natur  
| vergessen und Trost  
| kann, während die  
| gleichsam die Kunst zu  
| Tag nicht abwartet,  
| vorhersieht und vor Augen  
| aber wird dieser Vorsprung  
| Fähigkeit der Kunst zum  
| Nachteil der Menschheit,  
| goldenen Äpfel behindert.

Kunst, die  
Weg bis zum  
Vielmehr  
daß die  
auf halbem  
Pfad abweichen  
Gewinn und  
volubile  
Metamorphosen X, 667). .

Kunst nicht  
die Natur  
den  
Wettkampfs  
sondern sie  
unterworfen  
Ehemann.

CLASSICAL  
IN  
Baltimore  
says that  
Comes (Conti)  
EXPLICATIONUM  
and on  
DEORUM

| keine Wissenschaft oder  
| ihren wahren und richtigen  
| Ziel unbeirrt beibehält.  
| geschieht es fortwährend,  
| Künste ihre Unternehmungen  
| Wege unterbrechen, vom  
| und sich wie Atalanta  
| Nutzen zuwenden:  
| "Declinat cursus, aurumque  
| tollit" (Ovid,  
| Und deshalb ist es nicht  
| verwunderlich, daß es der  
| gegeben ist, den Sieg über  
| zu erringen und sie nach  
| Bedingungen und Regeln des  
| zu töten und zu zerstören,  
| im Gegenteil der Natur  
| bleibt, wie das Weib dem  
| Charles W. Lemmi (THE  
| DEITIES IN BACON. A STUDY  
| MYTHOLOGICAL SYMBOLISM,  
| 1933, repr. New York 1971)  
| Bacon draws on Natalis  
| MYTHOLOGIAE SIVE  
| FABULARUM LIBRI X (1551)  
| Boccaccios DE GENEALOGIA  
| (1472).  
| Simone Wirthmann comments:

mythology had a  
the  
been

discover in the  
goddesses the  
sixteenth

Renaissance produced  
works on the

books was

"MYTHOLOGY", which was  
its  
read and  
as a

Furthermore, it  
every myth  
multitude of  
list of  
index and  
interpretations  
physical.

books, which  
Boccaccio's famous  
they were far  
forgotten.

presume that

Comes (Conti)

| Treatises on classical  
| wide circulation during  
| Renaissance because it has  
| thought that one might  
| stories of the gods and  
| wisdom of the ancients.  
| It was in Italy, in the  
| century that the  
| the most widely known  
| classic deities.

| One of the most popular  
| Natalis Conti's  
| fully as learned as any of  
| competitors, pleasanter to  
| incomparably easier to use  
| referencebook.

| systematically interprets  
| it relates according to a  
| authorities. It provides a  
| authorities, an excellent  
| synopses of the

| divided into ethical and  
| Despite all these new  
| largely superseded

| "DE GENEALOGIIS DEORUM",  
| from causing it to be

| For that reason it is to  
| Bacon draws on Natalis

EXPLICATIONEM

and on

W. Lemmi

BACON. A

SYMBOLISM

York 1971).

race{45}. And knowledge referred to some  
Buch X, 665-  
particular point of use is but  
as Harmodius{46} which putteth down one  
Histories, V, 55 and  
tyrant, and not like

Dictionary says:

B.C.), Athenian

Harmodius, both of

kill the

younger brother

of a

B.C.). The plot

Hipparchus was

one cut down

Aristogiton

(after torture,

tyranny was

later, the two

have made

ever after

Simonides wrote

statues of

agora (and new

were carried

| "MYTHOLOGIAE SIVE

| FABULARUM LIBRI X" (1551)

| "Boccaccio's De Genealogia  
| Deorum" (1472) (see Charles

| THE CLASSICAL DEITIES IN

| STUDY IN MYTHOLOGICAL

| (Baltimore 1933, repr. New

| 45. Ovid, Metamorphosen,

| 680

| 46. see Herodot,

| VI, 109 and 123

| The Oxford Classical

| Aristogiton (6th c.

| tyrannicide. He and

| noble family, planned to

| tyrant Hippias and his

| Hipparchus, in consequence

| private quarrel (514

| miscarried: only

| killed. Harmodius was at

| by Hippias' guards,

| arrested and executed

| it is said). As the

| overthrown three years

| were popularly supposed to

| this possible, and were

| called the Liberators.

| a poem in their honour,

| them were set up in the

| ones erected when these

their | off by Xerxes in 480), and  
honoured with | descendants for all time  
Prytaneum. | the right to meals in the  
Hercules{47} who did perambulate the world | 47. Hercules is not a  
Baconian hero. | The real hero is Orpheus  
to suppress tyrants and giants and | interpreted in "Orpheus,  
as he is | Philosophia" in DE  
monsters in every | Orpheus is the Baconian  
sive | and the myth of Orpheus is  
SAPIENTIA VETERUM. | opera scientiae. The works  
philosopher, | are superior to the works  
about the | as the "works of wisdom"  
of Orpheus | sapientiae) are superior  
of Hercules | of strength" (opera  
(opera | 720).  
to the "works |  
fortitudinis) (VI,  
(lit. "having | Simone Wirthmann comments:  
Hera"; Hera, | Hercules (gr. Heracles),  
the son of | or showing the glory of  
Alkmene was a | wife of Zeus) Hercules,  
and Roman | Zeus and of the mortal  
was ranked | celebrated hero of Greek  
received divine | mythology, who after death  
as | among the gods and  
strength, | honours. He is represented  
perform | possessed of prodigious  
or | whereby he was enabled to  
by Hera. | twelve extraordinary tasks  
capture the | "labours" imposed upon him  
| One of these tasks was to

headed giant  
that on this  
the rocks

Abyla

HERCULES on  
of  
his longest  
seen by the  
supports of the  
world.

Hercules and  
methaphorical way, to  
contents of  
two  
impersonates  
throughout his  
people from  
giants and  
of his own  
comparison tried  
Hippias and  
of a private  
to free  
knowledge  
existence and not  
particular point.

| cattles of the three-  
| Geryoneus. It is said,  
| journey Hercules set up  
| Calpé (now Gibraltar) and  
| (Ceuta) / THE PILLARS OF  
| either side of the Strait  
| Gibraltar, as a sign for  
| journey. THE PILLARS where  
| ancients to be the  
| western boundary of the

|  
| Bacon uses the myth of  
| Harmodius in a  
| elucidate the real  
| knowledge by comparing the  
| "heroes". Hercules  
| strength and justice,  
| life he tried to free  
| tyranny, fought against  
| monsters without thinking  
| benefit. Harmodius in  
| to kill the tyrants  
| Hipparchus in consequence  
| quarrel and not primarily  
| people.

|  
| This shows, that for Bacon  
| must be of general  
| only refer to some

his later  
VETERUM (1609),  
Baconian hero  
Orpheus, the  
superior to  
the "works of  
are  
strength"  
729).

poet, a famous  
ancient Greece,  
charming all  
objects (he  
trees) by the  
He  
Hades, to bring  
Eurydice, and  
by infuriated  
OXFORD  
CENTURY

part.{48} It is true, that in two points  
words "that  
the curse is peremptory and not to be  
necessities,"  
removed; the one that vanity must be the  
transcript, have  
end in all human effects, eternity being  
resumed, though the revolutions and  
periods may be delayed{49}. The other that  
the consent of the creature being now  
resumed...": In  
turned into reluctance, this power cannot  
Lear (I/4)  
otherwise be exercised and administered  
back

| Nevertheless, in one of  
| works, DE SAPIENTIA  
| Hercules is not the  
| anymore. The real hero is  
| philosopher. His works are  
| the works of Hercules as  
| wisdom" (opera sapientiae)  
| superior to the "works of  
| (opera fortitudinis) (VI,  
|

| Orpheus was a legendary  
| musician and singer of  
| who had the power of  
| animate and inanimate  
| could move rocks and  
| sweet strains of his lyre.  
| descended living into  
| back to life his wife  
| perished, torn to pieces  
| Thracian maenads (see THE  
| CLASSICAL DICTIONARY; THE  
| DICTIONARY, VOL. 4)

| 48. Spedding's note: The  
| is, man's miseries and  
| which followed in the  
| a line drawn through them.  
| 49. Melek Hasgün comments:  
| "...eternity being  
| Henry VIII (...) and King  
| 'resume' means: to take

but with labour, as well in inventing as | something previously given  
or | granted. The fact that it  
in executing; yet nevertheless chiefly | in the passive form  
is written | implies that eternity has  
that labour and travel which is described | back by God, referring to  
without an object | Man and Paradise Lost.  
by the sweat of the brows more than of the | 'Revolution' is the action  
been taken | on the part of celestial  
body; that is such travel as is joined | moving round in an orbit  
the Fall of | course. The time in which  
with the working and discursion of the | other heavenly body  
spirits in the brain: for as Salomon saith | circuit or course. (OED) A  
excellently, THE FOOL PUTTETH TO MORE | complete works and  
or fact, | work, namely the  
STRENGTH, BUT THE WISE MAN CONSIDERETH | scientific or academic  
bodies, of | after his death that were  
WHICH | precursors of the Royal  
or circular | (1660), 'revolution' can  
a planet or | understood in the modern  
completes a full | fact, NEW ATLANTIS and  
look at the | set the foundation for the  
consequences of his | "intellectual revolution"  
foundation of | Wheeler's essay on Nova  
institutions | be obtained from the  
the | verulan@mindspring.com),  
Society | the complete overthrow of  
also be | state of affairs. (OED)  
sense. In | 50. Ecclesiastes 10, 12:  
NOVUM ORGANUM | Authorized Version: The  
(Harvey  
Atlantis; to  
author:  
  
which implies  
established  
WAY{50}, signifying the election of the  
mean to be more material than the  
words of a

multiplication of endeavour. It is true  
gracious; but the  
also that there is a limitation rather  
swallow up  
potential than actual, which is when the  
effect is possible, but the time or place  
yieldeth not the matter or basis whereupon  
Sp.III,322,  
man should work. But notwithstanding these  
486, I, 11  
precincts and bounds, let it be believed,  
and appeal thereof made to TIME, (with  
renunciation nevertheless to all the vain  
and abusing promises of Alchemists and  
Magicians, and such like light, idle,  
ignorant, credulous, and fantastical wits  
and sects,) that the new-found world of  
land was not greater addition to the  
ancient continent than there remaineth at  
this day a world of inventions and  
sciences unknown, having respect to those  
that are known, with this difference, that  
the ancient regions of knowledge will seem  
as barbarous compared with the new, as the  
new regions of people seem barbarous  
compared to many of the old.

The dignity of this end (of endowment of  
man's life with new commodities)  
appeareth by the estimation that  
antiquity made of such as guided  
thereunto. For whereas founders of states,  
lawgivers, extirpers of tyrants, fathers  
of the people, were honoured but with the  
titles of Worthies or Demigods, inventors  
were ever consecrated amongst the Gods  
themselves. And if the ordinary ambitions  
of men lead them to seek the amplification  
of their own power in their countries, and  
a better ambition than that hath moved men  
to seek the amplification of the power of  
their own countries amongst other nations,  
better again and more worthy must that  
aspiring be which seeketh the  
amplification of the power and kingdom of  
mankind over the world; the rather because  
the other two prosecutions are ever  
culpable of much perturbation and  
injustice; but this is a work, truly  
divine which cometh IN AURA LENI {51}  
(Vulgata)  
without noise or observation{52}.  
when he was  
The access also to this work hath been by  
when the

| wise man's mouth are  
| lips of a fool will  
| himself.  
| for a commentary see A.L.  
| I.14 seq. (D.A. Sp. I,  
| seq.)

51. 1 Kings 19,12

52. St Luke 17,20:  
Authorized Version: And

| demanded of the Pharisees,

that port or passage, which the divine | kingdom of God should  
come, he | answered them and said,  
Majesty (who is unchangeable in his ways) | of God cometh not with  
The kingdom | observation.  
doth infallibly continue and observe; that | see Novum Organum. I, 93;  
is the felicity wherewith he hath blessed | III, 301, I, 29-302; also  
an humility of mind, such as rather | (Sp. I, 222, I.16 seq.)  
A.L. Sp.  
laboureth to spell and so by degrees to  
N.O. I, 129  
read in the volumes of his creatures, than  
to solicit and urge and as it were to  
invoke a man's own spirit to divine and  
give oracles unto him. For as in the  
inquiry of divine truth, the pride of man  
hath ever inclined to leave the oracles of  
God's word and to vanish in the mixture of  
their own inventions; so in the self-same  
manner, in inquisition of nature they have  
ever left the oracles of God's works, and  
adored the deceiving and deformed imagery  
which the unequal mirrors of their own  
minds have represented unto them{53}. Nay  
later idea of  
it is a point fit and necessary in the  
front and beginning of this work without  
hesitation or reservation to be professed,  
that it is no less true in this human  
kingdom of knowledge than in God's kingdom  
of heaven, that no man shall enter into it  
EXCEPT HE BECOME FIRST AS A LITTLE CHILD.  
chapter ends  
The rest is  
entrance into  
upon their  
little  
Christ, children  
them  
kingdom of  
Channing  
and  
CAMBRIDGE COMPANION

53. compare this with the  
Idols  
54. Spedding's note: This  
at the top of a new page.  
left blank.  
55. In NO Bacon says that  
the new sciences depends  
followers' imitating the  
children favoured by  
whose lack of vanity gives  
privileged access to the  
heaven (IV, 69). cf. John  
Briggs, "Bacon's science  
religion", in: THE

Peltonen

199.

I say unto  
receive the  
child, he

| TO BACON, ed. by Markku  
(Cambridge, 1966), 172-  
| St Mark, 10,15:  
| Authorized Version: Verily  
| you, Whosoever shall not  
| kingdom of God as a little  
| shall not enter therein.

CAP. 4.

OF THE IMPEDIMENTS OF KNOWLEDGE, BEING THE 4TH CHAPTER, THE PREFACE  
ONLY OF IT.

In some things it is more hard to attempt than to achieve, which falleth out when the difficulty is not so much in the matter or subject, as it is in the crossness and indisposition of the mind of man to think of any such thing, to will or to resolve it. And therefore Titus Livius in his declamatory digression wherein he doth depress and extenuate the honour of Alexander's conquests saith, NIHIL ALIUD QUAM BENE AUSUS VANA CONTEMNERE: in which sort of things it is the manner of men first to wonder that any such thing should be possible, and after it is found out to wonder again how the world should miss it so long. Of this nature I take to be the invention and discovery of knowledge, etc.

THE IMPEDIMENTS WHICH HAVE BEEN IN THE TIMES, AND IN DIVERSION OF  
WITS, BEING THE 5TH CHAPTER, A SMALL FRAGMENT IN THE BEGINNING OF  
THAT CHAPTER.

The encounters of the times have been nothing favourable and prosperous for the invention of knowledge; so as it is not only the daintiness of the seed to take, and the ill mixture and unliking of the ground to nourish or raise this plant, but the ill season also of the weather by which it hath been checked and blasted. Especially in that the seasons have been proper to bring up and set forward other more hasty and indifferent plants, whereby this of knowledge bath been starved and overgrown; for in the descent of times always there hath been somewhat else in reign and reputation, which hath generally aliened and diverted wits and labours from that employment.

For as for the uttermost antiquity which is like fame that muffles her head and tells tales, I cannot presume much of it; for I would not willingly imitate the manner of those that describe maps, which when they come to some far countries whereof they have no knowledge, set down how there be great wastes and deserts there: so I am not apt to affirm that they knew little, because what they knew is little

known to us. But if you will judge of them by the last traces that remain to us, you will conclude, though not so scornfully as Aristotle doth, that saith our ancestors were extreme gross, as those that came newly from being moulded out of the clay or some earthly substance; yet reasonably and probably thus, that it was with them in matter of knowledge but as the dawning or break of day. For at that time the world was altogether home-bred, every nation looked little beyond their own confines or territories, and the world had no through lights then, as it hath had since by commerce and navigation, whereby there could neither be that contribution of wits one to help another, nor that variety of particulars for the correcting of customary conceits.

And as there could be no great collection of wits of several parts or nations, so neither could there be any succession of wits of several times, whereby one might refine the other, in regard they had not history to any purpose. And the manner of their traditions was utterly unfit and unproper for amplification of knowledge. And again the studies of those times, you shall find, besides wars, incursions, and rapines, which were then almost every where betwixt states adjoining (the use of leagues and confederacies being not then known), were to populate by multitude of wives and generation, a thing at this day in the waster part of the West-Indies principally affected; and to build sometimes for habitation towns and cities, sometimes for fame and memory monuments, pyramids, colosses, and the like. And if there happened to rise up any more civil wits; then would he found and erect some new laws, customs, and usages, such as now of late years, when the world was revolute almost to the like rudeness and obscurity, we see both in our own nation and abroad many examples of, as well in a number of tenures reserved upon men's lands, as in divers customs of towns and manors, being the devices that such wits wrought upon in such times of deep ignorance, etc.

THE IMPEDIMENTS OF KNOWLEDGE FOR WANT OF A TRUE SUCCESSION OF WITS,  
AND THAT HITHERTO THE LENGTH OF ONE MAN'S LIFE HATH BEEN THE GREATEST  
MEASURE OF KNOWLEDGE, BEING THE 6TH CHAPTER, THE WHOLE CHAPTER.

In arts mechanical the first device comes shortest and time addeth and perfecteth. But in sciences of conceit the first author goeth furthest and time leeseth and corrupteth. Painting, artillery, sailing, and the like, grossly managed at first, by time accommodate and refined. The philosophies and sciences of Aristotle, Plato, Democritus, Hippocrates, of most vigour at first, by time degenerated and imbased. In the former many wits and industries contributed in one: In the latter many men's wits spent to deprave the wit of one.

The error is both in the deliverer and in the receiver. He that delivereth knowledge desireth to deliver it in such form as may be soonest believed, and not as may be easiest examined. He that receiveth knowledge desireth rather present satisfaction than expectant search, and so rather not to doubt than not to err. Glory maketh the author not to lay open his weakness, and sloth maketh the disciple not to know his strength.

Then begin men to aspire to the second prizes; to be a profound interpreter and commenter, to be a sharp champion and defender, to be a methodical compounder and abridger. And this is the unfortunate

succession of wits which the world hath yet had, whereby the patrimony of all knowledge goeth not on husbanded or improved, but wasted and decayed. For knowledge is like a water that will never arise again higher than the level from which it fell; and therefore to go beyond Aristotle by the light of Aristotle is to think that a borrowed light can increase the original light from whom it is taken. So then no true succession of wits having been in the world, either we must conclude that knowledge is but a task for one man's life, and then vain was the complaint that LIFE IS SHORT, AND ART IS LONG: or else, that the knowledge that now is, is but a shrub, and not that tree which is never dangerous, but where it is to the purpose of knowing Good and Evil; which desire ever riseth upon an appetite to elect and not to obey, and so containeth in it a manifest defection.

CAP. 7.

THAT THE PRETENDED SUCCESSION OF WITS HATH BEEN EVIL PLACED, FOR ASMUCH AS AFTER VARIETY OF SECTS AND OPINIONS, THE MOST POPULAR AND NOT THE TRUEST PREVAILETH AND WEARETH OUT THE REST; BEING THE 7TH CHAPTER; A FRAGMENT.

It is sensible to think that when men enter first into search and inquiry, according to the several frames and compositions of their understanding they light upon different conceits, and so all opinions and doubts are beaten over, and then men having made a taste of all wax weary of variety, and so reject the worst and hold themselves to the best, either some one if it be eminent, or some two or three if they be in some equality, which afterwards are received and carried on, and the rest extinct.

But truth is contrary, and that time is like a river which carrieth down things which are light and blown up, and sinketh and drowneth that which is sad and weighty. For howsoever governments have several forms, sometimes one governing, sometimes few, sometimes the multitude; yet the state of knowledge is ever a DEMOCRATIE, and that prevaleth which is most agreeable to the senses and conceits of people. As for example there is no great doubt but he that did put the beginnings of things to be SOLID, VOID, AND MOTION TO THE CENTRE, was in better earnest than he that put MATTER, FORM, AND SHIFT; or he that put the MIND, MOTION, AND MATTER. For no man shall enter into inquisition of nature, but shall pass by that opinion of Democritus, whereas he shall never come near the other two opinions, but leave them aloof for the schools and table-talk. Yet those of Aristotle and Plato, because they be both agreeable to popular sense, and the one was uttered with subtlety and the spirit of contradiction, and the other with a stile of ornament and majesty, did hold out, and the other gave place, etc.

CAP. 8.

OF THE IMPEDIMENTS OF KNOWLEDGE IN HANDLING IT BY PARTS, AND IN  
SLIPPING OFF PARTICULAR SCIENCES FROM THE ROOT AND STOCK OF UNIVERSAL  
KNOWLEDGE, BEING THE 8TH CHAPTER, THE WHOLE CHAPTER.

Cicero, the orator, willing to magnify his own profession, and thereupon spending many words to maintain that eloquence was not a shop of good words and elegancies but a treasury and receipt of all knowledges, so far forth as may appertain to the handling and moving of the minds and affections of men by speech, maketh great complaint of the school of Socrates; that whereas before his time the same professors of wisdom in Greece did pretend to teach an universal SAPIENCE and knowledge both of matter and words, Socrates divorced them and withdrew philosophy and left rhetoric to itself, which by that destitution became but a barren and unnable science. And in particular sciences we see that if men fall to subdivide their labours, as to be an oculist in physic, or to be perfect in some one title of the law, or the like, they may prove ready and subtile, but not deep or sufficient, no not in that subject which they do particularly attend, because of that consent which it hath with the rest. And it is a matter of common discourse of the chain of sciences how they are linked together, insomuch as the Grecians, who had terms at will, have fitted it of a name of CIRCLE LEARNING. Nevertheless I that hold it for a great impediment towards the advancement and further invention of knowledge, that particular arts and sciences have been disincorporated from general knowledge, do not understand one and the same thing which Cicero's discourse and the note and conceit of the Grecians in their word CIRCLE LEARNING do intend. For I mean not that use which one science hath of another for ornament or help in practice, as the orator hath of knowledge of affections for moving, or as military science may have use of geometry for fortifications; but I mean it directly of that use by way of supply of light and information which the particulars and instances of one science do yield and present for the framing or correcting of the axioms of another science in their very truth and notion. And therefore that example of OCULISTS and TITLE LAWYERS doth come nearer my conceit than the other two; for sciences distinguished have a dependence upon universal knowledge to be augmented and rectified by the superior light thereof, as well as the parts and members of a science have upon the MAXIMS of the same science, and the mutual light and consent which one part receiveth of another. And therefore the opinion of Copernicus in astronomy, which astronomy itself cannot correct because it is not repugnant to any of the appearances, yet natural philosophy doth correct. On the other side if some of the ancient philosophers had been perfect in the observations of astronomy, and had called them to counsel when they made their principles and first axioms, they would never have divided their philosophy as the Cosmographers do their descriptions by globes, making one philosophy for heaven and another for under heaven, as in effect they do.

So if the moral philosophers that have spent such an infinite quantity of debate touching Good and the highest good, had cast their eye abroad upon nature and beheld the appetite that is in all things to receive and to give; the one motion affecting preservation and the

other multiplication; which appetites are most evidently seen in living creatures in the pleasure of nourishment and generation; and in man do make the aptest and most natural division of all his desires, being either of sense of pleasure or sense of power; and in the universal frame of the world are figured, the one in the beams of heaven which issue forth, and the other in the lap of the earth which takes in: and again if they had observed the motion of congruity or situation of the parts in respect of the whole, evident in so many particulars; and lastly if they had considered the motion (familiar in attraction of things) to approach to that which is higher in the same kind; when by these observations so easy and concurring in natural philosophy, they should have found out this quaternion of good, in enjoying or fruition, effecting or operation, consenting or proportion, and approach or assumption; they would have saved and abridged much of their long and wandering discourses of pleasure, virtue, duty, and religion. So likewise in this same logic and rhetoric, or arts of argument and grace of speech, if the great masters of them would but have gone a form lower, and looked but into the observations of Grammar concerning the kinds of words, their derivations, deflexions, and syntax; specially enriching the same with the helps of several languages, with their differing proprieties of words, phrases, and tropes; they might have found out more and better footsteps of common reason, help of disputation, and advantages of cavillation, than many of these which they have propounded. So again a man should be thought to dally, if he did note how the figures of rhetoric and music are many of them the same. The repetitions and traductions in speech and the reports and hauntings of sounds in music are the very same things. Plutarch hath almost made a book of the Lacedaemonian kind of jesting, which joined ever pleasure with distaste. SIR, (saith a man of art to Philip king of Macedon when he controlled him in his faculty,) GOD FORBID YOUR FORTUNE SHOULD BE SUCH AS TO KNOW THESE THINGS BETTER THAN I. In taxing his ignorance in his art he represented to him the perpetual greatness of his fortune, leaving him no vacant time for so mean a skill. Now in music it is one of the ordinariest flowers to fall from a discord or hard tune upon a sweet accord. The figure that Cicero and the rest commend as one of the best points of elegancy, which is the fine checking of expectation, is no less well known to the musicians when they have a special grace in flying the close or cadence. And these are no allusions but direct communities, the same delights of the mind being to be found not only in music, rhetoric, but in moral philosophy, policy, and other knowledges, and that obscure in the one, which is more apparent in the other, yea and that discovered in the one which is not found at all in the other, and so one science greatly aiding to the invention and augmentation of another. And therefore without this intercourse the axioms of sciences will fall out to be neither full nor true; but will be such opinions as Aristotle in some places doth wisely censure, when he saith THESE ARE THE OPINIONS OF PERSONS THAT HAVE RESPECT BUT TO A FEW THINGS. So then we see that this note leadeth us to an administration of knowledge in some such order and policy as the king of Spain in regard of his great dominions useth in state; who though he hath particular councils for several countries and affairs, yet hath one council of State or last resort, that receiveth the advertisements and certificates from all the rest. Hitherto of the diversion, succession, and conference of wits.

CAP. 9.

THAT THE END AND SCOPE OF KNOWLEDGE HATH BEEN GENERALLY MISTAKEN, AND THAT MEN WERE NEVER WELL ADVISED WHAT IT WAS THEY SOUGHT; BEING THE 9TH CHAPTER, WHEREOF A FRAGMENT (WHICH IS THE END OF THE SAME CHAPTER) IS BEFORE.

It appeareth then how rarely the wits and labours of men have been converted to the severe and original inquisition of knowledge; and in those who have pretended, what hurt hath been done by the affectation of professors and the distraction of such as were no professors; and how there was never in effect any conjunction or combination of wits in the first and inducing search, but that every man wrought apart, and would either have his own way or else would go no further than his guide, having in the one case the honour of a first, and in the other the ease of a second; and lastly how in the descent and continuance of wits and labours the succession hath been in the most popular and weak opinions, like unto the weakest natures which many times have most children, and in them also the condition of succession hath been rather to defend and to adorn than to add; and if to add, yet that addition to be rather a refining of a part than an increase of the whole. But the impediments of time and accidents, though they have wrought a general indisposition, yet are they not so peremptory and binding as the internal impediments and clouds in the mind and spirit of man, whereof it now followeth to speak.

The Scripture speaking of the worst sort of error saith, ERRARE FECIT COS IN INVIO ET NON IN VIA. For a man may wander in the way, by rounding up and down. But if men have failed in their very direction and address that error will never by good fortune correct itself. Now it hath fared with men in their contemplations as Seneca saith it fareth with them in their actions, DE PARTIBUS VITAE QUISQUE DELIBERAT, DE SUMMA NEMO. A course very ordinary with men who receive for the most part their final ends from the inclination of their nature, or from common example and opinion, never questioning or examining them, nor reducing them to any clear certainty; and use only to call themselves to account and deliberation touching the means and second ends, and thereby set themselves in the right way to the wrong place. So likewise upon the natural curiosity and desire to know, they have put themselves in way without foresight or consideration of their journey's end.

For I find that even those that have sought knowledge for itself, and not for benefit or ostentation or any practical enablement in the course of their life, have nevertheless propounded to themselves a wrong mark, namely satisfaction (which men call truth) and not operation. For as in the courts and services of princes and states it is a much easier matter to give satisfaction than to do the business; so in the inquiring of causes and reasons it is much easier to find out such causes as will satisfy the mind of man and quiet objections, than such causes as will direct him and give him light to new experiences and inventions. And this did Celsus note wisely and

truly, how that the causes which are in use and whereof the knowledges now received do consist, were in time minors and subsequents to the knowledge of the particulars out of which they were induced and collected; and that it was not the light of those causes which discovered particulars, but only the particulars being first found, men did fall on glossing and discoursing of the causes; which is the reason why the learning that now is hath the curse of barrenness, and is courtesanlike, for pleasure, and not for fruit. Nay to compare it rightly, the strange fiction of the poets of the transformation of Scylla seemeth to be a lively emblem of this philosophy and knowledge; a fair woman upwards in the parts of show, but when you come to the parts of use and generation, Barking Monsters; for no better are the endless distorted questions, which ever have been, and of necessity must be, the end and womb of such knowledge.

But yet nevertheless here I may be mistaken, by reason of some which have much in their pen the referring sciences to action and the use of man, which mean quite another matter than I do. For they mean a contriving of directions and precepts for readiness of practice, which I discommend not, so it be not occasion that some quantity of the science be lost; for else it will be such a piece of husbandry as to put away a manor lying somewhat scattered, to buy in a close that lieth handsomely about a dwelling. But my intention contrariwise is to increase and multiply the revenues and possessions of man, and not to trim up only or order with conveniency the grounds whereof he is already stated. Wherefore the better to make myself understood that I mean nothing less than words, and directly to demonstrate the point which we are now upon, that is, what is the true end, scope, or office of knowledge, which I have set down to consist not in any plausible, delectable, reverend, or admired discourse, or any satisfactory arguments, but in effecting and working, and in discovery of particulars not revealed before for the better endowment and help of man's life; I have thought good to make as it were a Kalendar or Inventory of the wealth, furniture, or means of man according to his present estate, as far as it is known; which I do not to shew any universality of sense or knowledge, and much less to make a satire of reprehension in respect of wants and errors, but partly because cogitations new had need of some grossness and inculcation to make them perceived; and chiefly to the end that for the time to come (upon the account and state now made and cast up) it may appear what increase this new manner of use and administration of the stock (if it be once planted) shall bring with it hereafter; and for the time present (in case I should be prevented by death to propound and reveal this new light as I purpose) yet I may at the least give some awaking note both of the wants in man's present condition and the nature of the supplies to be wished; though for mine own part neither do I much build upon my present anticipations, neither do I think ourselves yet learned or wise enough to wish reasonably: for as it asks some knowledge to demand a question not impertinent, so it asketh some sense to make a wish not absurd.

THE INVENTORY, OR AN ENUMERATION AND VIEW OF INVENTIONS ALREADY DISCOVERED AND IN USE, TOGETHER WITH A NOTE OF THE WANTS AND THE NATURE OF THE SUPPLIES, BEING THE 10TH CHAPTER; AND THIS A SMALL FRAGMENT THEREOF, BEING THE PREFACE TO THE INVENTORY.

The plainest method and most directly pertinent to this intention, will be to make distribution of sciences, arts, inventions, works, and their portions, according to the use and tribute which they yield and render to the conditions of man's life, and under those several uses, being as several offices of provisions, to charge and tax what may be reasonably exacted or demanded; not guiding ourselves neither by the poverty of experiences and probations, nor according to the vanity of credulous imaginations; and then upon those charges and taxations to distinguish and present, as it were in several columns, what is extant and already found, and what is defective and further to be provided. Of which provisions, because in many of them after the manner of slothful and faulty officers and accomptants it will be returned (by way of excuse) that no such are to be had, it will be fit to give some light of the nature of the supplies, whereby it will evidently appear that they are to be compassed and procured. And yet nevertheless on the other side again it will be as fit to check and control the vain and void assignations and gifts whereby certain ignorant, extravagant, and abusing wits have pretended to induc the state of man with wonders, differing as much from truth in nature as Caesar's Commentaries differeth from the acts of King Arthur or Huon of Bourdeaux in story. For it is true that Caesar did greater things than those idle wits had the audacity to feign their supposed worthies to have done; but he did them not in that monstrous and fabulous manner.

CAP. 11.

THE CHAPTER IMMEDIATELY FOLLOWING THE INVENTORY; BEING THE 11TH IN ORDER; A PART THEREOF.

It appeareth then what is now in proposition not by general circumlocution but by particular note. No former philosophy varied in terms or method; no new PLACET or speculation upon particulars already known; no referring to action by any manual of practice; but the revealing and discovering of new inventions and operations. This to be done without the errors and conjectures of art, or the length or difficulties of experience; the nature and kinds of which inventions have been described as they could be discovered; for your eye cannot pass one kenning without further sailing; only we have stood upon the best advantages of the notions received, as upon a mount, to shew the knowledges adjacent and confining. If therefore the true end of knowledge not propounded hath bred large error, the best and perfectest condition of the same end not perceived will cause some declination. For when the butt is set up men need not rove, but except the white be placed men cannot level. This

perfection we mean not in the worth of the effect, but in the nature of the direction; for our purpose is not to stir up men's hopes, but to guide their travels. The fullness of direction to work and produce any effect consisteth in two conditions, certainty and liberty. Certainty is when the direction is not only true for the most part, but infallible. Liberty is when the direction is not restrained to some definite means, but comprehendeth all the means and ways possible; for the poet saith well SAPIENTIBUS UNDIQUE LATAE SUNT VIAE, and where there is the greatest plurality of change, there is the greatest singularity of choice. Besides as a conjectural direction maketh a casual effect, so a particular and restrained direction is no less casual than an uncertain. For those particular means whereunto it is tied may be out of your power or may be accompanied with an overvalue of prejudice; and so if for want of certainty in direction you are frustrated in success, for want of variety in direction you are stopped in attempt. If therefore your direction be certain, it must refer you and point you to somewhat which, if it be present, the effect you seek will of necessity follow, else may you perform and not obtain. If it be free, then must it refer you to somewhat which if it be absent the effect you seek will of necessity withdraw, else may you have power and not attempt. This notion Aristotle had in light, though not in use. For the two commended rules by him set down, whereby the axioms of sciences are precepted to be made convertible, and which the latter men have not without elegancy surnamed the one the rule of truth because it preventeth deceit, the other the rule of prudence because it freeth election, are the same thing in speculation and affirmation which we now observe. An example will make my meaning attained, and yet percase make it thought that they attained it not. Let the effect to be produced be Whiteness; let the first direction be that if air and water be intermingled or broken in small portions together, whiteness will ensue, as in snow, in the breaking of the waves of the sea and rivers, and the like. This direction is certain, but very particular and restrained, being tied but to air and water. Let the second direction be, that if air be mingled as before with any transparent body, such nevertheless as is uncoloured and more grossly transparent than air itself, that then etc. as glass or crystal, being beaten to fine powder, by the interposition of the air becometh white; the white of an egg being clear of itself, receiving air by agitation becometh white, receiving air by concoction becometh white; here you are freed from water, and advanced to a clear body, and still tied to air. Let the third direction exclude or remove the restraint of an uncoloured body, as in amber, sapphires, etc. which beaten to fine powder become white; in wine and beer, which brought to froth become white. Let the fourth direction exclude the restraint of a body more grossly transparent than air, as in flame, being a body compounded between air and a finer substance than air; which flame if it were not for the smoke, which is the third substance that incorporateth itself and dyeth the flame, would be more perfect white. In all these four directions air still beareth a part. Let the fifth direction then be, that if any bodies, both transparent but in an unequal degree, be mingled as before, whiteness will follow; as oil and water beaten to an ointment, though by settling the air which gathereth in the agitation be evaporate, yet remaineth white; and the powder of glass or crystal put into water, whereby the air giveth place, yet remaineth white, though not so perfect. Now are you freed from air, but still you are tied to transparent bodies. To ascend

further by scale I do forbear, partly because it would draw on the example to an over-great length, but chiefly because it would open that which in this work I determine to reserve; for to pass through the whole history and observation of colours and objects visible were too long a digression; and our purpose is now to give an example of a free direction, thereby to distinguish and describe it; and not to set down a form of interpretation how to recover and attain it. But as we intend not now to reveal, so we are circumspect not to mislead; and therefore (this warning being given) returning to our purpose in hand, we admit the sixth direction to be, that all bodies or parts of bodies which are unequal equally, that is in a simple proportion, do represent whiteness; we will explain this, though we induce it not. It is then to be understood, that absolute equality produceth transparence, inequality in simple order or proportion produceth whiteness, inequality in compound or respective order or proportion produceth all other colours, and absolute or orderless inequality produceth blackness; which diversity, if so gross a demonstration be needful, may be signified by four tables; a blank, a chequer, a fret, and a medley; whereof the fret is evident to admit great variety. Out of this assertion are satisfied a multitude of effects and observations, as that whiteness and blackness are most incompatible with transparence; that whiteness keepeth light, and blackness stoppeth light, but neither passeth it; that whiteness or blackness are never produced in rainbows, diamonds, crystals, and the like; that white giveth no dye, and black hardly taketh dye; that whiteness seemeth to have an affinity with dryness, and blackness with moisture; that adustion causeth blackness, and calcination whiteness; that flowers are generally of fresh colours, and rarely black, etc. All which I do now mention confusedly by way of derivation and not by way of induction. This sixth direction, which I have thus explained, is of good and competent liberty for whiteness fixed and inherent, but not for whiteness fantastical or appearing, as shall be afterwards touched. But first do you need a reduction back to certainty or verity; for it is not all position or contexture of unequal bodies that will produce colour; for AQUA FORTIS, oil of VITRIOL, etc. more manifestly, and many other substances more obscurely, do consist of very unequal parts, which yet are transparent and clear. Therefore the reduction must be, that the bodies or parts of bodies so intermingled as before be of a certain grossness or magnitude; for the inequalities which move the sight must have a further dimension and quantity than those which operate many other effects. Some few grains of saffron will give a tincture to a tun of water; but so many grains of civet will give a perfume to a whole chamber of air. And therefore when Democritus (from whom Epicurus did borrow it) held that the position of the solid portions was the cause of colours, yet in the very truth of his assertion he should have added, that the portions are required to be of some magnitude. And this is one cause why colours have little inwardness and necessitude with the nature and proprieties of things, those things resembling in colour which otherwise differ most, as salt and sugar, and contrariwise differing in colour which otherwise resemble most, as the white and blue violets, and the several veins of one agate or marble, by reason that other virtues consist in more subtile proportions than colours do; and yet are there virtues and natures which require a grosser magnitude than colours, as well as scents and divers other require a more subtile; for as the portion of a body will give forth scent which is too small to be seen, so the portion of a body will shew

colours which is too small to be endued with weight; and therefore one of the prophets with great elegancy describing how all creatures carry no proportion towards God the creator, saith, THAT ALL THE NATIONS IN RESPECT OF HIM ARE LIKE THE DUST UPON THE BALANCE, which is a thing appeareth but weigheth not. But to return, there resteth a further freeing of this sixth direction; for the clearness of a river or stream sheweth white at a distance, and crystalline glasses deliver the face or any other object falsified in whiteness, and long beholding the snow to a weak eye giveth an impression of azure rather than of whiteness. So as for whiteness in apparition only and representation by the qualifying of the light, altering the INTERMEDIUM, or affecting the eye itself, it reacheth not. But you must free your direction to the producing of such an incidence, impression, or operation, as may cause a precise and determinate passion of the eye; a matter which is much more easy to induce than that which we have passed through; but yet because it hath a full coherence both with that act of radiation (which hath hitherto been conceived and termed so unproperly and untruly by some an effluxion of spiritual species and by others an investing of the INTERMEDIUM with a motion which successively is conveyed to the eye) and with the act of sense, wherein I should likewise open that which I think good to withdraw, I will omit. Neither do I contend but that this motion which I call the freeing of a direction, in the received philosophies (as far as a swimming anticipation could take hold) might be perceived and discerned; being not much other matter than that which they did not only aim at in the two rules of AXIOMS before remembered, but more nearly also in that which they term the form or formal cause, or that which they call the true difference; both which nevertheless it seemeth they propound rather as impossibilities and wishes than as things within the compass of human comprehension. For Plato casteth his burden and saith THAT HE WILL REVERE HIM AS A GOD, THAT CAN TRULY DIVIDE AND DEFINE; which cannot be but by true forms and differences. Wherein I join hands with him, confessing as much as yet assuming to myself little; for if any man call by the strength of his ANTICIPATIONS find out forms, I will magnify him with the foremost. But as any of them would say that if divers things which many men know by instruction and observation another knew by revelation and without those means, they would take him for somewhat supernatural and divine; so I do acknowledge that if any man can by anticipations reach to that which a weak and inferior wit may attain to by interpretation, he cannot receive too high a title. Nay I for my part do indeed admire to see how far some of them have proceeded by their ANTICIPATIONS; but how? It is as I wonder at some blind men, to see what shift they make without their eye-sight; thinking with myself that if I were blind I could hardly do it. Again Aristotle's school confesseth that there is no true knowledge but by causes, no true cause but the form, no true form known except one, which they are pleased to allow; and therefore thus far their evidence standeth with us, that both hitherto there hath been nothing but a shadow of knowledge, and that we propound now that which is agreed to be worthiest to be sought, and hardest to be found. There wanteth now a part very necessary, not by way of supply but by way of caution; for as it is seen for the most part that the outward tokens and badges of excellency and perfection are more incident to things merely counterfeit than to that which is true, but for a meaner and baser sort; as a dubline is more like a perfect ruby than a spinel, and a counterfeit angel is made more like a true angel than if it were an

angel coined of China gold; in like manner the direction carrieth a resemblance of a true direction in verity and liberty which indeed is no direction at all. For though your direction seem to be certain and free by pointing you to a nature that is unseparable from the nature you inquire upon, yet if it do not carry you on a degree or remove nearer to action, operation, or light to make or produce, it is but superficial and counterfeit. Wherefore to secure and warrant what is a true direction, though that general note I have given be perspicuous in itself (for a man shall soon cast with himself whether he be ever the nearer to effect and operate or no, or whether he have won but an abstract or varied notion) yet for better instruction I will deliver three particular notes of caution. The first is that the nature discovered be more original than the nature supposed, and not more secondary or of the like degree; as to make a stone bright or to make it smooth it is a good direction to say, make it even; but to make a stone even it is no good direction to say, make it bright or make it smooth; for the rule is that the disposition of any thing referring to the state of it in itself or the parts, is more original than that which is relative or transitive towards another thing. So evenness is the disposition of the stone in itself, but smooth is to the hand and bright to the eye, and yet nevertheless they all cluster and concur; and yet the direction is more unperfect, if it do appoint you to such a relative as is in the same kind and not in a diverse. For in the direction to produce brightness by smoothness, although properly it win no degree, and will never teach you any new particulars before unknown; yet by way of suggestion or bringing to mind it may draw your consideration to some particulars known but not remembered; as you shall sooner remember some practical means of making smoothness, than if you had fixed your consideration only upon brightness by making reflexion, as thus, make it such as you may see your face in it, this is merely secondary, and helpeth neither by way of informing nor by way of suggestion. So if in the inquiry of whiteness you were directed to make such a colour as should be seen furthest in a dark light; here you are advanced nothing at all. For these kinds of natures are but proprieties, effects, circumstances, concurrences, or what else you shall like to call them, and not radical and formative natures towards the nature supposed. The second caution is that the nature inquired be collected by division before composition, or to speak more properly, by composition subaltern before you ascend to composition absolute, etc.

OF THE INTERNAL AND PROFOUND ERRORS AND SUPERSTITIONS IN THE NATURE OF THE MIND, AND OF THE FOUR SORTS OF IDOLS OR FICTIONS WHICH OFFER THEMSELVES TO THE UNDERSTANDING IN THE INQUISITION OF KNOWLEDGE; BEING THE 16TH CHAPTER, AND THIS A SMALL FRAGMENT THEREOF, BEING A PREFACE TO THE INWARD ELENCHES OF THE MIND.

The opinion of Epicurus that the gods were of human shape, was rather justly derided than seriously confuted by the other sects, demanding whether every kind of sensible creatures did not think their own figure fairest, as the horse, the bull, and the like, which found no beauty but in their own forms, as in appetite of lust appeared. And the heresy of the Anthropomorphites was ever censured for a gross conceit bred in the obscure cells of solitary monks that never looked abroad. Again the fable so well known of *QUIS PINXIT LEONEM*, doth

set forth well that there is an error of pride and partiality, as well as of custom and familiarity. The reflexion also from glasses so usually resembled to the imagery of the mind, every man knoweth to receive error and variety both in colour, magnitude, and shape, according to the quality of the glass. But yet no use hath been made of these and many the like observations, to move men to search out and upon search to give true cautions of the native and inherent errors in the mind of man which have coloured and corrupted all his notions and impressions.

I do find therefore in this enchanted glass four Idols or false appearances of several and distinct sorts, every sort comprehending many subdivisions: the first sort, I call idols of the NATION or TRIBE; the second, idols of the PALACE; the third, idols of the CAVE; and the fourth, idols of the THEATRE, etc.

HERE FOLLOWETH AN ABRIDGMENT OF DIVERS CHAPTERS OF THE FIRST BOOK OF INTERPRETATION OF NATURE.

CAP. 12.

That in deciding and determining of the truth of knowledge, men have put themselves upon trials not competent. That antiquity and authority; common and confessed notions; the natural and yielding consent of the mind; the harmony and coherence of a knowledge in itself; the establishing of principles with the touch and reduction of other propositions unto them; inductions without instances contradictory; and the report of the senses; are none of them absolute and infallible evidence of truth, and bring no security sufficient for effects and operations. That the discovery of new works and active directions not known before, is the only trial to be accepted of; and yet not that neither, in ease where one particular giveth light to another; but where particulars induce an axiom or observation, which axiom found out discovereth and designeth new particulars. That the nature of this trial is not only upon the point, whether the knowledge be profitable or no, but even upon the point whether the knowledge be true or no; not because you may always conclude that the Axiom which discovereth new instances is true, but contrariwise you may safely conclude that if it discover not any new instance it is in vain and untrue. That by new instances are not always to be understood new recipes but new assignations, and of the diversity between these two. That the subtilty of words, arguments, notions, yea of the senses themselves, is but rude and gross in comparison of the subtilty of things; and of the slothful and flattering opinions of those which pretend to honour the mind of man in withdrawing and abstracting it from particulars, and of the inducements and motives whereupon such opinions have been conceived and received.

CAP. 13.

Of the error in propounding chiefly the search of causes and productions of things concrete, which are infinite and transitory, and not of abstract natures, which are few and permanent. That these natures are as the alphabet or simple letters, whereof the variety of things consisteth; or as the colours mingled in the painter's shell, wherewith he is able to make infinite variety of faces or shapes. An enumeration of them according to popular note. That at the first one would conceive that in the schools by natural philosophy were meant the knowledge of the efficient causes of things concrete; and by metaphysic the knowledge of the forms of natures simple; which is a good and fit division of knowledge: but upon examination there is no such matter by them intended. That the little inquiry into the production of simple natures sheweth well that works were not sought; because by the former knowledge some small and superficial deflexions from the ordinary generations and productions may be found out, but the discovery of all profound and radical alteration must arise out of the latter knowledge.

CAP. 14.

Of the error in propounding the search of the materials or dead beginnings or principles of things, and not the nature of motions, inclinations, and applications. That the whole scope of the former search is impertinent and vain; both because there are no such beginnings, and if there were they could not be known. That the latter manner of search (which is all) they pass over compendiously and slightly as a by-matter. That the several conceits in that kind, as that the lively and moving beginnings of things should be shift or appetite of matter to privation; the spirit of the world working in matter according to platform; the proceeding or fructifying of distinct kinds according to their proprieties; the intercourse of the elements by mediation of their common qualities; the appetite of like portions to unite themselves; amity and discord, or sympathy and antipathy; motion to the centre, with motion of stripe or press; the casual agitation, aggregation, and essays of the solid portions in the void space; motion of shuttings and openings; are all mere nugations; and that the calculating and ordination of the true degrees, moments, limits, and laws of motions and alterations (by means whereof all works and effects are produced), is a matter of a far other nature than to consist in such easy and wild generalities.

CAP. 15.

Of the great error of inquiring knowledge in Anticipations. That I call Anticipations the voluntary collections that the mind maketh of

knowledge; which is every man's reason. That though this be a solemn thing, and serves the turn to negotiate between man and man (because of the conformity and participation of men's minds in the like errors), yet towards inquiry of the truth of things and works it is of no value. That civil respects are a lett that this pretended reason should not be so contemptibly spoken of as were fit and medicinable, in regard that hath been too much exalted and glorified, to the infinite detriment of man's estate. Of the nature of words and their facility and aptness to cover and grace the defects of Anticipations. That it is no marvel if these Anticipations have brought forth such diversity and repugnance in opinions, theories, or philosophies, as so many fables of several arguments. That had not the nature of civil customs and government been in most times somewhat adverse to such innovations, though contemplative, there might have been and would have been many more. That the second school of the Academics and the sect of Pyrrho, or the considerers that denied comprehension, as to the disabling of man's knowledge (entertained in Anticipations) is well to be allowed, but that they ought when they had overthrown and purged the floor of the ruins to have sought to build better in place. And more especially that they did unjustly and prejudicially to charge the deceit upon the report of the senses, which admitteth very sparing remedy; being indeed to have been charged upon the Anticipations of the mind, which admitteth a perfect remedy. That the information of the senses is sufficient, not because they err not, but because the use of the sense in discovering of knowledge is for the most part not immediate. So that it is the work, effect, or instance, that trieth the Axiom, and the sense doth but try the work done or not done, being or not being. That the mind of man in collecting knowledge needeth great variety of helps, as well as the hand of man in manual and mechanical practices needeth great variety of instruments. And that it were a poor work that if instruments were removed men would overcome with their naked hands. And of the distinct points of want and insufficiency in the mind of man.

#### CAP. 16.

That the mind of a man, as it is not a vessel of that content or receipt to comprehend knowledge without helps and supplies, so again it is not sincere, but of an ill and corrupt tincture. Of the inherent and profound errors and superstitions in the nature of the mind, and of the four sorts of Idols or false appearances that offer themselves to the understanding in the inquisition of knowledge; that is to say, the Idols of the Tribe, the Idols of the Palace, the Idols of the Cave, and the Idols of the Theatre. That these four, added to the incapacity of the mind and the vanity and malignity of the affections, leave nothing but impotency and confusion. A recital of the particular kinds of these four Idols, with some chosen examples of the opinions they have begot, such of them as have supplanted the state of knowledge most.

Of the errors of such as have descended and applied themselves to experience, and attempted to induce knowledge upon particulars. That they have not had the resolution and strength of mind to free themselves wholly from Anticipations, but have made a confusion and intermixture of Anticipations and observations, and so vanished. That if any have had the strength of mind generally to purge away and discharge all Anticipations, they have not had that greater and double strength and patience of mind, as well to repel new Anticipations after the view and search of particulars, as to reject old which were in their mind before; but have from particulars and history flown up to principles without the mean degrees, and so framed all the middle generalities or axioms, not by way of scale or ascension from particulars, but by way of derivation from principles; whence hath issued the infinite chaos of shadows and notions, wherewith both books and minds have been hitherto, and may be yet hereafter much more pestered. That in the course of those derivations, to make them yet the more unprofitable, they have used when any light of new instance opposite to any assertion appeared, rather to reconcile the instance than to amend the rule. That if any have had or shall have the power and resolution to fortify and inclose his mind against all Anticipations, yet if he have not been or shall not be cautioned by the full understanding of the nature of the mind and spirit of man, and therein of the seats, pores and passages both of knowledge and error, he hath not been nor shall not be possibly able to guide or keep on his course aright. That those that have been conversant in experience and observation have used, when they have intended to discover the cause of any effect, to fix their consideration narrowly and exactly upon that effect itself with all the circumstances thereof, and to vary the trial thereof as many ways as can be devised; which course amounteth but to a tedious curiosity, and ever breaketh off in wondering and not in knowing; and that they have not used to enlarge their observation to match and sort that effect with instances of a diverse subject, which must of necessity be before any cause be found out. That they have passed over the observation of instances vulgar and ignoble, and stayed their attention chiefly upon instances of mark; whereas the other sort are for the most part more significant and of better height and information. That every particular that worketh any effect is a thing compounded (more or less) of diverse single natures, (more manifest and more obscure,) and that it appeareth not to whether of the natures the effect is to be ascribed, and yet notwithstanding they have taken a course without breaking particulars and reducing them by exclusions and inclusions to a definite point, to conclude upon inductions in gross, which empirical course is no less vain than the scholastical. That all such as have sought action and work out of their inquiry have been hasty and pressing to discover some practices for present use, and not to discover Axioms, joining with them the new assignations as their sureties. That the forerunning of the mind to frame recipes upon Axioms at the entrance, is like Atalanta's golden ball that hindereth and interrupteth the course, and is to be inhibited till you have ascended to a certain stage and degree of generalities; which forbearance will be liberally recompensed in the end; and that chance discovereth new inventions by

one and one, but science by knots and clusters. That they have not collected sufficient quantity of particulars, nor them in sufficient certainty and subtlety, nor of all several kinds, nor with those advantages and discretions in the entry and sorting which are requisite; and of the weak manner of collecting natural history which hath been used. Lastly that they had no knowledge of the formulare of interpretation, the work whereof is to abridge experience and to make things as certainly found out by Axiom in short time, as by infinite experiences in ages.

CAP. 18.

That the cautels and devices put in practice in the delivery of knowledge for the covering and palliating of ignorance, and the gracing and overvaluing of that they utter, are without number; but none more bold and more hurtful than two; the one that men have used of a few observations upon any subject to make a solemn and formal art, by filling it up with discourse, accommodating it with some circumstances and directions to practice, and digesting it into method, whereby men grow satisfied and secure, as if no more inquiry were to be made of that matter; the other, that men have used to discharge ignorance with credit, in defining all those effects which they cannot attain unto to be out of the compass of art and human endeavour. That the very styles and forms of utterance are so many characters of imposture, some choosing a style of pugnacity and contention, some of satire and reprehension, some of plausible and tempting similitudes and examples, some of great words and high discourse, some of short and dark sentences, some of exactness of method, all of positive affirmation, without disclosing the true motives and proofs of their opinions, or free confessing their ignorance or doubts, except it be now and then for a grace, and in cunning to win the more credit in the rest, and not in good faith. That although men be free from these errors and incumbrances in the will and affection, yet it is not a thing so easy as is conceived to convey the conceit of one man's mind into the mind of another without loss or mistaking, specially in notions new and differing from those that are received. That never any knowledge was delivered in the same order it was invented, no not in the mathematic, though it should seem otherwise in regard that the propositions placed last do use the propositions or grants placed first for their proof and demonstration. That there are forms and methods of tradition wholly distinct and differing, according to their ends whereto they are directed. That there are two ends of tradition of knowledge, the one to teach and instruct for use and practice, the other to impart or intimate for re-examination and progression. That the former of these ends requireth a method not the same whereby it was invented and induced, but such as is most compendious and ready whereby it may be used and applied. That the latter of the ends, which is where a knowledge is delivered to be continued and spun on by a succession of labours, requireth a method whereby it may be transposed to another in the same manner as it was collected, to the end it may be discerned both where the work is weak, and where it breaketh off. That this latter method is not only unfit for the former end, but

also impossible for all knowledge gathered and insinuated by Anticipations, because the mind working inwardly of itself, no man can give a just account how he came to that knowledge which he hath received, and that therefore this method is peculiar for knowledge gathered by interpretation. That the discretion anciently observed, though by the precedent of many vain persons and deceivers disgraced, of publishing part, and reserving part to a private succession, and of publishing in a manner whereby it shall not be to the capacity nor taste of all, but shall as it were single and adopt his reader, is not to be laid aside, both for the avoiding of abuse in the excluded, and the strengthening of affection in the admitted. That there are other virtues of tradition, as that there be no occasion given to error, and that it carry a vigour to root and spread against the vanity of wits and injuries of time; all which if they were ever due to any knowledge delivered, or if they were never due to any human knowledge heretofore delivered, yet are now due to the knowledge propounded.

CAP. 19.

Of the impediments which have been in the affections, the principle whereof hath been despair or diffidence, and the strong apprehension of the difficulty, obscurity, and infiniteness which belongeth to the invention of knowledge, and that men have not known their own strength, and that the supposed difficulties and vastness of the work is rather in shew and muster than in state or substance where the true way is taken. That this diffidence hath moved and caused some never to enter into search, and others when they have been entered either to give over or to seek a more compendious course than can stand with the nature of true search. That of those that have refused and prejudged inquiry, the more sober and grave sort of wits have depended upon authors and traditions, and the more vain and credulous resorted to revelation and intelligence with spirits and higher natures. That of those that have entered into search, some having fallen upon some conceits which they after consider to be the same which they have found in former authors, have suddenly taken a persuasion that a man shall but with much labour incur and light upon the same inventions which he might with ease receive from others; and that it is but a vanity and self-pleasing of the wit to go about again, as one that would rather have a flower of his own gathering, than much better gathered to his hand. That the same humour of sloth and diffidence suggesteth that a man shall but revive some ancient opinion, which was long ago propounded, examined, and rejected. And that it is easy to err in conceit that a man's observation or notion is the same with a former opinion, both because new conceits must of necessity be uttered in old words, and because upon true and erroneous grounds men may meet in consequence or conclusion, as several lines or circles that cut in some one point. That the greatest part of those that have descended into search have chosen for the most artificial and compendious course to induce principles out of particulars, and to reduce all other propositions unto principles; and so instead of the nearest way, have been led to no way or a mere labyrinth. That the two contemplative ways have some

resemblance with the old parable of the two moral ways, the one beginning with incertainty and difficulty, and ending in plainness and certainty, and the other beginning with shew of plainness and certainty, and ending in difficulty and incertainty. Of the great and manifest error and untrue conceit or estimation of the infiniteness of particulars, whereas indeed all prolixity is in discourse and derivations; and of the infinite and most laborious expense of wit that hath been employed upon toys and matters of no fruit or value. That although the period of one age cannot advance men to the furthest point of interpretation of nature, (except the work should be undertaken with greater helps than can be expected), yet it cannot fail in much less space of time to make return of many singular commodities towards the state and occasions of man's life. That there is less reason of distrust in the course of interpretation now propounded than in any knowledge formerly delivered, because this course doth in sort equal men's wits, and leaveth no great advantage or preeminence to the perfect and excellent motions of the spirit. That to draw a straight line or to make a circle perfect round by aim of hand only, there must be a great difference between an unsteady and unpractised hand and a steady and practised, but to do it by rule or compass it is much alike.

CAP. 21.

Of the impediments which have been in the two extreme humours of admiration of antiquity and love of novelty, and again of over-servile reverence or over-light scorn of the opinions of others.

CAP. 22.

Of the impediments which have been in the affection of pride, specially of one kind, which is the disdain of dwelling and being conversant much in experiences and particulars, specially such as are vulgar in occurrence, and base and ignoble in use. That besides certain higher mysteries of pride, generalities seem to have a dignity and solemnity, in that they do not put men in mind of their familiar actions, in that they have less affinity with arts mechanical and illiberal, in that they are not so subject to be controlled by persons of mean observation, in that they seem to teach men that they know not, and not to refer them to that they know. All which conditions directly feeding the humour of pride, particulars do want. That the majesty of generalities, and the divine nature of the mind in taking them (if they be truly collected, and be indeed the direct reflexions of things,) cannot be too much magnified. And that it is true that interpretation is the very natural and direct intention, action, and progression of the understanding delivered from impediments. And that all Anticipation is but a deflexion or declination by accident.

CAP. 25.

Of the impediments which have been in the state of heathen religion and other superstitions and errors of religion. And that in the true religion there hath not nor is any impediment, except it be by accident or intermixture of humour. That a religion which consisteth in rites and forms of adoration, and not in confessions and beliefs, is adverse to knowledge; because men having liberty to inquire and discourse of Theology at pleasure, it cometh to pass that all inquisition of nature endeth and limiteth itself in such metaphysical or theological discourse; whereas if men's wits be shut out of that port, it turneth them again to discover, and so to seek reason of reason more deeply. And that such was the religion of the Heathen. That a religion that is jealous of the variety of learning, discourse, opinions, and sects, (as misdoubting it may shake the foundations,) or that cherisheth devotion upon simplicity and ignorance, as ascribing ordinary effects to the immediate working of God, is adverse to knowledge. That such is the religion of the Turk, and such hath been the abuse of Christian religion at some several times, and in some several factions. And of the singular advantage which the Christian religion hath towards the furtherance of true knowledge, in that it excludeth and interdicteth human reason, whether by interpretation or anticipation, from examining or discussing of the mysteries and principles of faith.

CAP. 26.

Of the impediments which have been in the nature of society and the policies of state. That there is no composition of estate or society, nor order or quality of persons, which have not some point of contrariety towards true knowledge. That monarchies incline wits to profit and pleasure, and commonwealths to glory and vanity. That universities incline wits to sophistry and affectation, cloisters to fables and unprofitable subtilty, study at large to variety; and that it is hard to say, whether mixture of contemplations with an active life, or retiring wholly to contemplations, do disable and hinder the mind more.

(Back Cover.)

Philosophy.

Line 1: see commentary

Line 2: libri dimidium est, pagina 34

Line 3: pagellarum numeri veri

Writing on the Back Cover of VALERIUS TERMINUS

The writing in the original is on the outside of the last leaf, which is in fact the cover. The front cover, if there ever was one, is lost. The ink with which the line containing the symbols is written corresponds with that in the body of the manuscript; and the line itself is placed symmetrically in the middle of the page, near the top. The two lower lines are apparently by another hand, probably of later date, certainly in ink of a different colour, and paler. The word "Philosophy" is in Bacon's own hand, written lightly in the upper corner at the left, and is no doubt merely a docket inserted afterwards when he was sorting his papers. What connexion there was between the note and the manuscript it is impossible to say. But it is evidently a careful memorandum of something, set down by somebody when the manuscript was at hand; and so many of the characters resemble those adopted to represent the planets and the signs of the zodiac, that one is led to suspect in it a note of the positions of the heavenly bodies at the time of some remarkable accident;--perhaps the plague, of which 30,578 persons died in London, during the year ending 22nd December, 1603. The period of the commencement, the duration, or the cessation of such an epidemic might naturally be so noted.

Now three of the characters clearly represent respectively Mercury, Aquarius, and Sagittarius. The sign for Jupiter, as we find it in old books, is so like a 4, that the first figure of 45 may very well have been meant for it. The monogram at the beginning of the line bears a near resemblance to the sign of Capricorn in its most characteristic feature. And the mark over the sign of Aquarius appears to be an abbreviation of that which usually represents the Sun. (The blot between 1603 and B is nothing; being only meant to represent a figure 6 blotted out with the finger before the ink was dry.) Suspecting therefore that the writing contained a note of the positions of Mercury and Jupiter in the year 1603, I sent a copy to a scientific friend and asked him if from such data he could determine the month indicated. He found upon a rough calculation (taking account of mean motions only) that Jupiter did enter the sign of Sagittarius about the 10th of August, 1603, and continued there for about a twelvemonth; that the Sun entered Aquarius about the 12th or 13th of January, 1603-4; and that Mercury was about the 16th or 17th of the same month in the 26th or 27th degree of Capricorn: --coincidences which would have been almost conclusive as to the date indicated, if Capricorn had only stood where Aquarius does, and vice versa. But their position as they actually stood in the manuscript is a formidable, if not fatal, objection to the interpretation.

According to another opinion with which I have been favoured, the first monogram is a NOTA BENE; the next group may mean DIES MERCURII (Wednesday) 26TH JANUARY, 1603; and the rest refers to something not connected with astronomy. But to this also there is a serious objection. The 26th of January, 1603-4, was a Friday, and it seems to me very improbable that any Englishman would have described the preceding January as belonging to the year 1603. Bacon himself invariably dated according to the civil year, and the occasional use

of the historical year in loose memoranda would have involved all his dates in confusion. I should think it more probable that the writer (who may have been copying a kind of notation with which he was not familiar) miscopied the sign of Venus into that of Mercury; in which case it would mean Friday, 26th January, 1603-4. But even then the explanation would be unsatisfactory, as leaving so much unexplained. Those however who are familiar with old manuscripts relating to such subjects may probably be able to interpret the whole.