

Science Institutionalization in Early Islam: “Bayt al-Hikma of Baghdad as a Model of an Academy of Sciences”

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ABSTRACT

This study aims to introduce academy-type institutions of the pre-Islamic era. To illustrate the ascendance of the Islamic tradition of science institutionalisation, founding and patronage of academies, the example of Baghdad's Bayt al-Hikma (House of Wisdom) which flourished in the ninth century AD is examined closely in the light of primary Arabic sources on the subject as well as recent contemporary international literature. The study will then go beyond the existing narrative on Bayt al-Hikma to argue that it was an 'academy of sciences' that preceded by centuries the *Accademia dei Lincei* of Rome, considered by many scholars as the world's first academy of sciences established in 1603.

Keywords: History of Science, Islamic Science, Islamic Civilisation, Bayt al-Hikma, Academies of Sciences.

Introduction

Science institutions have evolved historically, eventually emerging in many forms. Nowadays, they include schools and universities, research centres, learned societies and academies of sciences.

However, even with the existence today of over 120 formally recognised academies of sciences around the world (IAP, 2015), the understanding of the term 'academy of sciences' is, at present, lacking. Many people are ignorant of the fact that an academy of sciences' primary role is to act as the science advisory or *sovereign* (supreme authority) (Ravetz, 1980) which actively promotes science in the catchment⁽¹⁾ area where it operates, and a forum where scientific issues are debated, studied and communicated.

A quotation from Drenth, which appears in his book *Walks in the Garden of Science* provides a definition of an academy of sciences (Drenth, 2006). It reads:

An Academy is basically a learned society, with (a restricted number of) members who are solely selected on the basis of their scientific or scholarly

qualification and reputation... An Academy's main responsibility is the promotion of science and scholarship through independent research, reflection and discussion as well as evaluative and advisory activities, and the public disclosure of its opinions and judgements.

Although the abovedefinition essentially explains what the term 'academy' means in the context of the 20th century, many of the elements embedded in it are applicable to academies of sciences and academy-type institutions of the past including Bayt al-Hikma of Baghdad in the first half of the ninth century.

This paper aims to provide a short history of ancient academy-type institutions. Moreover, to illustrate the rise of the Islamic tradition of science institutionalisation and patronage, the example of Bayt al-Hikma of Baghdad will be re-examined and the perception that Bayt al-Hikma of Baghdad was an 'academy of sciences' of its day involved in translation, research and information dissemination, will be investigated leading to the conclusion that Bayt al-Hikma preceded the *Accademia dei Lincei*, viewed by many scholars as the world's first academy of sciences established in Rome in 1603.

This, to draw lessons that can help to raise the profile of science and further institutionalise the scientific enterprise in developing countries, today.

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Academies in Ancient Civilisations

Ancient civilizations such as those that flourished in China, Mesopotamia and Egypt, witnessed in their heyday illustrious accomplishments in the domain we today call science and technology (S&T). Some Middle Eastern historians claim that the Phoenicians too were interested in science and established sciences and law academies in Sidon and Beirut (in modern day Lebanon) respectively around BC 1000.

The Academies of Athens and Alexandria

Notwithstanding Confucian institutions that existed in China in BC 400, the view that Plato created the first academy of sciences of ancient times in BC 387 has been widely supported. The location of Plato's Academy was an orchard outside the walls of Athens where the legendary hero of Greek mythology *Akademios*⁽²⁾ was honoured. In his youth, Aristotle went to Athens to study with Plato and became a member of Plato's Academy for 20 years until Plato's death in BC 347 (McClellan and Dorn, 2006). The Academy of Athens was suppressed in AD 529 by the then Emperor Justinian almost a millennium after it was started, since the views it propagated were considered damaging to the state (Winter, 1952). That probably represented the first historical clash between academia (the academic community) and government.

The century following the birth of the Academy of Athens witnessed the rise and fall of Alexander the Great, and the end of the ancient Egyptian and Babylonian civilisations. However, the city founded by Alexander and carries his name, Alexandria, witnessed the birth, around the year BC 290 of the ancient library of Alexandria. Established by Ptolemy I Soter (BC 323 – BC 283), the library was intended to be a meeting place for scholars, and the first research centre in the world expanding to comprise all forms of knowledge of the ancient world. At its peak, the Library may have held over 700,000 scrolls (Serageldin, 2006a) (BA, 2004).

The establishment of the Library of Alexandria was a historical event. Alexander had managed to establish an empire that spanned from Taxila (in modern day Pakistan) to Byzance and Cyrene (in modern day Libya), thus facilitating the flow of knowledge between East and West. The ancient Library of Alexandria married Greek and Egyptian sciences and added some Asian elements. This produced an explosion of knowledge unparalleled in history until then. The ancient Library was the academy

par excellence of ancient times. By the 1st century BC, Alexandria had become the centre of Greek science and philosophy (Nasr, 1968).

The false hypothesis that Muslims were responsible for the destruction of the ancient Library of Alexandria was posited initially by *Abdel Latif Baghdadi* (d. AD 1241/42) who visited Egypt in AD 1200 (Qasem, 2006). *Ibn al-Qifti* (b. AD 1172) also provided a flawed account of the alleged destruction of the Library. However, historians argued that his narrative was proposed to justify *Salahuddin's* closure of *Dar al-Hikmain* the twelfth century on the basis that the earlier grander Library of Alexandria was destroyed upon the orders of the Caliph *Omar Ibn al-Khattab*. Thus, what *Salahuddin* allegedly did could be justified. The motive behind *Ibn al-Qifti's* narrative seems to have been the appeasement of *Salahuddin* (Qasem, 2006). Serageldin (2006b) and others strongly refute the claim that the final destruction of the library came at the hand of the Muslims during their conquest of Egypt (AD 640) under the Arab conqueror of Egypt *Amro Ibn al-'As*; the same argument is offered by Daffa' who provides evidence that the Library was burnt down by Julius Caesar in BC 48.

Moreover, the allusion to the actions of *Amro Ibn al-'As* in the context of the above narrative is tantamount to falsification of history, for *Ibn al-'As* was an exceptionally progressive figure of his day renowned for his military and political acumen as well as his exposure to and appreciation of non-Islamic cultures. Had the Library existed when he ventured into Egypt, it is almost certain that he would have preserved it.

The idea of Alexandrian-type academies resurfaced centuries later by the leaders of the Christian Church who founded similar institutions in Antioch and Nisibis (in modern-day Turkey) after AD 425 (Becker, 2005). Although Greek served as the *lingua franca* for scholars at such (schools), many of the texts were translated from Greek to Syriac, and when these schools moved to Edessa (in modern-day Turkey) in AD 464, they became engrossed in the Syriac tradition.

Nestorians, named after the bishop of Constantinople 'Nestorius' (AD 381-451), who had settled in Edessa, eventually moved together with their Syriac traditions to the east in AD 457.

The Academy of Jundishapur⁽³⁾

The Syriac traditions survived for another century, for when the Persian leader *Khosrau I* established an

Alexandrian-type ‘academy’ in Jundishapur (in modern-day Iran) around AD 560 (half a century before the birth of Islam in Mecca), instruction would be conducted in Syriac. This academy was a refuge for many Greek philosophers and Nestorian Assyrians fleeing persecution by the Byzantine Empire.

In his book, *History of Islamic Origins of Western Education*, Nakosteen (1964) mentions the Academy of Jundishapur, which flourished during the 6th century and was described as the greatest ‘academy’ of its time. It lasted until after the establishment of the ‘*Abbāsīd* Caliphate, and became an important source of ancient learning in the Islamic world.

The storyline line of the flow of scientific knowledge in the Middle East in that era demonstrates how interdependent the civilisations that existed then were; and how the Islamic civilisation, even in its infancy, was an alacritous appropriator of many earlier—including scientific – traditions. This is demonstrated by the hypothesis that the Jundishapur academy was the forerunner of Bayt al-Hikma, which was founded two centuries later.

This is a reasonable supposition for the following reasons:

First

The ‘*Abbāsīds*, who established Bayt al-Hikma in Baghdad must have become aware of Jundishapur and its rich academic heritage due to its proximity to the route that linked their first capital Kufa (AD 749-762) to Khorasan and its capital city Merv or Merw (a UNESCO World Heritage Site in today’s Turkmenistan). Khorasan was the powerful province that first supported the rebellion of the ‘*Abbāsīds* against the Umayyads.

Second

The prestige of the Alexandrian-type institution in Jundishapur must have encouraged early ‘*Abbāsīd* Caliphs to establish Bayt al-Hikma in Baghdad, the city that was built by the second ‘*Abbāsīd* Caliph *al-Mansur* (the real founder of the ‘*Abbāsīd* Caliphate).

Third

The reported direct contact established between Jundishapur and Baghdad in AD 765, when al-Mansur sought the help of Jundishapur’s most famous physicians (Jirjīs Bukhtyishū); this paved the way for a tradition of transfer of medical knowledge from Jundishapur to Baghdad that lasted for decades (Nasr, 1968).

Fourth

The link between the two academies manifested itself in the person of *Hunayn Ibn Ishaq* (AD 809-877), the gifted philosopher and physician of wide erudition and one of the eminent figures of that century of translators, who became the curator of Bayt al-Hikma. Ibn Ishaq represented the Greco-Arabic translation movement at its best (Lindberg, 2007). He was a celebrated physician who mastered the language of the Greeks; he translated the entire works of Galen, as well as the works of Aristotle, Hippocrates, and other classics from Greek into Syriac. He also wrote the ‘Ten Treatises of the Eye,’ which later became known in the West as ‘Johannitus.’ In translating Galen’s book, Ibn Ishaq wrote that the only reasonably complete copy he could find of the same came from Alexandria (Mohaqqaq, 2001).

Bayt Al-Hikma: An Academy of Sciences?

Of the most famous scientific institutions to appear in the early ‘*Abbāsīd* era of the Islamic civilisation was Bayt al-Hikma of Baghdad.

Ahmed went as far as to describe it as the Baghdad Academy of Sciences (Ahmad, 2008); Abdus Salam described it as an institute of advanced study (Dalafi and Hassan, 1994), while Youssef Eshe described it as a stronghold of Mu’tazelite Thought during the reign of al-Ma’mun (Al-Awady, 1997). It is highly likely that it was more than an institution of learning of the type described by Makdisi in his book, *The Rise of Colleges: Institutions of Learning in Islam and the West* (Makdisi, 1981).

The rise of Bayt al-Hikma

The preliminary founding of Bayt al-Hikma as a concept or indeed as a forum for debate can be attributed to *Harun ar-Rashid* (AD 763-809) who regularly convened intellectual debates with scholars and scientists (Shalaby, 1954) (Yazigi, 1966).

The majority of historians, including Hitti (2002) in his *History of the Arabs*, however agree that it was the ‘*Abbāsīd* Caliph *al-Ma’mun* (AD 786 –833) who had formally instituted Bayt al-Hikma in Baghdad around AD 830⁽⁴⁾ as a combination of a forum of debate, a library, an academy, and a translation bureau.

Al-Ma’mun was an outstanding caliph who was best known for sponsoring the translation of Greek philosophy into Arabic and for promoting the activity of mathematicians, astronomers, engineers and physicians,

as the *Fihrist* of *Ibn al-Nadim* (the premier Arabic-language bibliographical book to survive to the present day) highlights (Saliba, 2007b) (Ahmad, n.d.) (Cooperson, 2005). His interest in the sciences of earlier civilisations could be traced to the time he had spent at Merv; which has been a stopover town on the Silk Road and on the path of every conqueror that has appeared in Eurasia. Al-Ma'mun was thus influenced by the rich heritage that the earlier cultures of the Greeks, Zoroastrians, Christians, and Buddhists had left (Morgan, 2007). Moreover, Merv, in Khorasan, had a great deal to do with the fortunes of the 'Abbāsids, who drew strong support from that province. The Barmakids, moreover, the family that later supplied the all-powerful ministers who guided and controlled the 'Abbāsīd government had its roots in that very city (O'Leary, 1979).

The account of Syed Ameer Ali (1955) of al-Ma'mun's reign as the most brilliant and glorious included a reference to his academic and scientific pursuits including how he collected the writings of the school of Alexandria, and secured from Athens the best philosophical works of ancient Greece. It was during his reign that new learning reached a climax that culminated in the formal institution of Bayt al-Hikma (Sarton, 1927-31) (Kirk, 1964) (Majeed, 2005).

Modelled after the ancient Library of Alexandria, Bayt al-Hikma was a centre of scholarly activities where books from the Greek, Syriac, and Persian languages were translated into Arabic by expert Arabists (Lerner, 1998); a forum for translating and documenting the rational sciences which were called the 'sciences of the ancients' (*ulūm al-awā'il*) to distinguish them from disciplines that dealt with Islam and Arabic language (Sabra, 1987).

Notwithstanding testimonies that Bayt al-Hikma was an academy as important as the Library of Alexandria, and Saliba's declaration that Bayt al-Hikma (c. 830) and the Accademia dei Lincei (founded in 1603) were carefree physical environments for the pursuit of science (Saliba, 2002), questions were raised on the validity of this argument by Gutas (1998) and later by Saliba himself (2007a) (2008). Gutas has according to Lindberg (2007) debunked the theory that Bayt al-Hikma was a research institute.

In what follows, an attempt will be made to show that Bayt al-Hikma was an academy of sciences of its day with all the associated roles including that of a formally instituted learned society, a forum for debate, research,

translation ... and should to be conceived as such.

Evidencedrawn from the Fihrist of Ibn al-Nadim

The *Fihrist* of Ibn al-Nadim is the premier Arabic-language bibliographical book to survive to the present day. It is an encyclopaedic work that investigated all the sciences and catalogued all the well-known books that were written about them (Nakosteen, 1964) (Atiyyeh, 1986). It includes a listing of all the books that were written in or translated into Arabic in all the fields of knowledge until the year AD 987, as well as the names of many of the scholars of that era.

The account of Ibn al-Nadim is often disregarded by modern Western scholars, however it is valuable source when it comes to unravelling some of the mysteries surrounding Bayt al-Hikma. In most contemporary versions of the *Fihrist*, Bayt al-Hikma (sometimes referred to as *Khizanat al-Hikma*) is mentioned 13 times. *Sahel bin Haroun* is mentioned as the curator/chief (sahib) of Bayt al-Hikma, and *Sa'id bin Haroun* is mentioned as his partner (Ahmad, n.d.); an official named *Sanawbar* is described as the curator/chief (sahib) of Bayt al-Hikma. Individuals associated with Bayt al-Hikma included administrators, copyists and binders. Ibn al-Nadim reports that the astrologer *al-Fadl ibn Nawbakht* was at the *khizanat al-Hikma* at the time of Harun al-Rashid; he translated scripts from Persian into Arabic and relied in his scholarship on Persian books. Ibn al-Nadim also mentions '*Allan al-Shu'ubi*, an individual devoted to the Barmakids, as a copyist who transcribed in the Bayt al-Hikma for al-Rashid and al-Mamun, and *ibn Abi'l Huraish* as a bookbinder at the time of al-Mamun (Ahmad, n.d.).

Furthermore, the fact that a towering figure like al-Khawarizmi frequented Bayt al-Hikma during the reign of al-Ma'mun clearly indicates that activities other than translation and book production took place within its confines (Ahmad, n.d.).

Ibn al-Nadim mentions another chief of Bayt al-Hikma, Sallamah (سلم) who among other scholastic activities, worked on the famous book *Kalila wa Dimna*, which it has been argued is based on the ancient Indian book called 'Panchatantra' (Ahmad, n.d.).

A Question of Terminology

In his book, *Les bibliothèques arabes publiques et semi-publiques en Mésopotamie, en Syrie et en Égypte au Moyen-Age*, published by *l'Institut français de Damas* in 1967, extensively cited by Makdisi (1981), Youssef Eche

provides a description of the terminology used to explain 'academic' institutions that existed at the time of Bayt al-Hikma. Arabic terminology that describes locales: bait (room), khizana (closet), and dar (house) and terminology that described activities: hikma (wisdom), 'ilm (knowledge), and kutub (books). Eshe claims that such terms refer to libraries. But, do they all have the same meaning?

It is likely that institutions that were identified as 'bait' were more than just libraries, probably locales where science and scientific matters were debated. Judging by how the term 'bait' appears in the *Qur'an*, it can be construed as a location that has a patron or a master where people assemble. If what Gutas (1998) claims is correct, essentially that Bayt al-Hikma was a library that formed part of 'Abbāsī administration, a replica of the Sassanid model; then it would have been called *Dar at-Tarjamah* or *Dar al-Naql*, (both meaning 'House of Translation') or simply *Dar al-Kutub* (House of Books) and not Bayt al-Hikma. This latter term means the patronized location within which intellectual matters are debated. Moreover, the term *al-Hikma* is what linguists call an intangible, an attribute that cannot be measured or quantified. In a similar vein, Sabra (1987) proposes that *al-Hikma* or *al-'ulum al-hikmiyya* is 'the philosophical sciences.'

Evidence Based on Contemporary Research

Research carried out by many contemporary scholars shows that Bayt al-Hikma was not merely a translation bureau. It was more of a complex that had a large repository of manuscripts, with specialists employed to oversee their translation. Adjacent to it, a large observatory was built as well as a school that taught astronomy. Researchers at Bayt al-Hikma studied a wide range of sciences such as medicine, chemistry, astronomy as well as other sciences mainly through experimentation (Yawar, 2001). Bayt al-Hikma embraced many of the translated sciences and was domicile to many diverse activities including authoring, translating, transcription, studying, documenting, and hosting scientific and literary debates between its various patrons who included *al-Khawarizmi*, *al-Farra'* and *Hamzah al-Asfahani* (Khalaf, 2001). Al-Hakim (2001) singled out scientific debates as a separate activity and described how Bayt al-Hikma facilitated to non-Muslims the opportunity to discuss and debate a wide range of issues. It is worth mentioning that the first curator of Bayt al-Hikma, according to

Hamarneh (2004), was the famous *Yohannah ibn Massawaih*, a Christian scholar, and that many of the eminent scholars who taught at Bayt al-Hikma were non-Muslims. Administrative affairs were carried out by directors who were of many origins, ethnicities and religious schools of thought; together with the scientists and the researchers, they had to wear special clothes when working at the 'House' (Al-Atrakji, 2001). Within Bayt al-Hikma, the individuals responsible for the mathematical sciences, geometry, and music were the *Banu Shaker*; the eldest of whom was *Abu Ja'far Muhammad Bin Musa* (died AH 259). The translation department had many famous chiefs including *Omar Bin Farkhan al-Tabari* as well as *Ibn Ishaq*.

Conclusive evidence is relayed on the high-end research carried out at Bayt al-Hikma, particularly in the field of translation. In translating the original works of Aristotle to Arabic, careful examination of the contribution of many researchers reveals two types of translations: the actual works of Aristotle; and the works allegedly carried out by Aristotle. Over the years, some manuscripts of the works of Aristotle that have been translated at Bayt al-Hikma have appeared in libraries around the world; mostly of the first type. Al-'Assam (2001) has spent over 30 years examining the manuscripts that have appeared at various libraries and research institutes around the world which either originated or were based on studies carried out at Bayt al-Hikma. He made a special mention of manuscript number Arab. 2446 (at the French National Library), which during various periods in the 20th century was studied by J.T. Zenker (1846 & 2006) in the book entitled 'Aristotelis Categoriae,' Ibrahim Madhkour in 1944, and K. Djorj in 1946; all of whom base their analysis on the work of the translators of Bayt al-Hikma. He cited numerous other examples of rare manuscripts that have appeared at various libraries around the world that were originally translated into Arabic by some of Bayt al-Hikma's translators; these range in subject from Organon (Aristotle's works on logic), biology, theology, ethics and art.

Like some of today's academies of sciences, Bayt al-Hikma had its own Waqf (Trust to generate income) (Khalaf, 2001) however accurate estimates are not available on the financial costs that were expended on running expenses. Some scholars claim that 20,000 Dinars were allocated for the purpose monthly. It is likely that such resources were afforded by the caliph, his

ministers and advisors and it has been reported that al-Ma'mun, the patron of Bayt al-Hikma, would give Hunayn Ibn Ishaq the weight of the books he translated in gold. The fact that this institution was strongly patronised by the caliph supports the argument that it was an academy-type institution.

Other evidence exists that shows that Bayt al-Hikma was a science academy, an observatory as well as a public library, and the greatest of cultural institutes after the Library of Alexandria. It was in part an Arabic language academy (majma') that contributed to spreading Arabic and elevating it to become the most important scientific language of the world for many centuries; it also was an international archive that preserved knowledge that might otherwise have been lost forever (Majeed, 2005).

A Note on the Demise of Bayt al-Hikma

Notwithstanding the theory of Hamarneh (2004) that Bayt al-Hikma's holdings were transferred to the Nizamiyyah in the 10th century, it is not clear if the rise of the Nizamiyyah Academy of al-Ghazzālī in Baghdad in 1066 did have an adverse effect on Bayt al-Hikma as a beacon of translation and scientific research.

Although the twilight existence of Bayt al-Hikma—beyond the ninth century—is not well documented, there is a consensus among contemporary historians and scientists that what was left of the original grandiose Bayt al-Hikma eventually came to a violent end at the hands of the Mongols when they occupied Baghdad under Hulagu in AD 1258. The last we hear of Bayt al-Hikma comes from Ibn al-Nadim (died AD 990) according to al-Atrakji (2001), who also supports the view that Bayt al-Hikma was destroyed by the Mongols in AD 1258.

Conclusion

Academies of sciences and academy-type institutions are not new. Examples of such institutions exist from ancient times. Athens was one of three ancient cities that were the domicile of academies of sciences. The other two were Alexandria and Jundishapur, which are cities found in what we know today as countries of the Islamic

world: Egypt and Iran respectively. Athens was the venue for Plato's academy (BC 387), followed historically by Alexandria, which boasted the ancient library named after it in BC 290. Jundishapur was home to an Alexandrian-type 'academy' established by Khosrau I around AD 560. The successor of the Jundishapur academy was the famous Bayt al-Hikma of Baghdad.

The fascinating storyline of the rise and subsequent demise of these institutions reveals a certain dynamism that the region enjoyed and how the region's powers at the time were relatively interdependent. It further shows how the Islamic civilisation of the day was a willing inheritor of scientific traditions it appropriated from other civilisations.

Saliba has classified Bayt al-Hikma and the *Accademia dei Lincei*⁽⁵⁾, which came almost eight centuries later, as institutions where scientists worked in a relatively carefree environment and whose collective activities were bound to make a difference in terms of scientific production (Saliba, 2002). This is unusual, as Saliba is known to be of the opinion that Bayt al-Hikma was not a science academy, justifying his opinion on the valid grounds that no manuscripts have come to light to prove that it was (Saliba, 2008).

Based on the evidence presented, this paper goes beyond the existing literature which depicts Bayt al-Hikma as an institution of translation and science, and proposes the novel narrative that Bayt al-Hikma was an academy of sciences *par excellence* of the ninth century (Hibbi, 2001) (Al-Hashem, 2001) (Qurashi and Rizvi, 1996) (Jawahiri, 2001); not only owing to institutional and administrative set-up but also due to the fact that the majority of the subjects studied within its confines belong to what in modern parlance consist of basic sciences including: astronomy, mathematics and medicine as well as the main Greek works on philosophy (Al-Hassan et al., 2007).

The paper further advocates that Bay al-Hikma as an academy of sciences superseded its famous European successor, the *Accademia dei Lincei* (1603), by eight centuries.

NOTES

- (1) The catchment area of an academy of sciences may, for the purpose of this study, be defined as the geographic area in which the academy operates whether it is the country, the region or the world.
- (2) A legendary hero in Greek mythology, Akademos was linked to the archaic name for the site of Plato's Academy, the Hekademeia, outside the walls of Athens.
- (3) Also written as Gundeshapur, Gondeshapur, Jondishapoor, Jondishapur, and Jondishapour, Gundishapur, Gondêshâpur, Jund-e Shapur, Jundê-Shâpûr. The city was the intellectual centre of the

Sassanid empire and the home of the Academy of Gundishapur.

- (4) Many dates have been proposed for the formal launch of Bayt al-Hikma however the most historically accurate date seems to be around AD 830, particularly if the age of Hunayn Ibn Ishaq (AD 809-877) who at some point became its curator, is taken into account.
- (5) The Academia dei Lincei in Rome which was founded in 1603 was the first 'academy of sciences' to be founded in modern times. The name of the Academy means 'Academy of Lynxes,' a name chosen by the founders because the lynx is renowned for its sharp eyesight.

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مأسسة العلوم في عصور الإسلام الأولى: بيت الحكمة في بغداد كنموذج لمجمع علمي

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ملخص

يهدف هذا البحث أولاً إلى تقديم لمحة موجزة عن مجامع العلوم في الحقبة ما-قبل الإسلامية. ولتوضيح كيفية صعود التقاليد الإسلامية في مجال مأسسة العلوم وتأسيس ورعاية المجمع سيدرس نموذج بيت الحكمة في بغداد الذي ازدهر في القرن التاسع الميلادي عن كُتب وذلك في ضوء المصادر العربية الأساسية وكذلك الأدب العالمي المعاصر المتعلق بالموضوع. ومن ثم سيتجاوز البحث الذي تم عرضه عن بيت الحكمة ويناقش النظرية القائلة إن بيت الحكمة كان بمثابة مجمع علمي سبق في تأسيسه ويقرون أكاديمية لينتشي الشهيرة والتي يعتبرها البعض أول أكاديمية علوم في العالم تأسست في روما عام 1603.

الكلمات الدالة: تاريخ العلوم، العلوم الإسلامية، الحضارة الإسلامية، بيت الحكمة، أكاديميات العلوم.

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