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**Objectifying the contribution of the Arab-Muslim world to the history of sciences and ideas:
the sources and resources of medieval encyclopaedism**

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The contribution of the Arab-Muslim world to the field of the history of science remains a matter of debate and controversy today. In spite of the undeniable achievements of scholarship over the last 150 years, current research is still in need of unbiased information and quantifiable benchmarks in order to assess, on a truly scientific basis, the extent of what Europe owes to the scholars of medieval Islam. Because their purpose is precisely to organise and classify human knowledge with an all-encompassing scope, encyclopaedias are works that reflect, like a mirror, the cultural and intellectual concerns of the societies that have produced them. Research on medieval encyclopaedism has generated excellent results in various fields so far, but still suffers from a regrettable propensity for compartmentalization, with the result that Arabists, Byzantinists, Latinists, and Romanicists are only rarely involved in common projects.

At the core of our investigations since the founding of our research group in 2003, the comparative study of encyclopaedias from the East and West offers a wide range of concrete and objective data that are directly usable in helping us to answer our initial question. This cross-cultural approach proves to be especially helpful with regards to the study of the sources and of the transmission of the texts. Therefore, in view of evaluating the importance of the Arab-Muslim world as one of the roots of Europe's cultural and intellectual identity, we have defined five complementary topics of inquiry that would be suitable either for doctoral (items 1 - 3) or post-doctoral (items 4 - 5) research. These five topics, which have been deliberately chosen to cover a maximum of cultural and linguistic areas and the largest possible time-span (roughly speaking, from the 9th to the 15th C.), are the following:

1) 'Arabic sources in black and white: a study of Arab authorities in the Latin encyclopaedias of the 13th C.' (supervisors: G. de Callatay – B. Van den Abeele)

2) 'Between East and West: the sources and scopes of the Byzantine *Suda* (10th C.)' (supervisor: F. Van Haepere)

3) 'From the *Speculum historiale* to the *Miroir historial*: towards a more 'neutral' approach of Islam' (supervisor: M. Cavagna)

4) 'A comparison of the Oriental and Occidental traditions with respect to the Wonders of the World' (supervisor: G. de Callatay)

5) 'From Latin to the vernacular: the translation of Arab authors into the Romance-speaking area' (supervisors: B. Van den Abeele – M. Cavagna).

The first three are chiefly studies of sources. They have been designed to be suitable topics for three 45-month PhDs launched simultaneously at the start of the project. The last two are studies of a more cross-disciplinary nature. Requiring a greater ability to synthesise and greater polyvalence, they are thus designed as topics for 24-month post-doctoral research projects. In the description to follow, each topic is described with reference to: its context and point of application (“what about”), the reason it has been chosen (“why”), the method to be used (“how”), the expectations of the project in terms of scientific output (“for which objective”), and the qualifications required (“by whom”).

1) Arabic sources in black and white: a study of Arab authorities in the Latin encyclopaedias of the 13th C.

(4-year PhD; supervisors: G. de Callataÿ – B. Van den Abeele)

What about: What credit can be granted to Arabic authors? This question was faced by the compilers of the various encyclopaedias of the 13th C. These works basically relied upon extracts borrowed from works whose authority was in turn based on a common canon and confirmed by tradition. At a time when Arab authors were increasingly studied in universities and clerical circles, one finds that they also made their entry into Latin encyclopaedias, where they were usually signalled with an explicit quotation mark such as « ut dicit Avicenna », sometimes with an indication of the work quoted or even with a more precise reference.

Why: Latin encyclopaedias from the middle of the 13th C., the climax of the genre, provide a good, a priori faithful overview of Arabic texts available at a key moment in the reception movement of Arab-Muslim science and philosophy, after the great influx of new translations. Surveys on a few specific works exist, but no comprehensive study has ever been conducted in this field.

How: This research will start with the elaboration of a database of the explicit quotations from Arabic sources in the major encyclopaedias of the 13th C, including the *Liber de natura rerum* of Thomas of Cantimpré (ca 1240), the *De proprietatibus rerum* of Bartholomaeus Anglicus (ca 1240), the *Speculum Naturale* of Vincent of Beauvais (ca 1244-1260), the *De floribus rerum naturalium* of Arnoldus Saxo (ca 1230-1250), and the anonymous *Compendium philosophiae*. Coordination and collaboration with the Nancy project “Sourcencyme” might be welcome with this respect.

For which objective: This database of Arabic authors in the major Latin encyclopaedias of the Middle Ages will allow one to make several rewarding inquiries. A first objective will be to determine which authors and texts were chosen, whether ancient or modern writers were privileged, if commentaries were added by the compilers. Negative evidence might be collected as well, as in the case of Arab authors being not mentioned, although their texts are known to have been translated previously, or in the case of authors used, although not quoted explicitly. In the end, this study will enable a better understanding of the « Arabic façade » of these encyclopaedias, which will in turn provide quantitative evidence for the recognition of Arabic science, including technology, in Western compilations.

By whom: This field of inquiry is based on a well-defined corpus and an easy-to-follow method which makes it appropriate for a four-year doctoral research project in the field of Medieval Latin philology and history. With time, the subject will develop into more complex operations, requiring cross-checking of information and texts, which will necessitate a good feeling for historical criticism.

2) Between the East and the West: the sources and scope of the Byzantine *Suda* (10th C.)

(4-year PhD; supervisor: F. Van Haepere)

What about: The work of a single compiler or of a team, the *Suda* (10th C.) forms the most elaborate encyclopaedic dictionary of the Byzantine period, with more than 30,000 entries. Relying for the most part on a collection of ancient and Byzantine sources, it provides an excellent tool to appraise which forms of knowledge were held to be of interest in the Byzantine East, saturated as it was with classical culture and apparently much less receptive to the Arab-Muslim world, although it was in permanent contact with it.

Why: Studies devoted to the *Suda* are mainly focused on issues such as the identity of its author(s) and its literary genre – lexicon of rare words or genuine encyclopaedia – or else on just a few entries relating to a specific topic or source. As a result of its impressive and discouraging size, the *Suda* has rarely been the subject of comprehensive studies. The digitization of the work, its translation into English (in progress) and the creation of a search engine will now allow more rapid and easier access, which will greatly facilitate large-scale investigations. One of these is, undoubtedly, the systematic search and analysis of the sources and issues covered by the *Suda*.

How: The work will start with the compilation of a database that lists, for each relevant entry in the *Suda*, the sources (Greek, Roman, Byzantine, Jewish, Christian, Islamic, and the like) explicitly or supposedly used, as well as the fields covered by them (definition of rare words, history, topography, biographies, institutions, philosophy, theology, natural sciences, and so on).

For which objective: The objective will be to assess, in a scientific way, the importance of the different sources of the work, and, consequently, to better evaluate the importance of the cultural areas from which these sources come. To what extent can we observe cultural transfers from the past to the present and from other areas of power and knowledge to the Byzantine East? Conversely, what are the omissions in this process – the composition of the *Suda* is slightly later than Ibn al-Nadīm's *Fihrist*, which seems to have been completely overlooked – and how are we to interpret these omissions? *In fine*, the study should also enable us to clarify how neighbouring cultures – Persian, Jewish, Arab – were perceived.

By whom: This investigation is appropriate for a four-year doctorate. It requires a deep familiarity with Greek philology and history of the Byzantine World.

3) From the *Speculum historiale* to the *Miroir historial* : towards a more ‘neutral’ approach of Islam

(4-year PHD; supervisor: M. Cavagna)

What about: Written by the Dominican Vincent of Beauvais in the middle of the 13th C., the *Speculum historiale* is by far the most important and the most-widely diffused historical encyclopaedia of the Western Middle Ages. With the purpose of an all-encompassing inquiry, this compilation, consisting of 32 books, opens with the creation of the world and ends up with events that are contemporary to the author’s own life. Book 26 devotes nearly thirty chapters to the life of Muhammad and to the doctrine of the Quran. Even if the tone is all but laudatory – the condemnation of the Prophet is fierce and the religion founded by him straightforwardly dismissed as heresy – the report itself is well documented and must be considered one of the most detailed statements on Islam from the Western Middle Ages. In the years 1320-1330, Vincent’s encyclopaedia was translated into French by Jean de Vignay as *Miroir historial*, a translation which definitely contributed to the diffusion of this work into the secular and aristocratic milieus. Although faithful to its source, the translator strives to soften its polemical tone. His own position is relatively more ‘neutral’ and reveals, quite remarkably, a genuine interest for the Islamic culture.

Why: A medieval encyclopaedia such as this one is a particularly faithful reflection of the cultural level attained by the society in which it was compiled. Indeed, the *Speculum historiale* and its French translation played a role of paramount significance in the circulation of ideas in the West and acted in particular as a very important vector of knowledge about the Islamic tradition. In spite of their importance, acknowledged by all, these two works, for which no modern critical edition is available, remain relatively poorly investigated. This is no doubt due to the enormous profusion of issues they deal with, a profusion that requires the collaboration of specialists from various fields at the same time.

How: The current work is part of a project launched years ago by Mattia Cavagna (UCL) and Laurent Brun (University of Ottawa), namely, the comprehensive edition of the *Miroir historial*. The project has been financed, among others, by an FSR fund, which has enabled us to appoint Nathalie Bragantini to a one-year post-doctoral research position. In 2010-11, she prepared the edition of the first four books and conducted a thorough investigation on the language of the translator. The researcher of this field of inquiry will continue these efforts, benefiting from tried-and-tested software, LaTeX, particularly useful for the edition and encoding of texts. He or she will moreover have at his disposal the digital reproduction of all manuscripts required for this study. The project now consists of editing the chapters on Islam, of identifying the sources used by Vincent of Beauvais and of underpinning his exegetical approach vis-à-vis the Islamic religion. Ultimately, the project will aim at understanding why, how and in which context Jean de Vignay sought to replace the polemical tone of his model with a more neutral and objective approach..

For which objective: Identifying the sources of Vincent of Beauvais and Jean de Vignay and understanding their attitudes will cast a new light on the reception of the Islamic culture in the West. A thorough analysis of Vincent’s statements will allow us to assess with precision the level of his effective knowledge of the Qur’ānic doctrine and Islamic tradition. Similarly, Jean de Vignay’s text is evidence for the important turning-point that was the 14th C., at a time when many vernacular translations became available.

By whom: The study will be conducted by a Ph.D student familiar with textual criticism and having a good command of Latin and medieval French. The researcher will benefit from the expertise of his or her Arabist colleagues, whose contribution will be crucial for the study of sources as well as for the interpretation of certain points of doctrine.

4) A comparison of the Oriental and Occidental traditions with respect to the Wonders of the Word

(18-month post-doc; supervisor: G. de Callatay)

What about: Popularized by a canonical list of seven masterpieces, the traditions about the Wonders of the Ancient World have been the subject of a multitude of studies and a wide variety of hypotheses over the centuries. In addition to the relatively well-known (if not always well-interpreted) literary and iconographical sources from Antiquity, the Wonders of the World topos also contains a broad variety of medieval texts, in Latin or vernacular languages but also in Arabic, and these texts are often crucial. Moreover, Arabic literature provides of its own a wide collection of texts about other human accomplishments of the past that have been similarly regarded as masterpieces. Descriptions have circulated, from the 9th C. onwards, among travellers, historians and litterateurs (al-Jāhīz, al-Masūdī, Ibn al-Faqīh) to be taken up later, with sometimes considerable deformation, by the great encyclopaedists of the 13th and 14th C. (al-Maqrīzī, al-Qalqashandī, al-Nuwayrī, al-Waṭwāt, al-'Umarī). Among other groupings, a list of four 'Wonders of the World' (*'ajā'ib al-'ālam*), could even be regarded as the Oriental equivalent to the Seven Wonders of the Occidental tradition.

Why: With the exception of one now-dated article restricted to the Latin area, medieval evidence about the Wonders of the World, although crucial at times, has not received the attention it deserves. In particular – and notwithstanding a brief overall inquiry made more than 20 years ago – no synthesis of any kind has been attempted so far about Arab traditions in the same field, let alone a work in which these traditions would be compared with those having circulated in the Latin and Byzantine worlds. A comparative, cross-cultural study would not only fill important gaps in our information about the subject, but would also contribute to the study of cultures by questioning the way each identifies itself with its own 'roots'.

How: As opposed to the study of traditions available in Greek or Latin, which have been already investigated several times, an inventory of Arabic sources will be the first requisite of this inquiry. It need not be exhaustive – exhaustiveness in this field is neither a realistic nor a desirable objective, as a very large number of reports of the Wonders are mere repetitions of former statements – but should focus on those reports that are either innovative or especially relevant in the transmission process of tradition. Subsequently, this inventory will be compared to those already available for Latin and Greek sources.

For which objective: It is the purpose of such a study to give us a panoramic view of the issue. The objectives are three: 1) to complete and refine the scientific information that we have about great artefacts of the past; 2) to help us better understand the ways of transmission of the traditions about them, and more specifically the role played by encyclopaedias in this transmission; 3) to identify habits, trends, folklore, mental representations and images that could be viewed as culturally representative in a field which by nature mixes sciences, techniques, arts, folklore and popular literatures.

By whom: The panoramic scope of this project requires the skills of a post-doctoral researcher with an excellent command of classical Arabic and a thorough familiarity with the medieval Arabic literature. A further background in the Classics would be welcome.

5) From Latin to the vernacular: the translation of Arab authors into the Romance-speaking area

(18-month post-doc; supervisors: B. Van den Abeele – M. Cavagna).

What about: The Arabic-Latin and Greek-Latin translation movement of the 11th and 12th C. dramatically changed the access to scientific and philosophical texts in the West. But a further range of influence can be observed when these texts were translated for a second time into the vernacular languages. For Spain, this phenomenon has been studied to some degree already. For France and Italy, however, only limited attention has been paid to this. Under the Valois rulers, especially from Philippe VI and Charles V onwards, the 14th C. witnesses a spectacular growth of translations of Latin texts, either classical or medieval, some of which were originally written in Arabic. In Italy, the movement is less centralized, due to the fragmentation of political and intellectual life. The question arising in these two areas is to know which scientific and technical Arabic texts have been submitted to vernacularization. It is our intention to launch an overview.

Why: The translation into the vernacular is a significant turning point. First of all, at the social and cultural level, it implies a broader access to the Arab authors, the readership being no longer only clerical, but expanded to the laity. At a more technical and linguistic point of view, this process entails a considerable enrichment of the French and Italian languages, because technical terms (vocabulary of algebra, astrology, veterinary medicine, etc.) often gave rise to neologisms.

How: This project will start with a comprehensive screening of existing repertoires of medieval texts, including international databases developed by the SISMEL (Mirabile, CALMA), the IRHT and others (Arlima), followed by a systematic search into published and unpublished manuscript inventories. The aim is to build a database of texts and manuscripts in the two fields of expertise of the supervisors, i.e. medieval French and medieval Italian. The Old-French language will be considered in its variety (Anglo-Norman, Occitan, Franco-Italian) and the various regional varieties of Italian will be included. This research will also benefit from the database which will have been elaborated in project 1, containing the explicit quotations of Arab authors in the principal Latin encyclopaedias.

For which objective: The impact of oriental traditions on medieval French has been the topic of some inquiries, even recently. A systematic overview of texts translated is however lacking and it will enable us to quantify the impact of Arabic texts on secular culture through the vernacular language.

By whom: This research will be realized by a post-doctoral researcher with a good knowledge of the two linguistic areas, and if possible also of the Arabic language.