[Essay Pack] NOVUM ORGANUM

Wednesday, May 6, 2020 9:05 AM

Question Two

History of Ideas
February Intake 2020 First Essay
1000 words, 15%
Due date: Monday 1st June

* If the essay is more than 10% above the word count this will be taken into account when determining the grade of the essay. The bibliography and references in brackets are not included in the word count. **The essay must be based on the recommended reading** (both primary source extracts and secondary sources).

** Any materials used which are *not* on the recommended reading list **must be provided electronically** on TCOLE via the "Extra readings that I have used for my essay" link immediately below the Turnitin essay submission link. You can upload these files as PDFs or image files (JPEG, TIFF etc.), but the parts used in the text must be highlighted so that it is clear to your teacher what you have used.

Academic integrity is vital to the attainment and maintenance of high standards in scholarship, education and professional practice. Trinity College Pathways School (and the University of Melbourne) regards breaches of Academic Integrity as very serious. It employs an educative approach with regard to academic misconduct, together with measured and fair penalties in appropriate instances. Details of the Pathways School policy can be found in the **TCPS Academic Integrity Policy and Procedure** document which is located on HOI TCOLE. Before submitting an essay students should familiarise themselves with this document and ensure their work meets the standards laid out in this policy.

Information on how to reference your essay can be found in the *Essay Writing iBook* on TCOLE. This iBook also contains lots of other useful information on essay writing.

Question Two:
Why does Francis Bacon criticise Aristotle in the *Novum Organum*?
REASONS

Reading:

Primary Sources

These primary source extracts are provided on the following pages:

Bacon, F. (2020). *Novum Organum extract*. Melbourne: Trinity College Foundation Studies.

Secondary Sources

The following secondary source PDFs have been placed in the Assessment: First Essay section on TCOLE. Areas of the PDFs that have been crossed out in yellow are not required reading. You may however, use that information if you wish.

Note on page numbers: Where these are indicated, these are the most important sections, but you may also find useful material on other pages, depending on your approach and needs.

Boas, M. (1962). *The Scientific Renaissance: 1450-1630*. New York: Harper and Row.
Recommended pages: 247-251, 252-253, 254-255, 260.

Broad, C. D. (1958). *The history of science, origins and results of the Scientific Revolution: a symposium*. Melbourne: Melbourne University Press.
Recommended pages: 45-53.

Dear, P. (2009) *Revolutionizing the sciences: European knowledge and its ambitions, 1500-1700,* (2nd ed.). Princeton and Oxford: Princeton University Press.
Recommended pages: 3, 6-7, 55-59, 60.

Losee, J. (1993). *A historical introduction to the philosophy of science* (3rd ed.). Oxford and New York: Oxford University Press.
Recommended pages: 65-69, 71-72.

Rossi, P. (1968). *Francis Bacon: from magic to science* (S. Rabinovitch, Trans.). London: Routledge & Kegan Paul.
Recommended pages: 36-39, 59-64.

Introduction[1] and notes' to Francis Bacon's *Novum Organum* by S. Fleischfresser (2020)

476 CE

Organon origin

After the collapse of the Western Roman Empire in 476 BCE, much of the learning of antiquity (the ancient Greeks and the Romans) was lost to European culture. A revival of learning in the 12th century saw the works of Aristotle (384-322 BC) on the topic of logic made widely available in Latin for the first time. This collection was known as the *Organon*, a Greek word meaning 'tool' or 'instrument', and it gained Aristotle a reputation as an expert in logic (known as a 'logician').

By 1200 many of Aristotle's other works were translated into Latin, and Aristotle became known as 'The Philosopher', whose "authority came to be regarded as almost that of another Bible" (Harris, 1962, p.240). Aristotle, unlike many other philosophers of his time, was a champion of the use of philosophy to understand the natural world. His philosophical approach to nature, which relied mostly on logic, became known as 'Aristotelian natural philosophy'

Scholasticism and Aristotelianism

The work of Aristotle became an important component of Christian thinking. Scholasticism's of Greek philosophy were integrated with medieval Christian theology by European philosophers such as Anselm of Canterbury, Peter Abelard and Thomas Aquinas. This mixture of classical philosophy and Christian theology was known as 'Scholasticism'. Scholasticism sought to bring together the faith of Christianity with the reason of classical philosophy, particularly the thought of Aristotle. Scholasticism is thus an example of *Aristotelianism* – the tradition of Western philosophy based on, and inspired by, the works of Aristotle. Scholasticism became the primary way of thinking (or paradigm) for the medieval universities and cathedral schools from the 12th to the end of the 17th centuries CE.

Sir Francis Bacon

Sir Francis Bacon (1561-1626 CE) was an English lawyer, politician, writer and philosopher, most famous for his role in developing the idea of the 'scientific method'. In 1573, at 13 years old, Bacon was sent to Trinity College at the University of Cambridge (obviously, not Trinity College Melbourne…) where he spent three years learning under the scholastic system of education. Here he developed, according to one source, "an antipathy towards Aristotelian philosophy" (Losee, 1993, p. 64) which he considered to be 'unfruitful'.

"antipathy" definition: extreme dislike

Upon leaving Cambridge Bacon studied law in London, eventually becoming a barrister and then a member of parliament. Under King James I, Bacon became Lord High Chancellor, the highest political office, where he oversaw the English legal system. However Bacon's real passion was natural philosophy (this would eventually turn into what we know as 'science'). It is important to note that Bacon himself was not a scientist, rather he called himself a *baccinator*, (Pesic, 2001, 430) a herald or prophet of science, a vocal advocate supporting the cause of scientific inquiry.

Bacon was also keenly interested in human reason and its limitations. He identified a number of problems with human reason which he referred to as the 'Idols', but most modern psychologists would call these 'cognitive biases' (built-in errors of reason in the human mind). Because of these errors in our thinking, Bacon believed we needed to have a 'method' by which to do science that corrected these errors.

Bacon is often referred to as the father of empiricism, the stream of Western epistemology (the philosophy of knowledge) that argues that our knowledge of the world must come via our senses

[1] In your essay, refer to this introduction as (Fleischfresser, 2020, p. 3) or p. 4. List in your bibliography as Fleischfresser, S. (2020). Introduction and notes to *Francis Bacon essay*. Melbourne: Trinity College Foundation Studies.
In the case of footnotes accompanying the primary source, the authors are Fleischfresser. To reference in your essay, give the footnote number preceded by the letter 'n' as well as the page number. For example (Fleischfresser, 2020, p. 5, n. 10).

Why is 'new discoveries'

[LECTURE] 2020 FIRST ESSAY DETAILS

CUE COLUMN Questions/Cues	NOTE TAKING COLUMN Key Ideas/Important facts/Repeated (stressed) information
Due Date	• **Monday, 1st June 2020** • 11:59pm
Word Limit	• **900 - 1100 words**
Referencing Style	• APA REFERENCI NG GUIDE
Formatting	• Steve Monday 4:00pm Q2.docx (Microdoft Word) • Font Size: 12 • Font: Times New Roman, Arial, Calibri etc. • Double Line Spacing • 2.5-3cm margin
Submission process	• TCOLE

Why does Francis Bacon criticise Aristotle in the Novum Organum?

- Why - reasons
- Francis Bacon
- criticise - definition
- Aristotle
- *Novum Organum*

SUMMARY

Term	Definition

REVIEW QUESTIONS

Link to Anki:

Question	Answer in white

[LECTURE] INTRODUCTION AND NOTES TO FRANCIS BACON'S NOVUM ORGANUM by S. Fleischfresser (2020)

CUE COLUMN Questions/Cues	NOTE TAKING COLUMN Key Ideas/Important facts/Repeated (stressed) information
Referencing	In-text : (Fleischfresser, 2020, p.XX) Post text : Fleischfresser, S. (2020). *Introduction and notes to Francis Bacon essay*. Melbourne: Trinity College Foundation Studies.

Organon origin	• *Organom*
	  • Meaning 'tool' or 'instrument'
	  • A collection of the works of Aristotle on the topic of logic in Latin during a revival of learning in the 12th century

Sir Francis Bacon
(1561-1626 CE)
	• Lawyer, politician, writer, philosopher
	• Developed the 'scientific method'
	• Developed "an antipathy towards Aristotelian philosophy" (Losee, 1993, p.64 as cited in…, p.3) after…
	  • Three years learning under the scholastic system of education
	  • At Trinity College at the University of Cambridge
	• Called himself a *buccinator*, not a scientist (Pesic, 2001, 430 as cited in…, p.3)
	  • *Buccinator*: a herald or prophet of science, a vocal advocate supporting the cause of scientific inquiry
	• The father of empiricism
	  • The stream of Western epistemology (the philosophy of knowledge)
	  • Argues that our knowledge of the world must come via our senses (sight, sound, touch, taste and smell)
	  • Empiricist, 'inductive logic' > deductive, Aristotle logic
	  • Scientific logic > passive observation to investigate nature
	  • *New discoveries* - highest importance
	  • Scientific knowledge: practical - improve the lives of humanity > understanding nature just for the sake of knowledge
	  • Science: both intellectual and moral
	  • ^… = "Baconian method"

What is this - paragraph number? Page number? & do we need to put sources which are cited in into our reference list?

italicised?

(sight, sound, touch, taste and smell). He also argued that we must move beyond the deductive logic used by Aristotle and embrace a new form of empiricist logic called 'inductive logic', which consists of carefully making conclusions based on observation. He championed the use of scientific experiment (as opposed to just passive observation) to investigate nature, and the idea of scientists working in collaborative institutions. All of this was designed to allow science to make *new discoveries*, something Bacon thought was of the highest importance.

Most importantly, Bacon believed that scientific knowledge should be practical. He wasn't interested in understanding nature just for the sake of knowledge, rather he believed the purpose of science was to improve the lives of humanity. In this sense he believed that science was both an intellectual and moral endeavour.

All of this together formed what is known as 'Baconian method'. While the specific method advocated by Bacon was not successful, the idea of a scientific method that all scientists should use was enormously influential and formed an important part of the later Scientific Revolution.