

How Europe came to forget about its Arabic heritage

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Summary

Traditional education about Western civilisation tells the story of how around 1500, Greek texts recovered the lost memory of Europe's Greek and Roman past and unleashed an era of progress in science and civilisation called the Renaissance. In fact, the progress in civilisation had begun in the eleventh and twelfth centuries, and was the result of the transfer of Arabic civilisation to Europe. The sixteenth century Renaissance was rather the construction of an exclusive Christian European identity within the world of literature and science. Latin humanists created a movement imitating the Arab tradition in its key values, but distinguishing itself by classical Latin as its *lingua franca* and the classical authors as its founding fathers. After a period in which classical culture was vigorously celebrated and Arab influences were attempted to be removed from the scientific canon, the image of a Greek source of European culture had settled itself firmly in the European mind. Scholars hardly dared cite an Arab in support of their revolutionary developments. Popular belief reaffirmed the theme of the revived classics by repetition after repetition until the Arabic heritage in Europe came to be forgotten. Biased educative material should be corrected to offer a true image of history to our youth.

A cultural myth

Traditional education about Western civilisation tells the story of how Europe, floundering in the ignorance and illiteracy of the Middle Ages, suddenly came across a number of texts in classical Greek which at once recovered the lost memory of Europe's glorious Greek and Roman past. Science and literature started flourishing, and with the help of the brilliant Greek philosophers the dormant Europeans were able to shed the ignorance of Medieval times and open the doors of science and civilisation. This process has been called the *rebirth* of classical civilisation in Europe, the *Renaissance*. The story however, is a myth quite lacking historical substance.

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The Twelfth Century Renaissance

In fact, the progress in civilisation had begun in the eleventh and twelfth centuries, and did not have a Greek or Roman origin. In 1060, the Normans conquered Sicily while some time later in 1085, the Reconquista took the city of Toledo. Both Sicily and Toledo became centers through which the Arab culture of science and learning started spreading through Europe, creating a spark of learning among European Christians. In the words of E.J. Holymard:

During the twelfth and thirteenth centuries there was a scientific renaissance in Europe, and scholars from Christian countries journeyed to Muslim universities in Spain, Egypt, Syria and even Morocco in order to acquire knowledge from their foes in religion but friends in learning. Arabic science soon began to filter through, and by the middle of the thirteenth century the trickle had become a river.²

England's 'first scientist', Adelard of Bath, explains what he learned from his Arab masters in these words:

From the Arab masters I have learned one thing, led by reason, while you are caught by the image of authority, and led by another halter. For what is an authority to be called, but a halter? As the brute beasts, indeed, are led anywhere by the halter, and have no idea by what they are led or why, but only follow the rope that holds them, so the authority of writers leads not a few of you into danger, tied and bound by brutish credulity.³

Other scientists of the twelfth century 'Renaissance' indebted to the Arabs were Roger Bacon, Witelo, Albertus Magnus, Adam Marsh, Arnold de Villeneuve, Peter of Abano, and Daniel of Morley.

In the transfer of Muslim-Arabic civilisation to Europe, three important primary developments can be distinguished. The first are the giant translation projects in Italy and Spain in the twelfth century, in which hundreds of Arabic books were translated into Latin. The second development is the adoption, primarily at the court of Sicily and in Al-Andalus, of the values of Arabic 'adab', which in Europe came to be known as *humanism*. This humanism was not an atheist philosophy, as it is often understood today, but comprised a set of disciplines such as ability in speech and writing, knowledge of grammar, poetry, erudition, scholarship, and research into religious texts. These humanist disciplines became the fundamental driving force of the emerging European civilisation.⁴ Well known early humanists are Petrarch (1304-1374), Giovanni Boccaccio (1313-1375) and Coluccio Salutati (1331-1406). That Islam was an influence even in the humanist perspective of man is illustrated by the humanist Pico della Mirandola's famous 'Oration on the Dignity of Man' (1486), which has been called the 'Manifesto of the Renaissance' and commences by quoting the famous Arabic humanist Abdallah ibn Qutaibah (d. 889):

² Russel R (transl). *The Works of Geber: a new edition with introduction by E.J. Holymard*. London/Toronto/New York: Dent & sons/Dutton & Co. 1928; xv

³ Norman Daniel, *The Arabs and Mediaeval Europe*. Edinburgh: Edinburgh University Press; 1974; 265-6

⁴ See George Makdisi. *The Rise of Humanism in Classical Islam and the Christian West*. Edinburgh: Edinburgh University Press 1991

Most esteemed Fathers, I have read in the ancient writings of the Arabians that Abdala the Saracen on being asked what, on this stage, so to say, of the world, seemed to him most evocative of wonder, replied that there was nothing to be seen more marvelous than man.⁵

The third development is the foundation of European universities after the example of the Islamic *Jamia*'s.⁶ The first European universities were the University of Bologna (1088), Paris (c. 1150), Oxford (1167), Cambridge (1209), Padua (1222), and Naples (1224).



Image: Frontispiece of *Fasciculus di medicina*, Venice, 1493. A university lecturer at Padua (Italy) is surrounded by titles of twelve important scholars, six of which are Arabs and one is an Arab Jew. On the top shelf the classical authors Aristotle, Hippocrates and Galen are followed by the Arab authors Avicenna, Haly Abbas, Rhazes and Averroës. Next to the teacher is Pliny's *Historia Naturalis*. On the shelf below the cabinet are the *Conciliator* of the Medieval English scholar Peter Abano, the works of Isaac the Jew and a work by the Arab surgeon Avenzoar. Source: Singer & Rabin. *A Prelude to Modern Science*. Cambridge University Press 1946; xxiv

⁵ Pico della Mirandola, *Oration on the Dignity of Man*. www.cscs.umich.edu/~crshalizi/Mirandola/
See also Makdisi, *The Rise of Humanism*, 307

⁶ See George Makdisi, *The Rise of Colleges: Institutions of Learning in Islam and the West*. Edinburgh: Edinburgh University Press 1981

The emancipation from Arabic predominance

To illustrate the presence of Arabic authors in the European scientific world of the twelfth to sixteenth centuries, only in the field of medicine there were nineteen authors who were known in Europe by the Latin transcription of their Arabic name: Mesue sr., Mesue jr., Humainus, Jesu Haly, Alkindus, Serapion, Janus Damascensus, Isaac Judaeus, Haly Abbas, Algazirah, Annafis, Albucasis, Avenzoar, Averroës, Maimonides, Aben-Guefit, Ebn Albethar, and the most influential, Avicenna en Rhazes.⁷ An important textbook by Ferrari from 1471 quotes Avicenna 3000 times, Rhazes 1000 times and the Greek authors Galen and Hippocrates 1000 and 140 times respectively.⁸ Many a Greek work was known only through the Latin rendering of their Arabic translation.

The dominance of Arab authors had caused feelings of unease among Christians very early on. A significant fragment has been preserved in a letter of a Christian named Alvaro who lived in Al-Andalus in the ninth century. He complained that the talented Christian Mozarab youths of Spain lost their identity by participating in Arab learning:

My fellow Christians delight in the poems and romances of the Arabs; they study the works of Mohammedan theologians and philosophers, not in order to refute them, but to acquire a correct and elegant Arabic style. Where today can a layman be found who reads the Latin commentaries on Holy Scriptures? Who is there that studies the Gospels, the Prophets, and the Apostles? Alas! The young Christians who are most conspicuous for their talents have no knowledge of any literature or language save the Arabic; they read and study with avidity Arabic books; they amass whole libraries of them at a vast cost and they sing everywhere the praises of Arabian lore. On the other hand, at the mention of Christian books they disdainfully protest that such works are unworthy of their notice. The pity of it! Christians have forgotten their own tongue, and scarce one in a thousand can be found able to compose in fair Latin a letter to a friend. But when it comes to writing Arabic, how many there are who can express themselves in that language with the greatest elegance, and even compose verses which surpass in formal correctness those of the Arabs themselves!⁹

George Makdisi considers this fragment illustrative of the backgrounds of the further development of humanism in Christian Europe. Feeling increasingly uncomfortable with the Arab-Islamic identity of literature and science, Christians sought to create their own culture of learning, similar to, but competing with, the Arab tradition.

Two important choices were made by the Christian humanists in their search for their own identity. As George Makdisi puts it, Christian humanists wanted to ‘answer the challenge of classical Arabic with an equally classical language’.¹⁰ This language came to be Latin. Latin was the language of the Catholic Bible, and was in this sense comparable to the Arabic of the Qur’an. Classical Latin however had been long ago replaced by vernacular Latin and was not anymore in use in everyday life. In order to make classical Latin meet the demands of a holy *lingua franca* like Arabic, it had to be literally revived from the dead. Christian humanists went out of their way to learn

⁷ Donald Campbell. *Arabian Medicine and its Influence on the Middle Ages*. Amsterdam: Philo Press 1974; 60-102

⁸ Campbell *Arabian Medicine*; 201

⁹ Makdisi, *The Rise of Humanism*; 330

¹⁰ George Makdisi, ‘Humanism and Scholasticism in Classical Islam and the Christian West’, *Journal of the American Oriental Society*, 1989:2, 175-182; 182

to write in the pure Latin of the Roman author Cicero, which ironically hardly anyone could read.

The second formative decision was a choice to regard only the classical Greek and Roman authors as foundations of their literature and science. As stated by William Montgomery Watt:

... Europeans were attracted to Aristotle, not simply by the inherent qualities of his philosophy, but also by the fact that he belonged in a sense to their own European tradition. That is to say, the assignment to Aristotle of a central position in philosophy and science is partly understood as one aspect of the European assertion of distinction from Islam. The purely negative activity of turning from Islam, especially when so much was being learnt from Arab science and philosophy, would have been difficult, if not impossible, without a positive complement. This positive complement was the appeal to Europe's classical (Greek and Roman) past.¹¹

With classical Latin as a new European *lingua franca* and the classical authors appointed the founding fathers of a new European tradition, the foundations of the *Renaissance* were laid – literally the ‘rebirth’ of classical culture in Europe. This Renaissance was all but a spontaneous one; it was an artificial image imposed by Christians upon themselves, to be able to establish a competing culture of learning distinct from the Arab example.

After the Turks took Constantinople in 1453, Greek refugees brought with them texts from classical authors in the original Greek. This was like coal on the fire of European growing self awareness. Around the start of the sixteenth century, the Renaissance ideals were carried to their climax by demanding their absolute rule over science and literature. The aforementioned Pico della Mirandola would at some stage proclaim: ‘Let us in Heaven's name our Pythagoras, Plato and Aristotle, and keep your Omar, your Alchabitius, your Abenzoar and your Abenragel’.¹²

Latin humanism adopted from the religious aspect of Arabic humanism a stress on purity of sources and of language. In an ironic twist, this religious demand for purity turned against the Arabic heritage in the sciences. When a Dutch scholar (probably Nicolaus Clenardus of Diest¹³) arrived in Salamanca, Spain, in 1531-32, and asked whether he could kindly be taught the Arabic language, a Spanish dignitary told him:

What concern do you have with this barbaric language, Arabic? It is sufficient to know Latin and Greek. In my youth I was foolish as you and took up Hebrew and Arabic; but I have long since given up these two last and devote myself entirely to Greek. Let me advise you to do the same.¹⁴

In a wave of anti-Arabism, Renaissance humanists sought to literally cleanse the scientific field of Arabic influences. To illustrate the proceedings of this cleansing campaign, we will examine it in the field of medicine, as described by historian

¹¹ William Montgomery Watt, *The Influence of Islam on Medieval Europe*. Edinburgh: Edinburgh University Press, 1972; 79

¹² Watt, *The Influence of Islam*; 80

¹³ Alastair Hamilton mentions his journey to Salamanca in *Arab Culture and Ottoman Magnificence in Antwerp's Golden Age*. Antwerp: Museum Plantin-Moretus, 2002; 37

¹⁴ Watt, *The Influence of Islam*; 80

Nancy Siriasi.¹⁵ Petrarch in the fourteenth condemned medicine itself as ‘Arab lies’; after him several themes would develop in the rejection of Arabic medical literature. The obvious charges were concerned with the supposedly heretical nature of the religion or philosophy of the authors. Arab writings were deemed ‘obscure’, erroneous, and a corruption of the ‘pure’ Greek sources. Arabic borrowings in botany and pharmacology came to be seen as confusing, and perceived traces of the Arabic language itself were condemned as ‘coarse’ and ‘barbaric’, when compared to the Renaissance ideal of classical Latin.

By 1530, ‘the role of the Arabs was a central issue in debates over the reform of medicine’,¹⁶ creating ‘an intellectual climate in which hostility to the Arabs had become a shibboleth of modernism in medicine’.¹⁷ Venomous pamphlets were published with titles like ‘... Against Neoteric Physicians Who, Neglecting the Discipline of Galen, Cultivate the Barbarians’ (1533). Some started to talk of the ‘tyranny’ of Avicenna and of Arab ‘occupation of the schools’. The influential humanist Leonhart Fuchs makes things very clear in his ‘Institutions of medicine’ (1555):

It is best to reject the Arabs completely and just to abandon them, the barbarians of a bygone age, and – as if one drinks water from the purest spring – to start studying the writings of the Greek physicians, who have passed on the art of medicine in its most pure and uncontaminated form and by the most reliable of methods, all that is required for the medical practice. As everything in the teachings of the Arabs is dirty, barbaric, contaminated, complicated and littered with the worst of errors, likewise all that is Greek is clean, clear, brilliant, lucid, transparent and uncontaminated ... The Arabs have nothing which they did not borrow from the Greeks, except for the mistakes which only they make.¹⁸

The University of Alcalá de Henares stopped teaching Avicenna in 1565. By 1563 the London College of Physicians had decided to examine new candidates only on Galenic texts. The University of Tübingen, perhaps so advised by Leonhart Fuchs, went so far as to discourage in its statutes the reading of Arab authors.

At the same time the Arabs were erased from European learning, the classics were sanctified as symbols of the humanist revolution. The Latin humanists went so far as to believe the classics had been infallible and were superior to empirical observation. When, for example, the anatomist Andreas Vesalius in his legendary *De humani corporis fabrica* (1543) attacked the infallibility of the Greek-Roman physician Galen, his former teacher Jacobus Sylvius answered that Galen had not erred, but that instead the human body had changed over the centuries.¹⁹ And when nobody could find the small holes which Galen assumed to perforate the heart septum, two Dutch

¹⁵ Nancy G. Siriasi, *Avicenna in Renaissance Italy: The Canon and Medical Teaching in Italian Universities after 1500*. Princeton: Princeton University Press, 1987; 66-77

¹⁶ Siriasi, *Avicenna*; 71

¹⁷ Siriasi, *Avicenna*; 74

¹⁸ Leonhard Fuchs, *Institutionum medicinae sive methodi ad Hippocratis, Galeni aliorumque veterum scripta recte intelligenda mire utiles libri quinque*. Lugduni: Apud Thomam Guerinum, 1555. See also Pormann E & E Savage Smith. *Medieval Islamic Medicine*. Edinburgh: Edinburgh University Press, 2007; 169

¹⁹ ‘Nec in hoc est Galeni peccatum, sed naturae in nobis mutatio ex caelo, solo, victu profecta’. Jacobus Sylvius / Jacques Dubois, *Vaesani cuiusdam calumniarum in Hippocratis Galenique rem anatoicam depulsio*. Paris: Apud Catharinam Barbé viduam Jacobi Gazelli, 1551, fol. 13v

professors Otto Heurnius and Adriaen van Valkenburg sought to do the truth a favour by creating the holes themselves before showing a heart to their students.²⁰

It may be observed that the fanaticism of the Latin humanists is very close to religious fundamentalism. We should not forget that the sixteenth century was the age in which heretics were burned almost on a daily basis. It was also the time in which the Spanish Inquisition enforced conversion of all Muslims and Jews in Spain, only to expel them, and all Arab Christians, in 1609.

In this socio-political atmosphere, accusations of heresy were easily made against individuals who disagreed with the hardliners, be they of the Church or of the new humanist *avant garde*. French humanist Guy Patin tried to defend the practice of bloodletting against the criticism of the Flemish alchemist Johannes Baptista van Helmont (1577-1624) by a post mortem slander campaign:

He was a wicked Flemish rascal who died insane a few months ago. He did nothing of value. I have seen all that he has done. This man had in mind only a medicine full of chemical and empirical secrets and to overthrow it more quickly he came out strongly against blood letting, for the lack of which he died mad.²¹

This fanatical and unreasoning attitude ultimately suffocated scientific advancement, as has been rightly pointed out by Lester King: ‘The humanists who condemned scholastic authority and domination of the church, themselves bowed before an equal tyranny – the authority of the ancients’.²²

Despite their aggression, the flood of extreme anti-Arabism and extreme classicism were short lived, and did not pervade all levels of the scholarly world. Translations from the Arabic were continuously made in Italy.²³ Elsewhere in Europe, there were writers who defended the Arab authors even at the peak of the antagonism. Lorenz Fries for example in 1530 published a *Defense of the important scholar Avicenna against the German physicians*.²⁴ By the second half of the sixteenth century, Johann Lange (1485-1565), physician to the Elector Palatine, proposed that universities instruct the Arab language and he did not to hide the fact that he himself associated with those Arab lands and participated in Arab learning.²⁵ In the 1570s the universities of Ingolstadt and Freiburg, where the curriculum had emphasised the Greeks at the expense of the Arabs, again introduced Avicenna and Rhazes.²⁶ And by the 1580s, printing offices such as that of Plantin in Antwerp showed a renewed interest in the Arab world and even printed texts in Arabic.²⁷

However, this short period, roughly between 1490 and 1560 with a climax in the 1530s, had made its impression on the self-image of European civilisation. Whereas

²⁰ See F.C. van Leersum, ‘Vesalius’, *Nederlands Tijdschrift voor Geneeskunde*, 59 (1915), 4-16: 9.

²¹ McGovern JP et al. (red). *Humanism in Medicine*. Springfield: Charles C. Thomas 1973; 14

²² L.S. King, ‘Humanism and the Medical Past’, In J.P. Mc Govern and C.R. Burns (eds), *Humanism in Medicine*. Springfield: Charles C Thomas 1973, 3-10; 9

²³ George Saliba, *Rethinking the Roots of Modern Science: Arabic Scientific Manuscripts in European Libraries*. Center for Contemporary Arab Studies, Georgetown University, 1999; 14-24

²⁴ Siraisi, *Avicenna*; 71

²⁵ Siraisi, *Avicenna*; 80

²⁶ Siraisi, *Avicenna*; 77

²⁷ See Alastair Hamilton, *Arab Culture and Ottoman Magnificence in Antwerp’s Golden Age*. Antwerp: Museum Plantin-Moretus, 2002

the Scientific Revolution, as in the critique of Vesalius on Galen mentioned above, actually involved a break with authoritarian humanism, the fanatical celebration of classical culture quite erroneously came to be understood as having been the cause of Europe's awakening to modernity. Whenever in the future any progress would be made, popular belief would praise classical Greek authors as having been the inspiration, even if the progress was made on the basis of research done by Arabs.



Image: The Danish humanist Melchior Lorch could by the second half of the sixteenth century again place Arabic among the prime languages in the sciences, as shown by this impression of Aristotle dated 1561. Source: Sievernich, *Europa und der Orient*, Bertelsmann 1989.

From the early sixteenth century onwards, scholars hardly dared to cite an Arab in support of revolutionary developments. For example Copernicus, in his 1543 work about the earth's rotation around the sun, failed to mention the Arabic source of the important astronomical models now known as the 'Tusi Couple' and the 'Urdu Lemma'.²⁸ The physician Michael Servet in 1553 offered a first description of the pulmonary blood circulation in Europe, but makes no mention of the text by the Arab physician Ibn an-Nâfis which probably was his source.²⁹ Similarly, we see the Arab influences on Descartes, on Stevin, on Huygens, Newton and Kepler, but either they

²⁸ George Saliba, *Rethinking the Roots of Modern Science: Arabic Scientific Manuscripts in European Libraries*. Center for Contemporary Arab Studies, Georgetown University, 1999

²⁹ See Joseph Schacht, *Ibn al-Nafis, Servetus and Colombo*, *Al-Andalus*, 1957:2, 317-336

were silent about them, or if they mentioned anything, popular belief ignored it. Whenever in the present day an ordinary person comes across the theme of Arab contributions to modern civilisation, he reduces it to the Arabs handing over the Greek texts – which he thinks did not belong to them anyway – to their true inheritors, the European Christians. The Arabs themselves never contributed anything.

The *Divina Comedia* by Dante Alighieri (Sicily, 1265-1321) probably is the best illustration of the paradoxes involved. Dante tells the story of a journey through heaven and hell which was inspired by Sufi accounts of the Ascension of the Prophet Muhammad^s. The work influenced Christianity even to the extent that the concept of Purgatory was adopted by the Catholic Church.³⁰ Despite the strong influences – or indeed because of them – Dante not only remains silent about his sources of inspiration, but even pictured the Prophet Muhammad^s in the deepest corner of Hell.

Conclusions

The Renaissance is an extremely important icon in our civilisation. It could be compared to the redemption by Jesus Christ, in the sense that the European myth either subconsciously or consciously believes that it is a unique event responsible for the progress of modern science and the apparent success of modern democracies. Like the blessing of the Holy Ghost, the moment in the sixteenth century when Europe awoke to its Greek past makes European man, in his mind, superior to all other civilisations which were not blessed in the same way.

The celebration of classical heritage at the start of the sixteenth century was however not the cause of progress and awakening as it is generally believed to be. The progress had been made much earlier, in the twelfth to thirteenth centuries, when Arab learning inspired a wave of learning, offered humanist scholars their ideals and disciplines and set the example for the European universities. The early sixteenth century was rather the construction of an exclusive Christian European identity within the world of literature and science. Latin humanists created a movement imitating the Arab tradition in its key values, but distinguishing itself by classical Latin as its *lingua franca* and the classical authors as its founding fathers.

We cannot fail to observe elements of jealousy and fanaticism in the vigorous cleansing campaign against Arab elements by the proponents of the sixteenth century Renaissance. The sanctification of the classical Greek authors at the expense of centuries of scientific work was dogmatic and slowed down scientific progress. It cannot be surprising that this idea would not survive for long as a model of practice. After the second half of the sixteenth century, scholars would simply continue to consult the translations of Arab works and would even again learn Arabic themselves. By then however, the image of a Greek source of European culture had settled itself firmly in popular belief, which reaffirmed the theme by repetition after repetition until

³⁰ The Prophet Muhammad^s (peace be upon him) offered the unique teaching that Hell is a means to purify the souls of sinners, after which they are all allowed to enter Paradise. This teaching was continued by the Muslim mystics; Dante was probably influenced by the writings of Muhyuddin ibn Arabi (1165-1240) (see Miguel Asin Palacios, *La escatologia musulmana en la Divina comedia*. Madrid: E. Maestre, 1819). The Catholic concept of Purgatory is a partial adoption of the Islamic teaching, in which forgiveness is allowed only for moderate sinners.

it received a strong second stimulus from nineteenth century educational programmes.³¹

Today, it is painful to watch how popular culture excludes Muslim immigrants by regarding them as a desert people who have come to consume the civilisation which allegedly they had no part in building. Science and civilisation however, are projects of mankind as a whole. The torch of science and civilisation has moved from India, China and Persia to remain with the Muslims for a thousand years before being truly taken over and appropriated by Europe.

As the death and resurrection of Jesus Christ never redeemed Europe from its sins, the death and resurrection of Greek civilisation never offered it any progress. It rather caused science to become limited and ethnocentric in vision. The ethnic cleansing of history by a mythical Renaissance should be replaced by an international vision in which credit is given where credit is due. If a true image of history is shown to our youth in their educative years, perhaps the European sense of superiority would see some moderation and immigrants would receive a sense of self esteem, which would contribute both to historical and social justice.

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<https://www.alislam.org/egazette/articles/How-Europe-came-to-forget-Arabic-heritage.pdf>

³¹ This is argued by Jona Lendering, *Vergeeten Erfenis: Oosterse Wortels van de Westerse cultuur*. Amsterdam: Polak & Van Gennip, 2009. An English summary can be found on www.livius.org