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APUD ARABES

Notes on Greek, Latin, Arabic, Persian,

and Hebrew Roots

of the Concept of Information

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CONTENTS

"Theoretical differences and divergence of views is inevitable in societies in spite of their unity and agreement in principles, and as long as the roots of the differences lie in methods of inference, and not in vested interests, they are even beneficial; because they cause mobility, dynamism, discussion, curiosity, and progress. Only when the differences are accompanied by prejudices and emotional and illogical alignments, and lead individuals to slander, defame, and treat one another with contempt, instead of motivating them to endeavor towards reforming themselves, that they are a cause of misfortune." (Martyr Murtada Mutahhari: An Introduction to 'Ilm al-Kalam, transl. from Persian by 'Ali Quli Qara'i, Vol. II, No. 2, Rabi al Tani 1405 - January 1985)

INTRODUCTION

The following palimsestic notes on Greek, Latin, Arabic, and Persian roots of the concept of information go back to my PhD thesis "Information. Ein Beitrag zur etymologischen und ideengeschichtlichen Begründung des Informationsbegriffs" (Munich 1978) [Information. A contribution to the etymological and historical foundation of the concept of information]. Key insights of this thesis can be found in Rafael Capurro and Birger Hjørland: "The Concept of Information," in Annual Review of Information Science and Technology (ARIST), Ed. Blaise Cronin, (New Jersey 2003, pp. 343-411) as well as in Rafael Capurro: "Past, present and future of the concept of information," in triple C (2009).

The first part of these notes deals with the philosophical debate between Aristotle, Averroes and Albertus Magnus. It is based around certain findings from my PhD thesis concerning the concept of *informatio* as quoted by Albertus Magnus who in his interpretation of Aristotle refers to "the Arabs" ("apud Arabes").

In the second part, I propose a number of questions for research on the concept of information through the context of Christian and Islamic traditions as well as a few questions regarding the phenomenological and ethical issues of today's message societies.

The third part is a dialogue with Mahmood Khosrowjerdi dealing with some issues of the first and second

parts with quotes *in extenso* from Harry A. Wolfson.

I excuse myself for quoting in the original languages. The transliteration particularly from Arabic and Persian names and words is not uniform. Not being able to understand Arabic and Persian, I ask the reader to be careful when I dare an interpretation based on other's knowledge and to accept my apologies when she expects better explanations. I've made a few formal changes in the Wikipedia quotes, for instance, deleting the links. Some quotes are given *in extenso*.

This presentation is on the occasion of an invitation from Prof. Jafar Mehrad to visit the [Islamic World Science Citation Center](#) (ISC) and the [Regional Information Center for Science and Technology](#) (RICeST), Shiraz and to give a number of lectures on the information concept and on information ethics. My sincere thanks to Prof. Mehrad for his invitation.

I've prepared PowerPoint presentations on the [Philosophical Debate](#) as well as on [Intercultural Information Ethics](#) based on the following notes.

I thank the reader for critical remarks and comments.

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A short version of this text was presented at the conference [FIS/ISIS 2015](#): Information Society at the Crossroads — Response and Responsibility of the Sciences of Information, Vienna University of Technology, Vienna, June 3-6, 2015. See [here](#).

I. THE PHILOSOPHICAL DEBATE

ARISTOTLE, AVERROES AND ALBERTUS MAGNUS

1. BIOGRAPHICAL DATA

Aristotle, roman copy of original by Lysippus (ca.330 BC), Paris, Louvre
Source: http://de.wikipedia.org/wiki/Aristoteles

"**Aristotle** (Greek: Ἀριστοτέλης, Aristotélēs; 384–322 BCE) was a Greek philosopher and scientist born in Stagirus, northern Greece, in 384 BCE. His father, Nicomachus, died when Aristotle was a child, whereafter Proxenus of Atarneus became his guardian. At eighteen, he joined Plato's Academy in Athens and remained there until the age of thirty-seven (c. 347 BCE).

His writings cover many subjects including physics, biology, zoology, metaphysics, logic, ethics, aesthetics, poetry, theater, music, rhetoric, linguistics, politics and government – and constitute the first comprehensive system of Western philosophy. Shortly after Plato died, Aristotle left Athens and, at the request of Philip of Macedon, tutored Alexander the Great between 356 and 323 BCE. According to the Encyclopædia Britannica, "Aristotle was the first genuine scientist in history ... [and] every scientist is in his debt."

Teaching Alexander the Great gave Aristotle many opportunities and an abundance of supplies. He established a library in the Lyceum which aided in the production of many of his hundreds of books. The fact that Aristotle was a pupil of Plato contributed to his former views of Platonism, but, following Plato's death, Aristotle immersed himself in empirical studies and shifted from Platonism to empiricism. He believed all peoples' concepts and all of their knowledge was

ultimately based on perception. Aristotle's views on natural sciences represent the groundwork underlying many of his works.

Aristotle's views on physical science profoundly shaped medieval scholarship. Their influence extended into the Renaissance and were not replaced systematically until the Enlightenment and theories such as classical mechanics. Some of Aristotle's zoological observations were not confirmed or refuted until the 19th century. His works contain the earliest known formal study of logic, which was incorporated in the late 19th century into modern formal logic.

In metaphysics, Aristotelianism profoundly influenced Judeo-Islamic philosophical and theological thought during the Middle Ages and continues to influence Christian theology, especially the scholastic tradition of the Catholic Church. Aristotle was well known among medieval Muslim intellectuals and revered as "The First Teacher" (Arabic: المعلم الأول).

His ethics, though always influential, gained renewed interest with the modern advent of virtue ethics. All aspects of Aristotle's philosophy continue to be the object of active academic study today. Though Aristotle wrote many elegant treatises and dialogues – Cicero described his literary style as "a river of gold" – it is thought that only around a third of his original output has survived."
Source: http://en.wikipedia.org/wiki/Aristotle

Averroës by Andrea Bonaiuto (14th Century)
Source: http://en.wikipedia.org/wiki/Averroes

"ʾ**Abū l-Walīd Muḥammad bin ʾAḥmad bin Rušd** (Arabic: أبو الوليد محمد بن احمد بن رشد), commonly known as Ibn Rushd (Arabic: ابن رشد) or by his Latinized name Averroës (/əˈvɛroʊˌiːz/; April 14, 1126 – December 10, 1198), was an Al-Andalus Muslim polymath, a master of Aristotelian philosophy, Islamic philosophy, Islamic

5

theology, Maliki law and jurisprudence, logic, psychology, politics and Andalusian classical music theory, and the sciences of medicine, astronomy, geography, mathematics, physics and celestial mechanics.

Averroes was born in Córdoba, Al Andalus, present-day Spain, and died in Marrakesh, present-day Morocco. He was interred in his family tomb at Córdoba. The 13th-century philosophical movement based on Averroes' work is called Averroism. Averroes was a defender of Aristotelian philosophy against Ash'ari theologians led by Al-Ghazali. Although highly regarded as a legal scholar of the Maliki school of Islamic law, Averroes' philosophical ideas were considered controversial in Muslim circles. Averroes had a greater impact on Western European circles and he has been described as the "founding father of secular thought in Western Europe". The detailed commentaries on Aristotle earned Averroes the title "The Commentator" in Europe. Latin translations of Averroes' work led the way to the popularization of Aristotle and were responsible for the development of scholasticism in medieval Europe.

[...]

Averroes wrote commentaries on most of the surviving works of Aristotle working from Arabic translations. He wrote three types of commentaries. The short commentary (*jami*) is generally an epitome; the middle commentary (*talkhis*) is a paraphrase; the long commentary (*tafsir*) includes the whole text with a detailed analysis of each line."
Source: http://en.wikipedia.org/wiki/Averroes

Albertus Magnus, a fresco by Tommaso da Modena (1352) Church of Saint Nicolò, Treviso, Italy
Source: http://en.wikipedia.org/wiki/Albertus_Magnus

"**Albertus Magnus**, O.P. (1193/1206 – November 15, 1280), also known as Albert the Great and Albert of Cologne, was a Catholic saint. He was a German Dominican friar and a Catholic bishop. He was

6

known during his lifetime as doctor universalis and doctor expertus and, late in his life, the term magnus was appended to his name. Scholars such as James A. Weisheipl and Joachim R. Söder have referred to him as the greatest German philosopher and theologian of the Middle Ages. The Catholic Church honours him as a Doctor of the Church, one of only 35 so honoured. [...] Albert believed that natural things were composed of composition of matter and form, he referred to it as quod est and quo est. Albert also believed that God alone is absolute ruling entity. Albert's version of hylomorphism is very similar to the Aristotelian doctrine, but he also took a some concepts from Avicenna**.**"

Source: http://en.wikipedia.org/wiki/Albertus_Magnus

2. SOME FINDINGS

This is a fascinating intercultural encounter between three great thinkers. Albert makes a short comment on the concept of *informatio* "apud Arabes" in the context of Aristotle's *De anima* and indirectly to Averroes, called "the Commentator".

"Indivisibilium quidem igitur, quae sunt incomplexa intelligentia sive intelligere, quod est actus intelligendi, in omnibus his est circa quae non est falsum, eo quod, sicut INFERIUS ostendemus, numquam accidit error intelligibilium in talium intellectu. Hic autem intellectus vocatur apud Arabes informatio, eo quod intelligere talia est informari intellectum possibilem naturis formalibus eorum." (Albertus Magnus: Opera Omnia (Aschendorf: Monast. Westf., 1968), Vol. VII: Libri de anima, Lib. 3, Tract. 3, cap. 1, p. 123).

In the French translation of the *Great Commentary* — the original arabic text of Averroes' *Great Commentary* on the *De anima* is lost — the French philosopher [Alain de Libera](#) writes:

"Que le *Grand Commentarie* d'Averroès sur le *De anima* soit un text capital est universellement admis: c'est lui qui en a fait connaître la "réception" grecque et arabe aux scolastiques; lui qui a rassemblé, formulé ou reformulé les dilemmes qui, de problèmes internes à l'interprétation d'Aristote, sont devenus ceux de la psychologie naissante; lui qui a créé ou stabilisé le lexique et systématisé les concepts. Qu'il soit (peut-être) illisible, cela tient d'abord à l'état dans lequel nous est livré ce membre fantôme de l'oeuvre originale qu'est la traduction latine

de Michel Scot éditée in 1953 par F. Stuart Crawford." (Alain de Libera: Introduction. Averroès. L'intelligence et la pensée. Sur le *De anima*. Présentation et traduction inédite par Alain de Libera, Paris 1998 (quoted as Libera 1998) p. 8)

Who was Michael Scot (1175 - ca. 1232)?
"He was born in Scotland, possibly at Balwearie in Fife (as Sir Walter Scott believed), and studied first at the cathedral school of Durham and then at Oxford and Paris, devoting himself to philosophy, mathematics, and astrology. It appears that he had also studied theology and become an ordained priest, as Pope Honorius III wrote to Stephen Langton on 16 January 1223/4, urging him to confer an English benefice on Scot, and actually himself nominated him archbishop of Cashel in Ireland.

This appointment Scot refused to take up, but he seems to have held benefices in Italy from time to time. From Paris, Scot went to Bologna, and thence, after a stay at Palermo, to Toledo. There he acquired a knowledge of Arabic. This opened up to him the Arabic versions of Aristotle and the multitudinous commentaries of the Arabs upon them, and also brought him into   contact   with   the   original   works   of Avicenna and Averroes."

What Greek terms from Aristotle's *De anima* were translated into Arabic and later on into Latin with *informatio* by Michael Scot in his translation of Averroes' Commentary of Aristotle?

To say it in advance, *informatio* or just *formatio* or "conception" (Alain de Libera), as apposed to *fides* or "assentiment" (Alain de Libera) means the "thinking of the indivisible" or of the "simple objects of thought", the Greek term being: τῶν ἀδιαιρέτων νόησις. There is no single Greek term in Aristotle's *De Anima* corresponding to the Latin translation by Michael Scot of the Arabic term(s) used by Averroes in his *Great Commentary* quoted by Albertus Magnus.

In his *Great Commentary* to Aristotle's *De Anima*, 6, 430a26-31 Averroes writes in the Latin translation by Michael Scot:

"Et, quia famosior differentiarum, per quas dividitur actio intellectus, sunt duae actiones, quarum una dicitur **formatio**, & alia **fides**, incoepit hic notificare differentiam inter has duas actiones, & dixit. Formare autem res indivisibiles, & c.i. apprehendere aute(m) res simplices non compositas erit per intellecta, quae non falsantur, neque verificantur: quae dicuntur **informatio**. Comprehendere autem ab eo res compositas erit per intellecta, in quibus est falsitas & veritas." (In: Aristotelis opera cum Averrois Commentariis (Venetiis apud Junctas 1562-1574. Frankfurt: 1962) Suppl. II, p.

8

166 (emphasis added)

Averroes' commentary in the French translation of Scot's Latin translation by Alain de Libera reads as follows:

"Et puisque la plus notoire (*famosior*) des différences qui caractérisent l'action de l'intellect réside dans les deux actions appelées, l'une, *conception* et l'autre *assentiment*, il commence par expliquer la différence entre ces deux actions. Et il dit: M a i s concevoir des choses indivisibles, etc. C'est-à-dire: mais la perception des choses simples, non composées - ce que l'on appelle *conception* - se fait par des intelligibles qui ne sont ni falsifiables (*falsantur*) ni vérifiables (*veridicantur*), tandis que la perception des choses composées par l'intellect se fait grâce à des intelligibles qui comportent fausseté et vérité." (Averroes, transl. by Libera 1998, p. 123-124)

In de Libera's translation only the term *formatio* appears. The sentence "quae dicuntur *informatio*" included in the edition of "Aristotelis opera cum Averrois Commentariis" (Venice 1562-1574) and quoted as "apud Arabes" by Albertus Magnus, does not appear.

What are the Arabic terms used by the anonymous Arabic translator of Aristotle's *De anima* and then by Averroes himself translating Aristotle's "famous" (*famosior*) distinction? Alain de Libera writes:

"La formation des choses indivisibles", la νόησις τῶν ἀδιαιρέτων, qui correspond à l'arabe **taṣawwur**, ne rend pas directement cette dimension intellective (marquée, en revanche, dans le syntagme verbal *formare per intellectum* = νοεῖν) et il ne traduit aucunement le sens de "représentation", qui est celui de l'original arabe. La notion de "foi", *fides*, évoque, elle aussi assez mal celle de l' "assentiment", **taṣdīq**. Le couple de notions est fondamental chez Averroès. Dans le *Faṣl al-maqāl, § 51,* il indique qu'il l'emprunte aux "représentants de la science du discours rationnel" (*ahl al- 'ilmi bi-l-kalām*) – et non aux représentants de la "science du *kalām*", c'est-à-dire de la théologie dialectique, comme le traduit Gauthier (*Traité décisif*, p. 23)." (Libera 1998, p. 301) (emphasis added)

Taṣawwur (or: *at-taṣawwur bi-l'-'aql)* and *taṣdīq* were translated into Latin by Michael Scot with *(in)formatio* and *fides*. The first concept addresses the representation of "indivisible things" (the "ideas") while the second concept means the predicative judgement about things using the composition of names or signs where there is right and wrong. This is also explained by Averroes in the *Decisive Treatise* (*Kitāb Faṣl al-Maqāl*), § 51.

Alain de Libera's translation of Averroes "*Grand commentarie* sur le livre III du *De anima* d'Aristote" reads as follows:

"III. comm. 1 [= *De an*. III, 4, 429a10-13]

Texte 1: Mais, concernant la partie de l'âme par laquelle l''âme connaît et pense (qu'elle soit différente [des autres parties de l'âme] ou non différente [d'elles] par la grandeur mais [seulement] par la notion) il faut examiner quelle est [sa] différence, et comment se produit [l'acte de] concevoir par l'intellect." (Libera 1998, p.49)

And this is Aristotle's text:

Περὶ δὲ τοῦ μορίου τοῦ τῆς ψυχῆς ᾧ γινώσκει τε ἡ ψυχὴ καὶ φρονεῖ, εἴτε χωριστοῦ ὄντος εἴτε μὴ χωριστοῦ κατὰ μέγεθος ἀλλὰ κατὰ λόγον, σκεπτέον τίν' ἔχει διαφοράν, καὶ πῶς ποτὲ γίνεται τὸ νοεῖν.

Source: http://www.mikrosapoplous.gr/aristotle/psyxhs/3_04.html

Averroes' commentary on ποτὲ γίνεται τὸ νοεῖν in Alain de Libera's translation reads as follows:

> "Il dit ensuite: et comment se produit [l'acte de] concevoir par l'intellect. C'est-à-dire: la première chose à faire est d'examiner si [l'acte de] concevoir par l'intellect est une action ou une réception; en effet, pour nous, la connaissance des actions de l'âme précède celle de son essence (*substantiam*). Et il semble qu'il entend ici par connnaître la connaissance théorique et par penser la connaissance pratique, puisque la pensée est commune à tous [les hommes], mais pas la connaisance." (Libera 1998, p. 50)

Alain de Libera comments:

"Les expressions "formare per intellectum" et "informatio" ou "formatio per intellectum", qui correspondent au grec νοεῖν, sont propres à la version arabo-latine d'Aristote. Cf. Albert, *De an*., III, 3.1; Strock, p. 207, 23-30:
"Hic autem intellectus [incomplexorum] vocatur apud Arabes *informatio*, eo quod intelligere talia est informari intellectum possibilem naturis formalibus eorum".
L'original arabe, attesté notamment par le passage parallèle du CM [*Commentaire Moyen*, RC] est, *at-taṣawwur bi-l'-'aql*, qu' A. Elamrani-Jamal traduit par "représentation par l'intellect". Aucune traduction de "formare per intellectum" n'est réellement satisfaisante: "penser", "former par l'intellect", "intelliger", "intellection". Fortenbaugh, p. 95, propose "forming by the intellect". Chaque expression a ses avantages et ses inconvénients. Nous nous expliquons sur notre choix dans l' "Introduction" du présent volume." (Libera 1998, p. 178)

Informatio or *formare per intellectum* is the Latin translation of Averroes' *at- taṣawwur bi-l'-'aql*. It corresponds to the "famous" Aristotelian distinction between the "simple" or "indivisible" things, τὸ τί ἦν εἶναι, and predicative knowledge, i.e., the intellect dealing with assertion and belief (*fides*).

Theoretical knowledge of the indivisible or νοεῖν, more precisely νόησις τῶν ἀδιαιρέτων, is also different from practical knowledge or φρόνεσις. Aristotle writes ᾧ γινώσκει τε ἡ ψυχὴ καὶ φρονεῖ, the last one being, according to Averroes' interpretation, "common to all human beings". This is a no less "famous" Aristotelian distinction.

The knowledge of the indivisible things corresponds to the perception of the qualities of each sensory faculty or ἴδια (*De anima* 6, 430b29-30). The process of sensory perception was called *informatio sensus* by, for instance, Thomas Aquinas. See my [Information](#) and the second part of these Notes.

Alain de Libera writes:

"Autrement dit: *formatio* ne traduit pas νοεῖν, mais *taṣawwur*; *mais* c'est du νοεῖν qu'il répond. Ce à quoi nous renvoie *formare per intellectum*, c'est au destin de l' "intellection", à l'histoire du νοεῖν, non à celle de la "représentation". En somme, on ne peut comprendre ni ce qu'Aristote est devenu dans la tradition interprétative arabophone, ni ce qu'il est devenu *à partir de là* dans la tradition latine, si l'on ne replace pas le mot latin dans la série *formatio- taṣawwur*;-"représentation "-νοεῖν, car méme si *formatio* traduit *taṣawwur*, ce dont nous parle le GC [Grand Commentaire, RC] n'est pas de l'ordre de la "représentation", mais - aux choix -. de l' "intellection", de la "pensée" ou de la "conceptualisation"." (Libera 1998, p. 26)

In other words, *informatio* as theoretical thinking of the "indivisibles" translates Averroes' *taṣawwur*. It is not imagination in the sense of *informatio sensus* as used already by Augustine or later on by Thomas Aquinas. And it is not, of course, modern representational thinking or "Vorstellung" in the German tradition.

Alain de Libera writes:

"Les philosophes scolastiques utilisent souvant l'expression *intellectus speculativus,* que les traductions modernes rendent en général par un calque ("intellect spéculatif", angl. "*speculative intellect*", ital. "*intelletto specultativo*" etc.) sans être inexacte, cette traduction littérale en

masque l'homonymie. L'expression provenant de la traduction latine du d'Averroes sur le *Grand Commentaire De anima*, l'analyse des divers passages du *textus*aristotélicien et de sa reprise averroïste montre que l'intellect "spéculatif" désigne, en fait, *trois* sortes d'entités:

(1) la faculté désignée par Aristote comme "intellect théorique" en *De Anima*, III, 6, 429 25sq.) (ar. *'aql nazari* [...]) par opposition à l'"intellect pratique" de *De anima*, III, 7, 431 a sq. (ar. (ar. *'aql 'amali* [...]);

(2) le "composé" de l'intellect matériel et de l'intellect agent, qu'Averroès appele **"intellect produit"** (*factus*), à savoir, non pas une faculté, mais un acte ou une activité (c'est-à-dire l'"intellection des indivisbles", selon Aristote, *ta adiaireta* [τὰ ἀδιαίρετα], *ta hapla* [τὰ ἁπλᾶ], et celles des "composés", objets du jugement);

(3) l'intellect en tant qu'il est joint à l'intellect matériel et est pour l'homme "forme' essentielle - une acception d'origine thémistienne, extrapolée du passage de *De anima*, II, 2, 431b 24-25 (Tricot. p. 76-77), où parlant de "l'intellect et de la faculté théorique", Aristote indique qu' "il semble bien que ce soit là un genre de l'âme tout différent, et que seul il puisse être séparé, comme l'éternel, du corruptible" (cf. Thémistius, In III De anima, ad 430a 20-25; Verbeke, p. 232, 44-46 et 233, 80-82). Ces trois sens ne sont évidemment pas cumulables. Le contexte immédiat permet, en principle, de trancher.Le latin *res speculativae* désigne, en général, les objets de l'activité de l'intellect théorique au sens n°2, c'est-à-dire, à titre premier, les indivislbes allégués en *De anima*, III, 6, 430a 26-31. On notera que cette activité porte chez Averroès le nom de **"représentation"** (*taṣawwur*) [التصور] lat. *formatio*, "formation, subsistant dans "former un dessein" au sens de "concevoir un dessein") en tant qu'elle s'applique aux intelligibles envisagés en eux-mêmes, en dehors de la prédication, tandis que la considération des "noêmes" (*man'na* [...], intention) dont la combinaison, dans la prédication, "comporte vérité ou fausseté", porte le nom d'"assentiment" (*taṣdīq* [التصديق], lat. *fides*, (foi). Dans les traductions arabo-latines d'Aristote (ainsi que dans celles d'Avicenne et d'Averroès), l'expression correspondant à *noein* [νοεῖν] est, le plus souvant, **"*formare per intellectum*"** = "représentation par l'intellect", ar. "*al-taṣawwur bi-al-'aql* [...]")." (Libera 2004, p. 604) (my emphasis).

For Christian thinkers the distinction between creator and creature is basic. Thomas Aquinas makes it clear when he distinguishes between *informatio*, in the ontological sense of moulding matter, and *creatio*. See the second part of these Notes as well as David B. Burrell: "Thomas Aquinas and

Islam", in *Modern Theology* 20:1 January 2014.

As Burrell remarks:

"And should some be put off by the apparently disembodied "intellectuality" of all this, they need only to recall Pierre Hadot's reminders that such rarified modes of thought can only be executed in a milieu shaped by sustained and rigorous "spiritual exercises". Such is the inherent *telos* of philosophical theology, as it strains, in the persons of its practitioners, to align itself with the goodnesses infused in things, the divineley ordained order of being." (p. 82).

The article on Ibn Rushd by H. Chad Hillier in the Internet Encyclopedia of Philosophy provides an excellent framework for the discussions on the concept of information in Islamic philosophy. Hillier refers several times to the works by Majid Fakhry (A History of Islamic Philosophy, New York 1983; Ibn Rushd, Oxford 2001; Islamic Occasionalism: and its Critique by Ibn Rushd and Aquinas, London 1958). I quote H. Chad Hillier in extenso:

"Psychology

Like Aristotle, Ibn Rushd views the study of the psyche as a part of physics, since it is related specifically to the generable and corruptible union of form and matter found in the physical world and passed from generation to generation through the seed and natural heat. Ibn Rushd's views on psychology are most fully discussed in his *Talkbis Kitab al-Nafs* (Aristotle on the Soul). Here Ibn Rushd, as M. Fakhry comments, divided the soul into five faculties: the nutritive, the sensitive, the imaginative, the appetitive and the rational. The primary psychological faculty of all plants and animals is the nutritive or vegetative faculty, passed on through sexual generation, as noted above. The remaining four higher faculties are dependent on the nutritive faculty and are really perfections of this faculty, the product of a nature urging to move higher and higher.

The nutritive faculty uses natural heat to convert nutrients from potentiality to actuality, which are essential for basic survival, growth and reproduction of the living organism. , This faculty is an active power which is moved by the heavenly body (Active

13

Intellect). Meanwhile, the sensitive faculty is a passive power divided into two aspects, the proximate and the ultimate, in which the former is moved within the embryo by the heavenly body and the latter is moved by sensible objects. The sensitive faculty in finite, in that it is passive, mutable, related to sensible forms and dependent upon the animal's physical senses (e.g. touch or vision). A part of these senses, notes Fakhry, is the *sensus communis*, a sort of sixth sense that perceives common sensibles (i.e. objects that require more than one sense to observe), discriminates among these sensibles, and comprehends that it perceives. Benmakhlouf notes that the imaginative faculty is dependent on the sensitive faculty, in that its forms result from the sensible forms, which Fakhry contends are stored in sensus communis. It differs from the sensitive faculty, however, by the fact that it "apprehends objects which are no longer present…its apprehensions are often false or fictitious," and it can unite individual images of objects perceived separately. Imagination is not opinion or reasoning, since it can conceive of unfalsified things and its objects are particular not universal, and may be finite because it is mutable (moving from potentiality to actuality by the forms stored in the *sensus communis*). The imaginative faculty stimulates the appetitive faculty, which is understood as desire, since it imagines desirable objects. Fakhry adds that the imaginative and appetitive faculties are essentially related, in that it is the former that moves the latter to desire or reject any pleasurable or repulsive object.

The rational faculty, seen as the capstone of Ibn Rushd's psychology by Fakhry, is unlike the imaginative faculty, in that it apprehends motion in a universal way and separate from matter. It has two divisions, the practical and theoretical, given to humans alone for their ultimate moral and intellectual perfection. The rational faculty is the power that allows humanity to create, understand and be ethical. The practical is derived from the sensual and imaginative faculties, in that it is rooted in sensibles and related to moral virtues like friendship and love. The theoretical apprehends universal intelligibles and does not need an external agent for intellectualization, contrary to the doctrine of the Active Intellect in Neoplatonism.

In its effort to achieve perfection, the rational faculty moves from potentiality to actuality. In doing so it goes through a number of stages, know as the process of intellection. Ibn Rushd had discerned, as seen in his

14

Long Commentary on *De Anima*, five distinct meanings of the Aristotelian intellect. They were, first and foremost, the material (potential) and the active (agent) intellects.

There is evidence of some evolution in Ibn Rushd's thought on the intellect, notably in his Middle Commentary on *De Anima* where he combines the positions of Alexander and Themistius for his doctrine on the material intellect and in his Long Commentary and the *Tahafut* where Ibn Rushd rejected Alexander and endorsed Themistius' position that "material intellect is a single incorporeal eternal substance that becomes attached to the imaginative faculties of individual humans." Thus, the human soul is a separate substance ontologically identical with the active intellect; and when this active intellect is embodied in an individual human it is the material intellect. The material intellect is analogous to prime matter, in that it is pure potentiality able to receive universal forms. As such, the human mind is a composite of the material intellect and the passive intellect, which is the third element of the intellect. The passive intellect is identified with the imagination, which, as noted above, is the sense-connected finite and passive faculty that receives particular sensual forms. When the material intellect is actualized by information received, it is described as the speculative (habitual) intellect. As the speculative intellect moves towards perfection, having the active intellect as an object of thought, it becomes the acquired intellect. In that, it is aided by the active intellect, perceived in the way Aristotle had taught, to acquire intelligible thoughts. The idea of the soul's perfection occurring through having the active intellect as a greater object of thought is introduced elsewhere, and its application to religious doctrine is seen. In the *Tahafut*, Ibn Rushd speaks of the soul as a faculty that comes to resemble the focus of its intention, and when its attention focuses more upon eternal and universal knowledge, it become more like the eternal and universal. As such, when the soul perfects itself, it becomes like our intellect. This, of course, has impact on Ibn Rushd's doctrine of the afterlife. Leaman contends that Ibn Rushd understands the process of knowing as a progression of detachment from the material and individual to become a sort of generalized species, in which the soul may survive death. This contradicts traditional religious views of the afterlife, which Ibn Rushd determines to be valuable in a political sense, in that it compels citizens to ethical

behavior.

Elsewhere, Ibn Rushd maintains that it is the Muslim doctrine of the afterlife that best motivates people to an ethical life. The Christian and Jewish doctrines, he notes, are too focused upon the spiritual elements of the afterlife, while the Muslim description of the physical pleasures are more enticing. Of course, Ibn Rushd does not ultimately reject the idea of a physical afterlife, but for him it is unlikely.

A number of other problems remain in Ibn Rushd's doctrine of the soul and intellect. For instance, if the material intellect is one and eternal for all humans, how is it divided and individualized? His immediate reply was that division can only occur within material forms, thus it is the human body that divides and individualizes the material intellect. Nevertheless, aside from this and other problems raised, on some of which Aquinas takes him to task, Ibn Rushd succeeded in providing an explanation of the human soul and intellect that did not involve an immediate transcendent agent. This opposed the explanations found among the Neoplatonists, allowing a further argument for rejecting Neoplatonic emanation theories. Even so, notes Davidson, Ibn Rushd's theory of the material intellect was something foreign to Aristotle.

Conclusion

The events surrounding Ibn Rushd towards the end of his life, including his banishment, signaled a broader cultural shift in the Islamic world. Interest in philosophy was primarily among the elite: scholars, royal patrons and civil servants. Nevertheless, its presence among the ruling elite spoke of the diversity of what it meant to be "Muslim." As interest in philosophy waned in the Muslim world after Ibn Rushd, his writings found new existence and intellectual vigor in the work of Christian and Jewish philosophers. The twelfth and thirteenth centuries saw an intellectual revival in the Latin West, with the first great universities being established in Italy, France and England. Within the walls of the University of Paris, a group of philosophers came to identify themselves with the Aristotelian philosophy presented by Ibn Rushd, particularly certain elements of its relation to religion. Later known as the "Averroists," these Christian philosophers sparked a controversy within the Roman Catholic Church about the involvement of philosophy

with theology. Averroists, their accusers charged, had promoted the doctrines of one intellect for all humans, denial of the immortality of the soul, claimed that happiness can be found in this life and promoted the innovative doctrine of "double truth". Double truth, the idea that there are two kinds of truth, religious and philosophical, was not held by Ibn Rushd himself but was an innovation of the Averroists.

Among Jewish thinkers, however, Ibn Rushd had a more positive impact. His thoughts on Aristotle and the relationship between philosophy and religion, particularly revelation, inspired a renewed interest in the interpretation of scripture and the Jewish religion. Key Jewish philosophers, such as Maimonides, Moses Narboni and Abraham ibn Ezra, became associated with Ibn Rushd in the West, even though they took Ibn Rushd's doctrines into novel directions. As such, Leaman notes, the category of a Jewish "Averroist" cannot be given to these philosophers, for their relationship with Ibn Rushd's thought was one of critique and integration into their own philosophical systems. Nevertheless, without the work of the Spanish-Muslim philosopher, much of what occurred in medieval philosophy would have not existed. He became an example of how religions are dynamic and evolving traditions, often shaped by epistemological influences from other traditions."

3. TRANSLATIONS AND INTERPRETATIONS

In this paragraph I quote from my [Information](#) (Munich 1978, pp. 114-115) and add new sources in the footnotes.

"c) <u>Averroes und Abert der Große</u>

Die aristotelischen Deutungen des Informationsbegriffs stehen in engem Zusammenhang mit den Übersetzungen und Kommentaren zu Aristoteles "De anima". Aristoteles hatte die Seele als Prinzip des Lebens sowie al Akt und Form des Körpers definiert und durch seine Auffassung des Eidos-Begriffs die dualistische Anthropologie und Ontologie Platons überwunden (vgl. 2.1.3).

In seinem Kommentar zu Aristoteles "De anima" berichtet Albert der Große (1193-1280), daß Averroes (1126-1198) den Formungsprozeß des Denkvermögens durch die Denkformen informatio genannt hat, weil das Denkvermögen (intellectus possibilis), indem es diese Formen erkennt, von ihnen geformt

wird (informari) [181].

Der etymologische und ideengeschichtliche Ursprung des Informationsbegriffs kommt hiermit ausdrücklich zur Sprache. Grundlage für diese erkenntnistheoretische Deutung des Informationsbegriffs ist die aristotelische Auffassung der Seele. Albert der Große selbst vermeidet aber in seiner Darstellung den erkenntnistheoretischen Informationsbegriff und gebraucht ihn lediglilch im ontologischen Sinne von Formung des Stoffes. Dadurch hebt er die rein geistige Natur des Intellekts (esse spirituale) hevor [182].

Der Informationsbegriff bezieht sich also bei Albert d. Gr. hauptsächlich auf das Begriffspaar Form-Stoff und bezeichnet die ontologisch-formende und belebende Tätigkeit des Intellekts bzw. der Seele auf den Stoff [183].

Der Stoff ist aber nicht etwas Vorhandenes, sondern wird erst durch die Form im Informationsprozeß aktualisiert. Das was ist, ist der informierte Stoff [184].

Der Informationsbegriff bezeichnet somit diesen Aktualisierungsprozeß, in dem das Mögliche zur Wirklichkeit übergeführt wird. Dabei kommen die Momente des Hervorbringens und der Neuigkeit zum Ausdruck. Der ontologische Informationsprozeß ist ferner ein Prozeß des Ordnens und des Unterscheidens. Albert d. Gr. bezieht diesen Begriff z.B. auch auf die Hervorbringung sprachlicher Laute bzw. auf die Formung der Stimme (vox) durch die verschiedenen Seelenteile, wodurch, wie im Falle des Menschen, die Stimme zur Sprache bzw. zum Zeichen des Begriffs (conceptus) wird [185].

Der Zusammenhang des Informationsbegriffs mit dem aristotelischen Eidos-Begriff sowie mit seiner Ontologie, Sprachphilosophie und Erkenntnistheorie liegt somit bei Albert d.Gr. unmittelbar vor."

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[181] Albertus Magnus: Opera Omnia (Aschendorf: Monast. Westf., 1968), Bd. VII: Libri de anima, Lib. 3, Tract. 3, cap. 1, S. 123:

"Indivisibilium quidem igitur, quae sunt incomplexa intelligentia sive intelligere, quod est actus intelligendi, in omnibus his est circa quae non est falsum, eo quod, sicut INFERIUS ostendemus, numquam accidit error intelligibilium in talium intellectu. Hic autem intellectus vocatur apud Arabes

informatio, eo quod intelligere talia est informari intellectum possibilem naturis formalibus eorum."

Aristotle, De anima 430a27-31

Ἡ μὲν οὖν **τῶν ἀδιαιρέτων νόησις** ἐν τούτοις περὶ ἃ οὐκ ἔστι τὸ ψεῦδος, ἐν οἷς δὲ καὶ τὸ ψεῦδος καὶ τὸ ἀληθές σύνθεσίς τις ἤδη νοημάτων ὥσπερ ἓν ὄντων-καθάπερ Ἐμπεδοκλῆς ἔφη "ᾗ πολλῶν μὲν κόρσαι ἀναύχενες ἐβλάστησαν", ἔπειτα συντίθεσθαι τῇ φιλίᾳ, οὕτω καὶ ταῦτα κεχωρισμένα συντίθεται, οἷον τὸ ἀσύμμετρον καὶ ἡ διάμετρος- (emphasis added)

> "The thinking then of the simple objects of thought is found in those cases where falsehood is impossible: where the alternative of true or false applies, there we always find a putting together of objects of thought in a quasi-unity. As Empedocles said that 'where heads of many a creature sprouted without necks' they afterwards by Love's power were combined, so here too objects of thought which were given separate are combined, e.g. 'incommensurate' and 'diagonal'." (Transl. J.A. Smith)

Bei **Averroes**: Aristotelis opera cum Averrois Commentariis (Venetiis apud Junctas 1562-1574). Nachdr. Frankfurt: Minerva, 1962) Suppl. II, S. 166 heißt es:

"Et, quia famosior differentiarum, per quas dividitur actio intellectus, sunt duae actiones, quarum una dicitur formatio, & alia fides, incoepit hic notificare differentiam inter has duas actiones, & dixit. Formare autem res indivisibiles, & c.i. apprehendere aute(m) res simplices non compositas erit per intellecta, quae non falsantur, neque verificantur: quae dicuntur **informatio**. Comprehendere autem ab eo res compositas erit per intellecta, in quibus est falsitas & veritas." (emphasis added)

French translation by Alain de Libera on Averroes' *Commentary* on *De an*. III, 6, 430a26-31:

"Et puisque la plus notoire (*famosior*) des différences qui caracterisent l'action de l'intellect réside dans les deux actions appelées, l'une, *conception* et l'autre *assentiment*, il commence par expliquer la différence entre ces deux actions. Et il dit: M a i s concevoir des choses indivisibles, etc. C'est-à-dire: mais la perception des choses simples, non composées — ce que l'on appelle *conception* — se fait par des intelligibles qui ne sont ni falsifiables (*falsantur*) ni vérifiables (*veridicantur*), tandis que la perception des choses composées par l'intellect se fait grâce à des intelligibles qui comportent fausseté et vérité." (Averroes, transl. Alain de Libera, op.cit. p. 123-124)

Aristotle explains in *De anima* III, 6 what are "simple objects of thought":

[430a27] 1. Ἡ μὲν οὖν τῶν ἀδιαιρέτων νόησις ἐν τούτοις περὶ ἃ οὐκ ἔστι τὸ ψεῦδος, ἐν οἷς δὲ καὶ τὸ ψεῦδος καὶ τὸ ἀληθές σύνθεσίς τις ἤδη νοημάτων ὥσπερ ἓν ὄντων-καθάπερ Ἐμπεδοκλῆς ἔφη "ᾗ πολλῶν μὲν κόρσαι ἀναύχενες ἐβλάστησαν", ἔπειτα συντίθεσθαι τῇ φιλίᾳ, οὕτω καὶ ταῦτα κεχωρισμένα συντίθεται, οἷον τὸ ἀσύμμετρον καὶ ἡ διάμετρος -
2. ἂν δὲ [430b] γενομένων ἢ ἐσομένων, τὸν χρόνον προσεννοῶν [καὶ] συντίθησι. τὸ γὰρ ψεῦδος ἐν συνθέσει ἀεί· καὶ γὰρ ἂν τὸ λευκὸν μὴ λευκὸν <φῇ, τὸ λευκὸν καὶ> τὸ μὴ λευκὸν συνέθηκεν· ἐνδέχεται δὲ καὶ διαίρεσιν φάναι πάντα. ἀλλ' οὖν ἔστι γε οὐ μόνον τὸ ψεῦδος ἢ ἀληθὲς ὅτι λευκὸς Κλέων ἐστίν, ἀλλὰ καὶ ὅτι ἦν ἢ ἔσται. τὸ δὲ ἓν ποιοῦν ἕκαστον, τοῦτο ὁ νοῦς. [430b6]

3. τὸ δ' ἀδιαίρετον ἐπεὶ διχῶς, ἢ δυνάμει ἢ ἐνεργείᾳ, οὐθὲν κωλύει νοεῖν τὸ <διαιρετὸν ᾗ> ἀδιαίρετον, <οἷον> ὅταν νοῇ τὸ μῆκος (ἀδιαίρετον γὰρ ἐνεργείᾳ), καὶ ἐν χρόνῳ ἀδιαιρέτῳ· ὁμοίως γὰρ ὁ χρόνος διαιρετὸς καὶ ἀδιαίρετος τῷ μήκει. οὔκουν ἔστιν εἰπεῖν ἐν τῷ ἡμίσει τί ἐνόει ἑκατέρῳ· οὐ γὰρ ἔστιν, ἂν μὴ διαιρεθῇ, ἀλλ' ἢ δυνάμει. χωρὶς δ' ἑκάτερον νοῶν τῶν ἡμίσεων διαιρεῖ καὶ τὸν χρόνον ἅμα, τότε δ' οἱονεὶ μήκη· εἰ δ' ὡς ἐξ ἀμφοῖν, καὶ ἐν τῷ χρόνῳ τῷ ἐπ' ἀμφοῖν.

4. [τὸ δὲ μὴ κατὰ τὸ ποσὸν ἀδιαίρετον ἀλλὰ τῷ εἴδει νοεῖ ἐν ἀδιαιρέτῳ χρόνῳ καὶ ἀδιαιρέτῳ τῆς ψυχῆς.] κατὰ συμβεβηκὸς δέ, καὶ οὐχ ᾗ ἐκεῖνα, διαιρετὰ ὃ νοεῖ καὶ ἐν ᾧ χρόνῳ, ἀλλ' ᾗ <ἐκεῖνα> ἀδιαίρετα· ἔνεστι γὰρ κἂν τούτοις τι ἀδιαίρετον, ἀλλ' ἴσως οὐ χωριστόν, ὃ ποιεῖ ἕνα τὸν χρόνον καὶ τὸ μῆκος. καὶ τοῦθ' ὁμοίως ἐν ἅπαντί ἐστι τῷ συνεχεῖ, καὶ χρόνῳ καὶ μήκει. [430b20] <τὸ δὲ μὴ κατὰ τὸ ποσὸν ἀδιαίρετον ἀλλὰ τῷ εἴδει νοεῖ ἐν ἀδιαιρέτῳ χρόνῳ καὶ ἀδιαιρέτῳ <τῳ> τῆς ψυχῆς.>

5. ἡ δὲ στιγμὴ καὶ πᾶσα διαίρεσις, καὶ τὸ οὕτως ἀδιαίρετον, δηλοῦται ὥσπερ ἡ στέρησις. καὶ ὅμοιος ὁ λόγος ἐπὶ τῶν ἄλλων, οἷον πῶς τὸ κακὸν γνωρίζει ἢ τὸ μέλαν· τῷ ἐναντίῳ γάρ πως γνωρίζει.

6. δεῖ δὲ δυνάμει εἶναι τὸ γνωρίζον καὶ ἐνεῖναι ἐν αὐτῷ. εἰ δέ τινι μηδὲν ἔστιν ἐναντίον [τῶν αἰτίων], αὐτὸ ἑαυτὸ γινώσκει καὶ ἐνέργειά ἐστι καὶ χωριστόν.

7. ἔστι δ' ἡ μὲν φάσις τι κατά τινος, ὥσπερ καὶ ἡ ἀπόφασις, καὶ ἀληθὴς ἢ ψευδὴς πᾶσα· ὁ δὲ νοῦς οὐ πᾶς, ἀλλ' ὁ τοῦ τί ἐστι κατὰ τὸ τί ἦν εἶναι ἀληθής, καὶ οὐ τὶ κατά τινος· ἀλλ' ὥσπερ τὸ ὁρᾶν τοῦ ἰδίου ἀληθές, εἰ δ' ἄνθρωπος τὸ λευκὸν ἢ μή, οὐκ ἀληθὲς ἀεί, οὕτως ἔχει ὅσα ἄνευ ὕλης.
([Source](#))

[English translation](#) by J.A. Smith:

The thinking then of the simple objects of thought is found in those cases where falsehood is impossible: where the alternative of true or false applies, there we always find a putting together of objects of thought in a quasi-unity. As Empedocles said that 'where heads of many a creature sprouted without necks' they afterwards by Love's power were combined, so here too objects of thought which were given separate are combined, e.g. 'incommensurate' and 'diagonal': if the combination be of objects past or future the combination of thought includes in its content the date. For falsehood always involves a synthesis; for even if you assert that what is white is not white you have included not white in a synthesis. It is possible also to call all these cases division as well as combination. However that may be, there is not only the true or false assertion that Cleon is white but also the true or false

assertion that he was or will he white. In each and every case that which unifies is mind.

Since the word 'simple' has two senses, i.e. may mean either (a) 'not capable of being divided' or (b) 'not actually divided', there is nothing to prevent mind from knowing what is undivided, e.g. when it apprehends a length (which is actually undivided) and that in an undivided time; for the time is divided or undivided in the same manner as the line. It is not possible, then, to tell what part of the line it was apprehending in each half of the time: the object has no actual parts until it has been divided: if in thought you think each half separately, then by the same act you divide the time also, the half-lines becoming as it were new wholes of length. But if you think it as a whole consisting of these two possible parts, then also you think it in a time which corresponds to both parts together. (But what is not quantitatively but qualitatively simple is thought in a simple time and by a simple act of the soul.)

But that which mind thinks and the time in which it thinks are in this case divisible only incidentally and not as such. For in them too there is something indivisible (though, it may be, not isolable) which gives unity to the time and the whole of length; and this is found equally in every continuum whether temporal or spatial.

Points and similar instances of things that divide, themselves being indivisible, are realized in consciousness in the same manner as privations.

A similar account may be given of all other cases, e.g. how evil or black is cognized; they are cognized, in a sense, by means of their contraries. That which cognizes must have an element of potentiality in its being, and one of the contraries must be in it. But if there is anything that has no contrary, then it knows itself and is actually and possesses independent existence.

Assertion is the saying of something concerning something, e.g. affirmation, and is in every case either true or false: this is not always the case with mind: the thinking of the definition in the sense of the constitutive essence is never in error nor is it the assertion of something concerning something, but, just as while the seeing of the special object of sight can never be in error, the belief that the white object seen is a man may be mistaken, so too in the case of objects which are without matter.

On the meaning of Aristotle's "indivisible objects" see also [Aristotle. Posterior Analytics, II. 19. Introduction, Greek Text, Translation and Commentary Accompanied by a Critical Analysis by Paolo C. Biondi](). Presses Univ. de Laval 2004, Chapter 4: *Nous* as Human Intuition, pp. 241ff. As well as this large quote from:

[Luca F. Tuninetti: "Per se notum" Die logische Beschaffenheit des Selbstverständlichen im Denken des Thomas von Aquin.](Leiden 1996), pp. 96-99, that makes explicit the Arabic and Persian sources of Albert the Great and other Latin thinkers:

"Es wäre sicherlich interessant zu untersuchen, wie die grammatikalischen und logischen Theorien der Aussage und der Prädikation die Rezeption dieser Passage aus Aristoteles *De anima*beeinflussen konnten. Die islamischen Denker, deren Werke für die Rezeption dieser Schrift im Mittelalter entscheidend waren, betonen in diesem Zusammenhang die

Unterscheidung von zwei Akten des Verstandes: einfaches Denken (Avicenna und Algazel: *imaginatio*, bzw. Averroes: *formatio*, *informatio* oder *formatio intellectiva*) und Zustimmung (*credulitas* bzw. *fides*). [376].

[376] Vgl. u.a. ALGAZEL, Logica pr. (ed. Lohr 239, 6-240, 21): "Scientiarum, quamvis multi sint rami, duae tamen sint primae partes, imaginatio et credulitas. *Imaginatio* est apprehensio rerum, quae significant singulae dictiones ad intelligendum et certificandum eas. Sicut est apprehensio significationis huius nominis, 'lapis', 'arbor', 'angelus', 'spiritus' et similium. *Credulitas* vero est sicut hoc quod dicitur quia 'Mundus coepit', et 'Obedentia remunerabitur'. Necesse est autem, ut omnem credulitatem praecedant ad minus duae imaginationes [...]", DOMINICUS GUNDISALVI, De div. phil. (ed. Baur, 80, 9-15); AVERROES, in III De anima 21 (ed. Crawford, 455, 10-28): "Cum complevit notificare substantiam trium intellectuum, scilicet materialis et eius qui est in habitu et agentis, incepit considerare de actionibus et proprietatibus intellectus. Et hoc est quod remansit de cognitione istius virtutis. Et quia famosior differentiarum par quas divitur actio intellectus sunt duae actiones quarum una dicitur formatio et alia fides, incepit hic notificare differentiam inter has duas actiones. Et dixit: Formare autem res indivisibiles [vgl. 430a26], etc. Idest, comprehendere autem res simplices non compositas erit per intellecta que non falsantur neque veridicantur, que dicitur informatio, comprehendere autem ab eo res compositas erit ab intellecta in quibus est falsitas et veritas. Et contentus fuit prima divisione sine secunda, cum oppositum intelligatur per suum oppositum. Deinde dixit: Res autem in quibus invenitur falsum et verum, etc. Idest, intellecta autem in quibus invenitur veritas et falsitas, es in eis aliqua compositio ab intellectu materiali et intellectu qui primo intelligit singularia. Si igitur hec compositio fuerit conveniens enti, erit vera, sin autem, erit falsa"; vgl. auch ib. 26 (ed. cit. 463, 9-464, 20; zum Sinn dieser Unterscheidung bei Avicenna vgl. SABRA Avicenna on the subject matter of logic (1980), 757-762).

Der Verfasser eines anonymen Kommentars aus dem frühen 13. Jahrhundert zum Traktat *De anima* kennt diese Terminologie arabischer Herkunft und versucht, sie mit der lateinischen Übersetzung des aristotelischen Textes (*intelligentia indivisibilium* und *compositio intellectuum*) in Einklang zu bringen [377]

[377] Vgl. In III De anima 4 (ed. Alonso, 334, 16-21): "Hic intendit determinare de intellectiva potentia quo ad eius proprie[t]ates: Et sunt duae proprietates de quibus hic intendit, scilicet, informatio et credulitas sive fides. Et quia credulitas in compositione ipsorum intelligibilium ad invicem radicatur, loco eius quo est credulitas, utitur eo quod est compositio"; ib. (335-14-15): "Per compositionem intellectuum intelligit ipse credulitatem sive iudicium"; das ist wahrscheinlich der älteste Text, der die zweite Operation des Verstandes alsl 'Urteil' bezeichnet. wie es später—aber noch nicht bei Thomas—üblich geworden ist; die Zuschreibung dieses Kommentars an Petrus Hispanus durch seinen Herausgeber wird von GAUTHIER bestritten (vgl. Préface [In De an.] 236-238.)

Albert kennt die Terminologie des Averroes und rechtfertigt sie [378]
[378] Vgl. ALBERTUS MAGNUS, De anima III, tr. 3, c. 1 (ed. Stroick, 207, 27-33): "Hic autem intellectus [scil. indivisibilium intelligentia] vocaltur apud Arabes informatio, eo quod intelligere talia est informari intellectum possibilem naturis formalisbus eorum. Intellectus autem complexorum, qui

est enuntiationis vel complexionis, vocatur fides propter assensum intellectus ad talia."

Einmal die Unterscheidung von zwei Arten von Denkinhalten gewonnen, war man berechtigt, auf den beiden Ebenen nach Grundkenntnissen zu suchen, d.h., nach Grundbegriffen und Grundaussagen [379]

[379] Vgl. AVICENNA Metaph. I, c. 5 (ed. Van Riet, 31, 2-32, 5): "Dicemus igitur quod res et ens et necesse talia sunt quod statim imprimuntur in anima prima impressione, quae non acquiritur ex aliis notioribus se, sicut credulitas quae habet prima principia, ex quibus ipsa provenit per se, et est alia ab eis, sed propter ea."; ALGAZEL, Logica, pr. (ed. Lohr, 239, 6-240, 54) (s.o. S. 79, Anm. 297).

[297] Vgl. ALGAZEL Logica prol. (ed. Lohr, 240 , 22, 241-254): "[...] imaginatio et credulitas unaquaeque dividitur in id quod primum apprehendeitur per se sine inquisitione et excogitatione et in id quod non apprehenditur sine inquisitione [...] necesse est, ut hoc perveniat ad prima quae sunt stabilita in natura intellectus sine inquisitione et meditatione"; DOMINICUS GUNDISALVI, De div. phil. (ed. Baur, 80, 16-81, 6).

und in der Begriffsbildung den Ursprung der letzteren anzusehen [380]

[380] Vgl. AVICENNA De anima V, c. 3 (ed. Van Riet, 102, 6-9): "[nachdem die Vernunft die Universalien aus den sinnlich wahrgenommenen Einzeldingen abstrahiert hat,] "anima ponit habitudines inter quaeque universalia secundum affirmationem et negationem, et id de quo affirmatio vel negatio fecerit per se nota, percipit; quod autem non fecerit ita, dimittit quousque inveniat medium terminum"; vgl. auch PETRUS HISPANUS, Scientia libri de anima X, c. 10 (ed. Alonso 403, 36-404, 7)

Diese Grundkenntnisse können nach Averroes im Vergleich zu den absichtlich erworbenen als natürlich bezeichnet werden [381].

[381] Vgl. AVERROES In III De anima 5 (ed. Crawford, 406, 575-407 [sic, RC], 583; 36 (499, 490-493): "Intellecta [...] duobus modis fiunt in nobis: aut naturaliter (et sunt prime propositiones, quas nescimus quando extiterunt et unde et quomodo) aut voluntarie (et sunt intellecta acquisita ex primis propositionibus)."

Eine zentrale Frage in der damaligen psychologischen Diskussion war bekanntlich die nach dem Unterschied von leidendem und wirkendem Intellekt. Wie verhält sich nur die Prinzipienerkenntnis zu diesen beiden? Avicenna hat die Prinzipienerkenntnis als den ersten Schritt des theoretischen Vermögens über die reine Potentialität hinaus beschrieben: Wenn der Intellekt in Besitz der durch sich selbst verständlichen Aussagen ist, ist er nicht mehr als bloße Anlage anzusehen (*intellectus materialis*), denn er ist schon imstande, etwa zu erkennen (*intellectus in habitu*); das geschieht indem er aufgrund der Grundkenntnisse (*intelligibilia prima*) zu neuen Erkenntnissen (*intelligibilia secunda*) gelangt (*intellectus in effectu*), insbesondere wenn er sie tatsächlich betrachtet (*intellectus accomodatus*). [382]

[...]
Diese Anordnung der Prinzipienerkenntnis innerhalb der Entwicklung der menschlichen Vernunft von der reinen Potentialität bis zur vollkommenen Aktualität stieß bei den lateinischen Denkern auf breites Interesse. Dominicus Gundisalvi übernimmt die Charakterisierung des *intellectus in habitu* als Prinzipienerkenntnis, aber glaubt, daß sie nicht nur die theoretische, sondern auch die praktische Vernunft betrifft [383].
[...]
Der Gedanke eines Pendants im praktischen Bereich zu den durch sich selbst verständlichen Aussagen im theoretischen war schon durch Avicenna geäußert worden [384].
[384] Vgl. AVICENNA, De anima V, c. 1 (ed. Van Riet, 78, 40-79, 42): "Principia autem contemplativi sunt ex propositionibus per se notis; principia vero activi sunt ex probabilibus et ex auctoritatibus et ex famosis"; ib. 81, 76-83; vgl. auch DOMINICUS GUNDISALVI, De anima c. 10 (ed. Muckle, 85, 20-22)."

In his "Einführung in die Philosophie des Mittelalters" (Darmstadt 1987, pp. 124-125) Kurt Flasch interprets Aristoteles, De anima, III, 5, 430a-10-23 as follows:

"Diese Passage des Aristoteles enthält bis heute eine Reihe von Rätseln. Sowohl Einzelheiten bleiben umstritten als auch die Vereinbarkeit dieser Aussagen mit den antiplatonischen Teilen der aristotelischen Schriften. Klar ist, daß nach Aristoteles die geistige Erkenntnis das Allgemeine, Bleibende, ja Ewige erfaßt und dabei identisch ist mit dem Wesen der Dinge. Diese Konzeption des Wissens teilte auch Averroes. Aber auch für ihn blieb zu entscheiden, was der "mögliche Intellekt" sei, wenn er keine "Natur" haben und "unvermischt" sein sollte. Er lehnte es ab, den "möglichen Intellekt" als eine augenblickliche Disposition unseres Organismus und unserer Einbildungskraft anzusehen. Dann wäre er etwas Körperliches, was Aristoteles ausdrücklich bestritten hat. Der "mögliche Intellekt" ist selbst geistig, unvermischt. Aber dann ist er zwar ewig und allgemein, zeigt aber keine individuellen Unterschiede. Dann wird begreiflich, daß er das Allgemeine und Bleibende erfaßt; er kann uneingeschränkt aufnehmen, **was der** tätige Intellekt ihm an Inhalten einprägt — aber er ist *einer* für alle Menschen. [4]
  [4] Averroes, Commentarium magnum in Aristotelis De anima libros, d. F. Stuart Crawford. Cambridge, Mass. 1953

Averroes sah die Probleme, die ihm daraus erwuchsen: Wenn ich etwas erkenne, erkennst nicht auch du deswegen etwas. Wenn ich eine Einsicht vergesse, vergißt deswegen nicht auch du sie. Wissen mußte als Vorgang in Individuen begreiflich gemacht werden. Wenn Wissen darin bestünde, daß der zeitlise tätige Intellekt den ebenfalls zeitlosen möglichen Intellekt **informiert**, verlöre die geistige Erkenntnis den

Charakter eines in der Zeit verlaufenden Prozesses. Averroes hatte größere Schwierigkeiten, das Zeitliche als das Ewige im menschlichen Wesen zu denken. Das war eine Folge des aristotelischen Wissensbegriffs. Aber wenn Averroes das Allgemeine im Wissen so sehr hervorhob, daß er individuelles Wissen kaum denken konnte, so hat er sich doch darum bemüht. Fest stand ihm aus Aristoteles: Der mögliche Intellekt ist kein Einzelnes, kein aliquid hoc. Doch hatte Aristoteles auch gezeigt, daßa wir nichts geistig erkennen können ohne die Schemata unserer Vorstellungskraft. Im Zusammenspiel von zeitlichen Prozessen der Bildung der Vorstellungsschemata, von tätiger Herausarbeitung allgemeiner Strukturen und von Rezeption dieser allgemeinen Strukturen im "möglichen Intellekt" sah Averroes den eigentlichen Vorgang der intellektuellen Erkenntnis des Menschen. Dieses Zusammenspiel setzte Naturorganismen und die Schaffung zeit- und raumbezogener Vorstellungsbilder voraus; es war also ein individueller Prozeß. Aber für die Unsterblichkeit denkender Wesen folgte daraus, daß sie ewig waren, soweit sie in reinem Denken die individuelle Naturbasis hinter sich ließen. Sie traten in dem Maße, als sie das Beschränkte und Individuelle abstreiften, ein in das ewige Licht, von dem sie in gebrochener und individualisierter Form zehrten, solange sie das Ewige im farbigen Abglanz sinnlicher Bilder schauten. Individualität galt als Schranke, die ein denkendes Wesen zurückläßt, sofern es denkt. Hatte nicht Aristoteles selbst gesagt, allein der tätige Intellekt sei "unsterblich"? Der "mögliche Intellekt war bei näherer Betrachtung nichts anders als die Rezeptivität des Intellekts, der in die sinnliche Organisation eines erkennenden Menschen eintrat. Dann war der Tod zwar nicht das Ende des Denkens, wohl aber des Menschen. Die individuelle Unsterblichkeit war aber ein Hauptdogma in Islam und Christentum; jenseitige Belohnungen und Bestrafungen verloren ihren Sinn, wenn die individuelle Person sich im allgemeinen Menschengeist auflöste. Daher die Gefährlichkeit des Averroismus für religiöse Zivilisationen, in denen die Schrecken des Jenseits vom Klerus sowohl erzeugt wie administrativ, finanziell und politisch "geregelt" wurden." (emphasis added)

See Hasse, Dag Nikolaus: Avicenna's 'Giver of Forms' in Latin Philosophy . Especially in the Works of Albertus Magnus. In Bertolacci, Amos; Hasse, Dag Nikolaus. The Arabic, Hebrew and Latin Reception of Avicenna's Metaphysics. In: Scientia Graeco-Arabica. Berlin : De Gruyter 2011 and the second part of this paper.

Martin Heidegger: Dasein und Wahrsein (nach Aristoteles) (1923/24). In: ibid.: III. Abteilung: Unveröffentlichte Abhandlungen. Vorträge und Gedachtes. Band 80.1 Vorträge, Teil 1: 1915-1932. Frankfurt am Main: Klostermann, 2016, p.

78.

"Zum Wisssen gehört die Lehr- und Lernbarkeit. Der Lernende bracuht nicht selbst wieder alles erst neu aufzufinden, sondern es kann ihm aufgezeigt werden (*apodeixis*) im Beweis. Der Beweis hängt in letzten Sätzen, Axiomen, Prinzipien, von denen das Wissen Gebrauch macht, die es aber nicht selbst thematisch erfaßt und gar aufdeckt. Das Lernbare im ausgezeichneten Sinne ist das Mathematische. Daher der Name *máthema*, das Gelernte. Aristoteles sah schon ganz klar, was die Heutigen immer nocht nicht verstehen, daß man Axiomatik nicht selbst wieder mathematisch behandeln kann. Damit ist schon deutlich geworden, daß man auch Wissenschaft nicht eigentliches Aufdecken sein kann. Sie macht Voraussetzungen; was in diesen Setzungen präsent wird, ist nicht Thema ihres Beweisens.
Wenn aber die ersten und äußersten Ausgänge aufgedeckt werden sollen, dann bedarf es dazu eines ausgezeichneten Aufweisens. Das nächste ist das in der *Rede*, im Durchsprechen von etwas *als etwas*. Das Erste und Äußerste aber kann nicht mehr als etwas anderes angesprochen werden. Darin liegt: Das Aufdecken der Prinzipien muß ohne Rede (*áneu lógou*) sein. Ein Auseinandernehmen (*diaíresis*) im Besprechen ist hier nicht mehr möglich, die Ausgänge sind **un-auseinandernehmbar** (*adiaíreta*). Hier gibt es nur noch schlichtes Sich vor die Sache selbst bringen, ein direktes Hinführen zu ihr (*epagogé*) (nicht Induktion), kein *dia-noein*, kein durchsprechendes Vernehmen, sondern reines *noein*, Vernehmen." (emphasis added)

[182] Albertus Magnus, Bd. XII: Liber de natura et origine animae, Tract. 1, cap. 4, S. 11:

"Esse enim spirituale, quod subito fit in medio materiae et in extremo, et esse ubique in materia subito et non infici vel informari numquam convenit materiae ex aliqua forma quae est in materia." Vgl. ibid. Bd. VII: Libri de anima, Lib. 3, Tract. 2, S. 178-179: "... (intellectus possibilis) <u>necesse est,quod sit immixtus</u>, hoc est non mixtus cum corpore sicut forma corporis aut sicut forma, quae est virtus in corpore... Si <u>enim</u> esset aliqua forma informatus ad hoc quod esset hoc aliquid, tunc hoc ipsum <u>prohiberet</u>, ne <u>appareret</u> ei in cognoscendo <u>alienum et</u> contrarium ab illa forma et impediret cognitionem omnis rei, quae <u>obicitur ei</u>..."

Aristotle, De anima 429a18-28

Περὶ δὲ τοῦ μορίου τοῦ τῆς ψυχῆς ᾧ γινώσκει τε ἡ ψυχὴ καὶ φρονεῖ, εἴτε χωριστοῦ ὄντος εἴτε μὴ χωριστοῦ κατὰ μέγεθος ἀλλὰ κατὰ λόγον, σκεπτέον τίν' ἔχει διαφοράν, καὶ πῶς ποτὲ γίνεται τὸ νοεῖν.

εἰ δή ἐστι τὸ νοεῖν ὥσπερ τὸ αἰσθάνεσθαι, ἢ πάσχειν τι ἂν εἴη ὑπὸ τοῦ νοητοῦ ἤ τι τοιοῦτον

ἕτερον.

ἀπαθὲς ἄρα δεῖ εἶναι, δεκτικὸν δὲ τοῦ εἴδους καὶ δυνάμει τοιοῦτον ἀλλὰ μὴ τοῦτο, καὶ ὁμοίως ἔχειν, ὥσπερ τὸ αἰσθητικὸν πρὸς τὰ αἰσθητά, οὕτω τὸν νοῦν πρὸς τὰ νοητά. ἀνάγκη ἄρα, ἐπεὶ πάντα νοεῖ, **ἀμιγῆ εἶναι**, ὥσπερ φησὶν Ἀναξαγόρας, ἵνα κρατῇ, τοῦτο δ' ἐστὶν ἵνα γνωρίζῃ (παρεμφαινόμενον γὰρ κωλύει τὸ ἀλλότριον καὶ ἀντιφράττει)· ὥστε μηδ' αὐτοῦ εἶναι φύσιν μηδεμίαν ἀλλ' ἢ ταύτην, ὅτι δυνατός. ὁ ἄρα καλούμενος τῆς ψυχῆς νοῦς (λέγω δὲ νοῦν ᾧ διανοεῖται καὶ ὑπολαμβάνει ἡ ψυχή) οὐθέν ἐστιν ἐνεργείᾳ τῶν ὄντων πρὶν νοεῖν· διὸ **οὐδὲ μεμῖχθαι** εὔλογον αὐτὸν τῷ σώματι· ποιός τις γὰρ ἂν γίγνοιτο, ἢ ψυχρὸς ἢ θερμός, κἂν ὄργανόν τι εἴη, ὥσπερ τῷ αἰσθητικῷ· νῦν δ' οὐθὲν ἔστιν. καὶ εὖ δὴ οἱ λέγοντες **τὴν ψυχὴν εἶναι τόπον εἰδῶν**, πλὴν ὅτι οὔτε ὅλη ἀλλ' ἡ νοητική, οὔτε ἐντελεχείᾳ ἀλλὰ δυνάμει τὰ εἴδη. (emphasis added)

https://ebooks.adelaide.edu.au/a/aristotle/a8so/book3.html

> "Turning now to the part of the soul with which the soul knows and thinks (whether this is separable from the others in definition only, or spatially as well) we have to inquire (1) what differentiates this part, and (2) how thinking can take place.
>
> If thinking is like perceiving, it must be either a process in which the soul is acted upon by what is capable of being thought, or a process different from but analogous to that. The thinking part of the soul must therefore be, while impassible, capable of receiving the form of an object; that is, must be potentially identical in character with its object without being the object. Mind must be related to what is thinkable, as sense is to what is sensible. Therefore, since everything is a possible object of thought, mind in order, as Anaxagoras says, to dominate, that is, to know, must be pure from all admixture; for the co-presence of what is alien to its nature is a hindrance and a block: it follows that it too, like the sensitive part, can have no nature of its own, other than that of having a certain capacity. Thus that in the soul which is called mind (by mind I mean that whereby the soul thinks and judges) is, before it thinks, not actually any real thing. For this reason it cannot reasonably be regarded as blended with the body: if so, it would acquire some quality, e.g. warmth or cold, or even have an organ like the sensitive faculty: as it is, it has none. It was a good idea to call the soul 'the place of forms', though (1) this description holds only of the intellective soul, and (2) even this is the forms only potentially, not actually." (Transl. J. A. Smith)

[183] ibid. Bd. II, Tract. 1, cap. 5, S. 85: "... et est intellectus purus et primus movens et informans omnia sub ipso instrumentaliter agentia, contigit eam formam esse animam rationalem..." Vgl. ibid. cap. 8, S. 35: "Divinam (operationem) quidem in formas faciendo tam intelligibiles, de quibus diximus, quam naturales, quibus ipsa informat omnis vires sensus et vegetationis, ut ad speciem intellectualem agant." Vgl. ibid. cap.

6, S. 15: "Anima enim vegetalis, eo quod magis vicina est materiae, totum quidem informat et partem, in quae ipsa est ultima perfectio."

[184] ibid. Bd. VII, Lib. 2, Tract. 3, cap. 4, S. 102: "Adhuc autem notandum est, quod differunt forma rei et intentio rei; forma enim proprie est, quae informando dat esse actu materiae et compositio ex materia et forma."

[185] ibid. Bd. XII: Quaestiones de animalibus, Lib. IV, Q. 8, S. 143: "Dicendum, quod vox dupliciter potest informari, quia in formatione eius est virtus vocativa, quae potest informari virtute imaginativa vel aestimativa, sicut accidit in animalibus astutis, aut ratione, ut in homine, et hoc propter aliquid exprimendum; et hoc vox sic formata significativa est, quia talis vox signum est interioris conceptus."

Aristotle, De anima 420b30 - 421a6.

http://www.mikrosapoplous.gr/aristotle/psyxhs/2_08.html

οὐ γὰρ πᾶς ζῴου ψόφος φωνή, καθάπερ εἴπομεν-ἔστι γὰρ καὶ τῇ γλώττῃ ψοφεῖν καὶ ὡς οἱ βήττοντες-ἀλλὰ δεῖ **ἔμψυχόν τε εἶναι τὸ τύπτον** καὶ μετὰ φαντασίας τινός· σημαντικὸς γὰρ δή τις ψόφος ἐστὶν ἡ φωνή)· καὶ οὐ τοῦ ἀναπνεομένου ἀέρος ὥσπερ ἡ βήξ, ἀλλὰ τούτῳ τύπτει τὸν ἐν τῇ ἀρτηρίᾳ πρὸς αὐτήν σημεῖον δὲ τὸ μὴ δύνασθαι φωνεῖν ἀναπνέοντα μηδ' ἐκπνέοντα, ἀλλὰ κατέχοντα· κινεῖ γὰρ τούτῳ ὁ κατέχων. φανερὸν δὲ καὶ διότι οἱ ἰχθύες ἄφωνοι· οὐ γὰρ ἔχουσι φάρυγγα. τοῦτο δὲ τὸ μόριον οὐκ ἔχουσιν ὅτι οὐ δέχονται τὸν ἀέρα οὐδ' ἀναπνέουσιν. δι' ἣν μὲν οὖν αἰτίαν, ἕτερός ἐστι λόγος. (emphasis added)

https://ebooks.adelaide.edu.au/a/aristotle/a8so/book2.html

"Not every sound, as we said, made by an animal is voice (even with the tongue we may merely make a sound which is not voice, or without the tongue as in coughing); what produces the impact must have soul in it and must be accompanied by an act of imagination, for voice is a sound with a meaning, and is not merely the result of any impact of the breath as in coughing; in voice the breath in the windpipe is used as an instrument to knock with against the walls of the windpipe. This is confirmed by our inability to speak when we are breathing either out or in-we can only do so by holding our breath; we make the movements with the breath so checked. It is clear also why fish are voiceless; they have no windpipe. And they have no windpipe because they do not breathe or take in air. Why they do not is a question belonging to another inquiry." (Transl. J. A. Smith)

II. RESEARCH QUESTIONS

1. What is the origin and interpretation of the concepts *taṣawwur* and *taṣdīq* in the Middle Ages?

2. What happened regarding the interpretation of these concepts after the Middle Ages?

3. How would a discourse on message theory ('angeletics') look like in an Iranian context?

4. How would a discourse on Information Ethics look like in an Iranian context look like?

1. What is the origin and interpretation of the concepts *taṣawwur* and *taṣdīq* in the Middle Ages?

Alain de Libera writes:

"La formation des choses indivisibles", la νόησις τῶν ἀδιαιρέτων, qui correspond à l'arabe *taṣawwur*, ne rend pas directement cette dimension intellective (marquée, en revanche, dans le syntagme verbal *formare per intellectum* = νοεῖν) et il ne traduit aucunement le sens de "représentation", qui est celui de l'original arabe. La notion de "foi", *fides*, évoque, elle aussi assez mal celle de l' "assentiment", *taṣdīq*. Le couple de notions est fondamental chez Averroès." (Libera 1998, p. 301).

What are the differences in this regard between Averroes and Persian thinkers [better: Islamic thinkers. See Conclusion] such as Al-Kindi, Al-Farabi, Avicenna, al-Ghazali and Ibn Arabi as well as between them and Latin thinkers such as Albertus Magnus and Thomas Aquinas?

See the Glossarium Graeco-Arabicum a lexicon of the mediæval Arabic translations from the Greek.

See also this research project: Greek into Arabic. Philosophical Concepts and Liguistic Bridges as well as the journal of the

project: Studia Graeco-Arabica(2014).

Muḥammad ibn Mūsā al-Khwārizmī

ca. 780 (in Khiva - 850)

Source https://en.wikipedia.org/wiki/Muhammad_ibn_Musa_al-Khwarizmi#Algebra

I quote from
https://en.wikipedia.org/wiki/Muhammad_ibn_Musa_al-Khwarizmi#Algebra

"Muḥammad ibn Mūsā al-Khwārizmī (Persian: محمد بن موسى خوارزمی, c. 850 – c. 780; Arabic: محمد بن موسى الخوارزمی, formerly Latinized as Algoritmi, was a Persian (modern Khiva, Uzbekistan) mathematician, astronomer, and geographer during the Abbasid Caliphate, a scholar in the House of Wisdom in Baghdad.

[...]

The Compendious Book on Calculation by Completion and Balancing (Arabic: الكتاب المختصر في حساب الجبر والمقابلة *al-Kitāb al-mukhtaṣar fī ḥisāb al-jabr wal-muqābala*) is a mathematical book written approximately 830 CE. The book was written with the encouragement of Caliph al-Ma'mun as a popular work on calculation and is replete with examples and applications to a

wide range of problems in trade, surveying and legal inheritance. The term "algebra" is derived from the name of one of the basic operations with equations (*al-jabr*, meaning "restoration", referring to adding a number to both sides of the equation to consolidate or cancel terms) described in this book. The book was translated in Latin as *Liber algebrae et almucabala* by Robert of Chester (Segovia, 1145) hence "algebra", and also by Gerard of Cremona. A unique Arabic copy is kept at Oxfordand was translated in 1831 by F. Rosen. A Latin translation is kept in Cambridge.

It provided an exhaustive account of solving polynomial equations up to the second degree, and discussed the fundamental methods of "reduction" and "balancing", referring to the transposition of terms to the other side of an equation, that is, the cancellation of like terms on opposite sides of the equation.

Al-Khwārizmī's method of solving linear and quadratic equations worked by first reducing the equation to one of six standard forms (where b and c are positive integers)

squares equal roots ($ax^2 = bx$)

squares equal number ($ax^2 = c$)

roots equal number ($bx = c$)

squares and roots equal number ($ax^2 + bx = c$)

squares and number equal roots ($ax^2 + c = bx$)

roots and number equal squares ($bx + c = ax^2$)

by dividing out the coefficient of the square and using the two operations

al-jabr (Arabic: الجبر "restoring" or "completion")

and

al-muqābala ("balancing").

Al-jabr is the process of removing negative units, roots and squares from the equation by adding the same quantity to each side. For example, $x^2 = 40x - 4x^2$ is reduced to $5x^2 = 40x$. *Al-muqābala* is the process of bringing quantities of the same type to the same side of the equation. For example, $x^2 + 14 = x + 5$ is reduced to $x^2 + 9 = x$."

I asked Mahmood Khosrowjerdi (See below) the following question:

> I write you as ask you if you see any connection between the thinking of Muhammad ibn Musa al Khwarizmi and our discussions dealing with *tasawwur* and *tasdiq* particularly with the concepts of *al-jabr* and *al-muqabala* referring to adding a number to both sides of the equation to consolidate or cancel terms and the methods of reduction and balacing between the terms of an equation (***al-Kitab al-mukhtasar fi hisab al-jabr wal-muqabala***)

His answer:

> If we understand information as a mathematical or numerical concept as, for example, in Shannon's *The Mathematical Theory of Communication*, where information is understood as a measure of one's freedom of choice when one selects a message, then we can accord this concept to *al-jgabr* and *al-muqabala* of Al-Khwārizmī, because in Al-Khwārizmī's method of solving linear and quadratic equations, *al-jabr* is the process of removing negative units, roots and squares from the equation by adding the same quantity to each side, that is very similar to the perspective of Shannon and Weaver."(personal communication May 2, 2017)

My reply:

> Al-Kwarizmi is interested in **restoring** an equation, similarly to Shannon who is interested in **preserving** the integrity of the message from a sender to a receiver. He admits that there is some insecurity (its measure being called 'information' in opposition to the usual meaning of this term in everyday language: the higher rate of 'insecurity' corresponds to more 'information') in the trasmission particularly when the code used to transmit a message is not fixed and limited and you have to deal with fuziness and probabilty. Norbert Wiener's cybernetics tied back the receiver to the sender. This is a dynamic restauration whose structure fits into what was called since the Middle Ages an *algorithm*.

I quote from https://en.wikipedia.org/wiki/Algorithm

> "Etymologically, the word 'algorithm' is a combination of the Latin word *algorismus*, named after Al-Khwarizmi, a 9th-century Persian mathematician, and the Greek word *arithmos*, i.e. αριθμός, meaning

"number".In English, it was first used in about 1230 and then by Chaucer in 1391.English adopted the French term, but it wasn't until the late 19th century that "algorithm" took on the meaning that it has in modern English."

Abu Yūsuf Ya'qūb ibn 'Isḥāq aṣ-Ṣabbāḥ al-Kindī

أبو يوسف يعقوب بن إسحاق الصبّاح الكندي

 ca. 800 in Kufa – 873 in Bagdad

Source: http://en.wikipedia.org/wiki/Al-Kindi

I quote from

http://en.wikipedia.org/wiki/Al-Kindi

"Al-Kindi [...] known as "the Philosopher of the Arabs", was an Iraqi Muslim Arab philosopher, mathematician, physician, and musician. Al-Kindi was the first of the Muslim peripatetic philosophers, and is unanimously hailed as the "father of Islamic or Arabic philosopohy" for his synthesis, adaptation and promotion of Greek and Hellenistic philosophy in the Muslim world. [...]
His greatest contribution to the development of Islamic philosophy was his efforts to make Greek thought both accessible and acceptable to a Muslim audience. Al-Kindi carried out this mission from the House of Wisdom (Bayt al-Hikma), an institute of translation and learning patronized by the Abbasid Caliphs, in Baghdad. As well as translating many important texts, much of what was to become standard Arabic philosophical vocabulary originated with al-Kindi; indeed, if it had not been for him, the work of philosophers like Al-Farabi, Avicenna, and al-Ghazali might not have been possible.

[...]
Al-Kindi theorized that there was a separate, incorporeal and universal intellect (known as the "First Intellect"). It was the first of God's creation and the intermediary through which all other things came into creation. Aside from its obvious metaphysical importance, it was also crucial to al-Kindi's epistemology , which was influenced by Platonic realism.

According to Plato, everything that exists in the material world corresponds to certain universal forms in the heavenly realm. These forms are really abstract concepts such as a species, quality or relation, which apply to all physical objects and beings. For example, a red apple has the quality of "redness" derived from the appropriate universal. However, al-Kindi says that human intellects are only potentially able to comprehend these. This potential is actualized by the First Intellect, which is perpetually thinking about all of the universals. He argues that the external agency of this intellect is necessary by saying that human beings cannot arrive at a universal concept merely through perception. In other words, an intellect cannot understand the species of a thing simply by examining one or more of its instances. According to him, this will only yield an inferior "sensible form", and not the universal form which we desire. The universal form can only be attained through contemplation and actualization by the First Intellect.

The analogy he provides to explain his theory is that of wood and fire. Wood, he argues, is potentially hot (just as a human is potentially thinking about a universal), and therefore requires something else which is already hot (such as fire) to actualize this. This means that for the human intellect to think about something, the First Intellect must already be thinking about it. Therefore he says that the First Intellect must always be thinking about everything. Once the human intellect comprehends a universal by this process, it becomes part of the individual's "acquired intellect" and can be thought about whenever he or she wishes."

I quote from F. Volpi: *Fi 'l-'aql* (arab.; lat. *De intellectu*; *Über den Intellekt*), Abu Yūsuf Yaʿqūb ibn ʾIsḥāq aṣ-Ṣabbāḥ al-Kindī; ED Münster 1897 (hg. von A. Nagy, in: Die philosoph. Abhandlungen des al-Kindī)

In: Franco Volpi and Julian Nida-Rümelin (eds.): Lexikon der philosophischen Werke. Stuttgart 1988, pp. 278-79:

"Die kurze Schrift (sermo brevis) des ersten Aristoteles-Übersetzers und Aristotelikers bei den Arabern enthält die früheste arabische Darstellung der Lehre vom Intellekt, die

man dann später bei al-Fārābī findet und die mit Averroes ihre endgültige Formulierung erhält.- Al-Kindī nimmt eine durch seine Nachfolger (mit einigen Varianten) klassisch gewordene Vierteilung de Intellekts vor: der aktuelle Intellekt (ʹaql bilfʹil, nus en energeia), der potentielle Intellekt ('aql billquwwah, nus *en* dynamei), der erworbene Intellekt ('aql mustād, nus epiktētos) , der schaffende Intellekt ('aql fʺāl, nus poiētikos). Er schreibt diese Vierteilung — wie später al-Fārābī auch — Aristoteles zu. Bei der Vierteilung wurde er vermutlich durch die damals verbreitete unechte Schrift *Theologia Aristotelis* und vor allem durch [Alexanders von Aphrodisias](#) Traktat *De Intellectu* und dessen Kommentar zu Aristoteles' *De anima*) (→*Peri psychēs*) inspiriert; freilich findet man bei Aristoteles nur den Begriff des 'nus poiētikos' und bei Alexander nur den Begriff 'nus epiktētos'. - Die kleine Schrift wirkte auf al-Fārābī und auf die arabische aristotel.-neuplaton. Philosophie und wurde im 12.Jh. durch einen nicht identifizierten Übersetzer zusammen mit den gleichnamigen Traktaten Alexanders von Aphrodisias und al-Fārābī ins Latein. übertragen.; im gleichen Jh. wurde sie auch von [Gerhard von Cremona](#) übersetzt, der den Grundbegriff 'aql (nus, Intellekt) mit ratio wiedergibt."

Abū Naṣr Muḥammad ibn Muḥammad Fārābī

ابونصر محمد بن محمد فارابی
c. 872 in Fārāb – between 14 December, 950 and 12 January, 951 in Damascus

Source: http://en.wikipedia.org/wiki/Al-Farabi#cite_note-Black.2C_p186-58

I quote from

"Human beings are unique in al-Farabi's vision of the universe because they stand between two worlds: the "higher", immaterial world of the celestial intellects and universal intelligibles, and the "lower", material world of generation and decay; they inhabit a physical body, and so belong to the "lower" world, but they also have a rational capacity, which connects them to the "higher" realm. Each level of existence in al-Farabi's cosmology is characterized by its movement towards perfection, which is to become like the First Cause; a perfect intellect. Human perfection (or "happiness"), then, is equated with constant intellection and contemplation.[54]

Al-Farabi divides intellect into four categories: potential, actual, acquired and the Agent. The first three are the different states of the human intellect and the fourth is the Tenth Intellect (the moon) in his emanational cosmology. The potential intellect represents the capacity to think, which is shared by all human beings, and the actual intellect is an intellect engaged in the act of thinking. By thinking, al-Farabi means abstracting universal intelligibles from the sensory forms of objects which have been apprehended and retained in the individual's imagination.[55]

This motion from potentiality to actuality requires the Agent Intellect to act upon the retained sensory forms; just as the Sun illuminates the physical world to allow us to see, the Agent Intellect illuminates the world of intelligibles to allow us to think.[56] This illumination removes all accident (such as time, place, quality) and physicality from them, converting them into primary intelligibles, which are logical principles such as "the whole is greater than the part". The human intellect, by its act of intellection, passes from potentiality to actuality, and as it gradually comprehends these intelligibles, it is identified with them (as according to Aristotle, by knowing something, the intellect becomes like it).[57] Because the Agent Intellect knows all of the intelligibles, this means that when the human intellect knows all of them, it becomes associated with the Agent Intellect's perfection and is known as the acquired Intellect.[58]

While this process seems mechanical, leaving little room for human choice or volition, Reisman says that al-Farabi is

committed to human voluntarism.[57] This takes place when man, based on the knowledge he has acquired, decides whether to direct himself towards virtuous or unvirtuous activities, and thereby decides whether or not to seek true happiness. And it is by choosing what is ethical and contemplating about what constitutes the nature of ethics, that the actual intellect can become "like" the active intellect, thereby attaining perfection. It is only by this process that a human soul may survive death, and live on in the afterlife.[56][59]

According to al-Farabi, the afterlife is not the personal experience commonly conceived of by religious traditions such as Islam and Christianity. Any individual or distinguishing features of the soul are annihilated after the death of the body; only the rational faculty survives (and then, only if it has attained perfection), which becomes one with all other rational souls within the agent intellect and enters a realm of pure intelligence.[58] Henry Corbin compares this eschatology with that of the Ismaili Neo-Platonists, for whom this process initiated the next grand cycle of the universe.[60] However, Deborah Black mentions we have cause to be skeptical as to whether this was the mature and developed view of al-Farabi, as later thinkers such as Ibn Tufayl, Averroes and Ibn Bajjah would assert that he repudiated this view in his commentary on the Nicomachean Ethics, which has been lost to modern experts.[58]

References 54, 55, 56, 57: Reisman, D. Al-Farabi and the Philosophical Curriculum In Adamson, P & Taylor, R. (2005). The Cambridge Companion to Arabic Philosophy. Cambridge: Cambridge University Press. Reference 58: Black, D. Al-Farabi in Leaman, O & Nasr, H (2001). History of Islamic Philosophy. London: Routledge. p178. References 59, 60: Corbin, H. (1993). History of Islamic Philosophy. London: Keagan Paul International."

I quote from Franco Volpi: *Fi 'l-'aql wal-ma'qūl* (arab.; lat. *De intellectu et intellecto*; *Über den Intellekt und das Intelligible*), Abū Naṣr Muḥammad ibn Muḥammad ibn Tarkān ibn Awzalugh (bzw. Uzlag) al-Fārābī . 10.Jh.; ED Venedig 1500 (lat.) Leiden 1890 (arab.; hg. von Fr. Dieterici); dt. 1892 Über die Bedeutungen des Worts 'Intellect'. In: Franco Volpi and Julian Nida-Rümelin (eds.): Lexikon der philosophischen Werke. Stuttgart 1988, pp. 279-80:

"Die von den gleichnamigen Traktaten Alexanders von Aphrodisias und al-Kindīs beeinflußte Schrift des 'Magister secundus', d.h. des zweiten Aristoteles, enthält eine philolog.-philosoph. Abhandlung über die verschidenen Bedeutungen des Begriffs Intellekts (nus) bei Aristoteles. -

Al-Fārābī unterscheidet sechs Bedeutungen von 'Intellekt':
1. die gewöhnliche Bedeutung, in der das Wort soviel wie
Klugheit heißt; 2. die Bedeutung, deren sich die 'Dialektiker'
in den Auseinandersetzungen bedienen, um etwas als
vernünftig oder als vernunftwidrig zu bezeichnen; 3. die in
den →*Analytika hystera* vorkommende Bedeutung; 4. die
Bedeutung im VI Buch der →*Ethica Nikomacheia*; 5. die im
Buch →*Peri psychēs* vorkommende Bedeutung; 6. die
Bedeutung, mit der das Wort in →*Ta meta ta
physika* verwendet wird. Philosophiegeschichtlich relevant
wurde vor allem die Vierteilung, die Al-Fārābī bei der
Erörterung der 5. Bedeutung im Anschluß an Alexander von
Aphrodisias und al-Kindī vornimmt und die er
fälschlicherweise Aristoteles (*Peri psychēs* III, 4-8)
zuschreibt: der potentielle Intellekt ('aql bilquw-wah, nus en
dynamei), der aktuelle Intellekt ('aql bilf'il, nus en energeia),
der erworbene Intellekt ('aql mustafād, nus epiktētos) und
der tätige Intellekt ('aql fa''al, nus poiētikos). Der potentielle
Intellekt ist ein Vermögen der Seele, beim Seienden die
Form vom Stoff zu abstrahieren. Wenn diese Abstraktion
vollzogen wird und so die Formen dem potentiellen Intellekt
zukommen, wird dieser zum aktuellen; dementsprechend
werden die abstrahierten Formen selbst, das Intelligible,
zum aktuell Intelligiblen. Wenn der Intellekt das Intelligible
als solches denkt, so wird er zum erworbenen Intellekt. Der
tätige Intellekt ist derjenige, der den potentiellen Intellekt
zum aktuellen und das potentiell Intelligible zum aktuell
Intelligiblen macht; er wird Formgeber (*wāhib aṣ-
ṣuwar*, *dator formarum*) genannt, weil er Formen ausstraht
und sie dem Stoff aufprägt; er bringt den potentiellen
Intellekt in der Seele zur Erkenntnis dieser Formen. Gemäß
der neuplaton. Forderung, die Quelle des Intelligiblen in
ihrer Transzendenz gegenüber dem es aufnehmenden
menschlichen Rezeptor zu wahren, wird der tätige Intellekt
als getrennt und selbständig für sich bestehend konzipiert.
Da er selbst nie mit dem Stoff affiziert ist, kann er aber auch
nicht das letzte Prinzip aller Wirklichkeit sein. Dieses ist der
sog. erste Intellekt, auch das erste Seiende, das erste Eine
oder das erste Wahre genannt, das Ursprung und Anfang
aller Dinge ist. Die Lehre vom Intellekt und dessen
Vierteilung, die im Rahmen einer neuplaton.
Emanationsmetaphysik entwickelt wird, hatte enormen
Einfluß auf die nachfolgende arabische Philosophie
(Avicenna, Averroes) sowie auf die Scholastik, in der das
Problem des Intellekts fundamental war und vielfach (u.a.
von Dominicus Gundissalinus, Alexander von Hales,
Albertus Magnus, Thomas von Aquin, Siger von Brabant,
Robert Grosseteste) erörtert wurde; mittelbar wirkte sie auch
auf die Auneindersetzungen um die Seele und deren
Unsterblichkeit, die vor allem in der Renaissance zwischen
Alexandrinisten (P. Pomponazzi), Averroisten (A. Achillini)

und Thomisten (F. Silvestri, F. Suarez, Tomaso de Vio) ausgetragen wurden." (emphasis added)

See Hasse, Dag Nikolaus: Avicenna's 'Giver of Forms' in Latin Philosophy . Especially in the Works of Albertus Magnus. In Bertolacci, Amos; Hasse, Dag Nikolaus. The Arabic, Hebrew and Latin Reception of Avicenna's Metaphysics. In: Scientia Graeco-Arabica. Berlin : De Gruyter. 2011.

Abū Alī al-Husain ibn Abdullāh ibn Sīnā

ابن سينا

ca. 980 Afschāna - 1037 Hamadan

Source: http://de.wikipedia.org/wiki/Avicenna

I quote from http://en.wikipedia.org/wiki/Avicenna

"Ibn Sīnā wrote extensively on early Islamic philosophy, especially the subjects logic, ethics, and metaphysics, including treatises named *Logic* and *Metaphysics*. Most of his works were written in Arabic - which was the scientific language of the time in the Middle East, and some were written in the Persian language. Of linguistic significance even to this day are a few books that he wrote in nearly pure Persian language (particularly the Danishnamah-yi 'Ala', Philosophy for Ala' ad-Dawla'). Ibn Sīnā's commentaries on Aristotle often criticized the philosopher, encouraging a lively debate in the spirit of ijtihad.

In the medieval Islamic world, due to Avicenna's successful reconciliation between Aristotelianism and Neoplatonism along with Kalam, Avicennism eventually became the leading school of Islamic philosophy by the 12th century, with Avicenna becoming a central authority on philosophy.

Avicennism was also influential in medieval Europe, particular his doctrines on the nature of the soul and his existence-essence distinction, along with the debates and censure that they raised in scholastic Europe. This was particularly the case in Paris, where Avicennism was later proscribed in 1210. Nevertheless, his psychology and theory of knowledge influenced William of Auvergne, Bishop of Paris and Albertus Magnus, while his metaphysics had an impact on the thought of Thomas Aquinas. [...]

While he was imprisoned in the castle of Fardajan near Hamadhan, Avicenna wrote his famous "Floating Man" — literally falling man —thought experiment to demonstrate human self-awareness and the substantiality and immateriality of the soul. Avicenna believed his "Floating Man" thought experiment demonstrated that the soul is a substance, and claimed humans cannot doubt their own consciousness, even in a situation that prevents all sensory data input. The thought experiment told its readers to imagine themselves created all at once while suspended in the air, isolated from all sensatiolns, which includes no sensory contact with even their own bodies. He argued that, in this scenario, one would still have self-consciousness. Because it is conceivable that a person, suspended in air while cut off from sense of experience, would still be capable of determining his own existence, the thought experiment points to the conclusions that the soul is a perfection, independent of the body, and an immaterial substance. The conceivability of this "Floating Man" indicates that the soul is perceived intellectually, which entails the soul's separateness from the body. Avicenna referred to the living human intelligence, particularly the active intellect, which he believed to be the hypostasis by which God communicates truth to the human mind and imparts order and intelligibility to nature. Following is an English translation of the argument:

One of us has to consider (*yatawaham*) that one has been just created in a stroke, and that one has been thus created fully developed and perfectly complete

(*kāmilan*), yet [created] with one's vision shrouded [or veiled] (*hujiba baṣarahu*) from watching [perceiving] (*mushāhadāt*) external entities created falling [floating] (*yahwa*) in the air on in empty space (*al-khalāʾ*) in a fall not buffeted by any felt air that buffets it [i.e. the Person in question]; its limbs separated and not in contact nor touching on another. Then let it contemplate (*yataʾamal*) whether it would affirm the existence of its own self. It would not then doubt the affirmation that its self is existent (*mawjūda*), yet not affirming the existence of any other limbs nor inner bowels, nor heart, nor brain, nor anything of the external things. Rather it was affirming the existence of its-self without affirming that it had length, breadth, or depth. And if it were possible for it, in such a state, to imagine (*yatakhayal*) a hand or any other limb, it would not then imagine it to be part of its-self nor to be condition of it [i.e. its-self existence]. And you know that what is affirmed is distinct from what is not affirmed, and what is implied is distinct from what is not implied. Therefore the *nafs* [self, soul], whose existence the person has affirmed, is its [the person's] characteristic identity that is not identical to its body nor its limbs [whose existence] it did not affirm. Therefore, the attentive *(al-mutanabih)* [to this situation] has a means of realizing (*yatanabah*) that the affirmation of the existence of its-self (soul, *al-nafs*) is distinct from the body and something that is quite non-body [i.e. that the mind/soul (*al-nafs*) is distinct from the body (*jism*)]; this is known though self-consciousness and if one was distracted from it, one needs to knock one's baton [as to be alerted to it].— Ibn Sina, Kitab Al-Shifa, On the Soul

The original Arabic text reads as follows:

يجب أن يتوهم الواحد منا كأنه خلق دفعةً وخلق كاملاً لكنه حجب بصره عن مشاهدة الخارجات وخلق يهوى في هواء أو خلاء هوياً لا يصدمه فيه قوام الهواء صدماً ما يحوج إلى أن يحس وفرق بين أعضائه فلم تتلاق ولم تتماس ثم يتأمل هل أنه يثبت وجود ذاته ولا يشكك في إثباته لذاته موجوداً ولا يثبت مع ذلك طرفاً من أعضائه ولا باطناً من أحشائه ولا قلباً ولا دماغاً ولا شيئاً من الأشياء من خارج بل كان يثبت ذاته ولا يثبت لها طولاً ولا عرضاً ولا عمقاً ولو أنه أمكنه في تلك الحالة أن يتخيل يداً أو عضواً آخر لم يتخيله جزء من ذاته ولا شرطاً في ذاته وأنت تعلم أن المثبت غير الذي لم يثبت والمقربه غير الذي لم يقربه فإذن للذات التي أثبت وجودها خاصية على أنها هو بعينه غير جسمه وأعضائه التي لم تثبت فإذن المثبت له سبيل إلى أن يثبته على وجود النفس شيئاً غير الجسم بل غير جسم وأنه عارف به مستشعر له وإن كان ذاهلاً عنه يحتاج إلى أن يقرع عصاه.

— Ibn Sina, Kitab Al-Shifa, On the Soul

However, Avicenna posited the brain as the place where reason interacts with sensation. Sensation prepares the soul to receive rational concepts from the universal Agent Intellect. The first knowledge of the flying person would be "I am," affirming his or her essence. That essence could not be the body, obviously, as the flying person has no sensation. Thus, the knowledge that "I am" is the core of a human being: the soul exists and is self-aware. Avicenna thus concluded that the idea of the self is not logically dependent on any physical thing, and that the soul should not be seen in relative terms , but as a primary given, a substance. The body is unnecessary; in relation to it, the soul is its perfection. In itself, the soul is an immaterial substance.

[...]

Almost half of Ibn Sīnā's works are versified. His poems appear in both Arabic and Persian. As an example, Edward Granville Browne claims that the following Persian verses are incorrectly attributed to Omar Khayyám, and were originally written by Ibn Sīnā:

از قعر گل سیاه تا اوج زحل
کردم همه مشکلات گیتی را حل
بیرون جستم زقید هر مکر و حیل
هر بند گشاده شد مگر بند اجل

Up from Earth's Centre through the Seventh Gate,
I rose, and on the Throne of Saturn sate,
And many Knots unravel'd by the Road,
But not the Master-Knot of Human Fate."

I quote from Sajjab H. Rizvi: Avicenna (Ibn Sina) (c. 980—1037). In [Internet Encyclopedia of Philosophy](#)

> "Abu 'Ali al-Husayn ibn Sina is better known in Europe by the Latinized name "Avicenna." He is probably the most significant philosopher in the Islamic tradition and arguably the most influential philosopher of the pre-modern era. Born in Afshana near Bukhara in Central Asia in about 980, he is best known as a polymath, as a physician whose major work the Canon (*al-Qanun fi'l-Tibb*) continued to be taught as a medical textbook in Europe and in the Islamic world until the early modern period, and as a philosopher whose major summa the Cure (*al-Shifa'*) had a decisive

impact upon European scholasticism and especially upon Thomas Aquinas (d. 1274).

 [...]

The second most influential idea of Avicenna is his theory of the knowledge. The human intellect at birth is rather like a *tabula rasa*, a pure potentiality that is actualized through education and comes to know. Knowledge is attained through empirical familiarity with objects in this world from which one abstracts universal concepts. It is developed through a syllogistic method of reasoning; observations lead to prepositional statements, which when compounded lead to further abstract concepts. The intellect itself possesses levels of development from the material intellect *(al-'aql al-hayulani)*, that potentiality that can acquire knowledge to the active intellect (al-'aql al-fa'il), the state of the human intellect at conjunction with the perfect source of knowledge.

But the question arises: how can we verify if a proposition is true? How do we know that an experience of ours is veridical? There are two methods to achieve this. First, there are the standards of formal inference of arguments —Is the argument logically sound? Second, and most importantly, there is a transcendent intellect in which all the essences of things and all knowledge resides. This intellect, known as the Active Intellect, illuminates the human intellect through conjunction and bestows upon the human intellect true knowledge of things. Conjunction, however, is episodic and only occurs to human intellects that have become adequately trained and thereby actualized. The active intellect also intervenes in the assessment of sound inferences through Avicenna's theory of intuition. A syllogistic inference draws a conclusion from two prepositional premises through their connection or their middle term. It is sometimes rather difficult to see what the middle term is; thus when someone reflecting upon an inferential problem suddenly hits upon the middle term, and thus understands the correct result, she has been helped through intuition (hads) inspired by the active intellect. There are various objections that can be raised against this theory, especially because it is predicated upon a cosmology widely refuted in the post-Copernican world."

43

Abū Hāmid Muhammad ibn Muhammad al-Ghazālī

ابو   حامد   محمد   غزالى

ca. 450 d.H (1058) Tus (Chorasan) - 505 d.H. (1111) Tus (Chorasan)

"Al-Ghazali had an important influence on both Muslim philosophers and Christian medieval philosophers. Margaret Smith writes in her book Al-Ghazali: The Mystic (London 1944): "There can be no doubt that al-Ghazali's works would be among the first to attract the attention of these European scholars" (page 220). Then she emphasizes, "The greatest of these Christian writers who was influenced by al-Ghazali was St. Thomas Aquinas (1225–1274), who made a study of the Arabic writers and admitted his indebtedness to them, having studied at the University of Naples where the influence of Arab literature and culture was predominant at the time." In addition, Aquinas' interest in Islamic studies could be attributed to the infiltration of 'Latin Averroism' in the 13th century, especially at the University of Paris.

Al-Ghazali's influence has been compared to the works of Thomas Aquinas in Christian theology, but the two differed greatly in methods and beliefs. Whereas al-Ghazali rejected non-Islamic philosophers such as Aristotle and saw fit to discard their teachings on the

> basis of their "unbelief," Aquinas embraced them and incorporated ancient Greek and Latin thought into his own philosophical writings."

Source: http://en.wikipedia.org/wiki/Al-Ghazali

I quote from Frank Griffel "Al-Ghazali", The Stanford Encyclopedia of Philosophy (Winter 2014 Edition), Edward N. Zalta (ed.), forthcoming.

http://plato.stanford.edu/archives/win2014/entries/al-ghazali/

Another important field where al-Ghazâlî introduced Avicennan ideas into Ash'arite kalâm in a way that this tradition eventually adopted them is human psychology and the rational explanation of prophecy (Griffel 2004, al-Akiti 2004). Based on partly mis-translated texts by Aristotle (Hansberger 2011), Avicenna developed a psychology that assumes the existence of several distinct faculties of the soul. These faculties are stronger or weaker in individual humans. Prophecy is the combination of three faculties which the prophet has in an extraordinarily strong measure. These faculties firstly allow the prophet to acquire theoretical knowledge instantly without learning, secondly represent this knowledge through symbols and parables as well as divine future events, and thirdly to bring about effects outside of his body such as rain or earthquakes. These three faculties exist in every human in a small measure, a fact proven by the experience of déjà vu, for instance, a phenomenon referred to in the Arabic philosophic tradition as "the veridical dream" (al-manâm al-sâdiq). Al-Ghazâlî adopted these teachings and appropriated them for his own purposes (Treiger 2012). The existence of the three faculties in human souls that make up prophecy serves for him as an explanation of the higher insights that mystics such as Sufi masters have in comparison to other people. While prophets have strong prophetic faculties and ordinary humans very weak ones, the "friends of God" (awliyâ', i.e. Sufi masters) stand in between these two. They are endowed with "inspiration" (ilhâm), which is similar to prophecy and which serves in al-Ghazâlî as one of the most important sources of human knoweldge. Unlike Avicenna, for whom prophets and maybe also some particularly talented humans ('ârifûn in his language) acquire the same knowledge that philosophers reach through apodictic reasoning, in al-Ghazâlî the prophets and awliyâ' have access to knowledge that is superior to that available solely through reason."

Quotes from works of Al-Ghazali related to this research question:

1)   al-Munqidh   min   al-dalal (Rescuer   from   Error)

I quote from the German translation by 'Abd-Elsamad 'Abd-Elhamid Elschazli: Der Erreter aus dem Irrtum, Hamburg 1988, p. 7, C12/D91:

> "Ich prüfre also alle meine Erkenntnisse und fand mich bar jeder Erkenntnis mit dieser Eigenschaft, mit Ausnahme der auf dem sinnlich Wahrnehmbaren beruhenden Erkenntnis und der Denknotwendigkeiten [dārûrīyāt,   RC]
> [...]
> *Das Übel, das für denjenigen entstehen kann, der die Philosophie zurückweist*
>
> Dieses Übel ist sehr groß. Denn eine Gruppe von Einfältigen glaubt, sofern diese Reden (der Propheten und Mystiker) in den Büchern der Philosophen wiedergegeben und mit ihrer Falschheit vermischt wurden, sollten sie gemieden werden und unerwähnt bleiben. Ja, sie finden es sogar verwerflich, sie zu zitieren, weil sie sie (diese Reden) zum ersten Mal nur von ihnen gehört haben. In ihren schwachen Köpfen kommen sie schnell zu der voreiligen Meinung, daß diese zitierten Äußerungen (der Propheten und Mystiker) falsch seien, weil der zitierende (Philosoph in anderen   Dingen   )   Unrecht   hat. Ihr Beispiel ähnelt demjenigen, der die Aussagen eines Christen hört: "Es gibt keinen Gott außer Gott, und Jesus ist sein Gesandter." Er lehnt diese Aussage mit der Begründung ab. daß sie von einem Christen stammt. Er überlegt dabei nicht, ob der Christ wegen dieser Aussage oder wegen der Leugnung der Prophetie Muhammads — Friede sei über ihm — als Ungläubiger anzusehen ist. Wenn der Christ nur wegen der Leugnung der Prophetie Muhammads für ungläubig gehalten wird, darf ihm nicht in den Dingen widersprochen werden, in denen er nicht für ungläubig gehalten wird und die an sich wahr sind, auch wenn sie von ihm selbst als wahr anerkannt werden. Dies aber ist die Gewohnheit der Einfältigen, die das Wahre aus dem Munde der Menschen, nicht aber die Menschen durch das Wahre erkennen wollen."

2)   Mishkat   al-Anwar (The   Niche   for   Lights)

I quote from the German translation by 'Abd-Elsamad 'Abd-Elhamid Elschazli: Die Nische der Lichter, Hamburg 1987, p. 15 (A 49)

> "Denn durch die Erleuchtung des Lichts der Weisheit wird die Vernunft in actu eine schauende, nachdem siees zuvor nur der Möglichkeit nach war. Die höchste Weisheit ist die Rede des erhabenen Gottes, und aus ihrer Gesamtheit ragt der Koran als besonders weise hervor. So haben die Koranischen Verse für das Auge der Vernunft die gleiche Bedeutung wie das Sonnenlicht für das physische (wörtl.: sichtbare) Auge, weil dadurch das Sehen vollkommen wird. Deshalb ist es angemessen, daß der Koran wie das Sonnenlicht (Licht" genannt wird. Das Symbol des Korans ist das Sonnenlicht und das Symbol der Vernunft das Augenlicht. Deshalb können wir den Sinn jenes Koranischen Verses begreifen: "Glaubt an Gott und seinen Gesandten und an das Licht, das wir (zu euch) hinabgesandt haben" (Sure 64, Vers (P u. H) 8). Und: "Ihr Menschen! Nunmehr ist (durch die Koranische Offenbarung) von eurem Herrn ein klarer Beweis zu euch gekommen. Und wir haben ein offenkundiges Licht zu euch hinabgesandt." (Sure 4, Vers (P u H) 174."

3)   Kimiya-yi   sa'ādat   (The   Alchemy   of   Happiness)

I quote from the German translation (Hellmut Ritter): Das Elixier der Glückseligkeit, Munich 1998, p. 65:

"Die Glückseligkeit besteht für jedes Ding in dem, woran es seine Lust hat und worin es seine Befriedigung findet. Für jedes Ding aber bedeutet Lust das, was seiner Natur gemäß ist; das seiner Natur Gemäße aber ist das, wozu es geschaffen ist. So besteht die Lust der Begierde in der Erfüllung ihrer Wünsche, die Lust des Zornmutes in der Rache an den Feinden, die Lust des Auges in schönen Gestalten, die Lust des Ohres in lieblichen Tönen und Melodien. Dementsprechend besteht auch die Lust des Herzens in dem, was seine besondere Eigenart ist und um derentwillen es geschaffen ist,*das ist die Erkenntnis des wahren Wesens der Dinge*. Denn das ist die besondere Eigenart des menschlichen Herzens, Begierde und Zornmut aber und die Wahrnehmung der sinnlichen Dinge mit den fünf Sinnen, das haben   auch   die   Tiere. Daheir liegt in de Natur des Menschen ein Drang, nach dem, was er nicht weiß, zu forschen, so lange, bis er es weiß, und an allem , was er weiß, hat er Freude und Lust udn ist stolz darauf,

mag es etwas noch so Geringes sein. Wenn man z.B. einem, der das Schachspiel kennengelernt hat, verbietet, es andere zu lehren, so wird ihn das schwer ankommen, denn die Freude daran, ein so merkwürdiges Spiel gelernt zu haben, treibt ihn an, sich damit vor anderen zu brüsten. Wenn nun die Lust des Herzens in der Erkenntnis der Dinge besteht, so ergibt sich weiter, daß, je größer und elder der Gegenstand der Erkenntnis ist, um so größer auch die Lust daran wird."

4) Mizan al-'amal (Criterion of Action)

I quote from the German translation by 'Abd-Elsamad 'Abd-Elhamid Elschazli: Das Kriterium des Handelns, Darmstadt 2006, pp. 100-102:

"Die menschliche Seele — betrachtet unter dem Aspekt ihrer Menschlichkeit — besteht aus einer <u>wissenden</u> und einer <u>handelnden</u>Kraft. Jede von den beiden könnte "Vernunft" genannt werden, aber nur insofern, als diese bon beiden der gemeinsame Nenner ist. Die handelnde Kraft wird deshalb "Vernunft" genannt, weil sie der "wissenden" einer Dienerin ist und dem gehorcht, was jene ihr vorschreibt.
[...]
Dieses wissende theoretische Vermögen empfängt die universellen, von allen Akzidenzien freien Begriffe, die durch jene konkret und sinnlich wahrnehmbar gemacht werden, ganz so, wie wir die Bedeutung des Universellen in unserem Buch "Das Kriterium des Wissens" dargelegt haben. Das theoretische Vermögen teilt sich gemäß dem Wissen, das es beinhaltet, in drei Stufen:

<u>Die erste</u> ist wie das Verhältnis des Kindes zum Schreiben; denn das Kind besitzt dazu zwar die Fähigkeit, diese ist aber von der Umsetzung in die Tat (des Schreibens) weit entfernt. So verhält sich beim Kind auch mit dem Vermögen zum Wissen.

<u>Auf der zweiten Stufe</u> tritt in der Vernunft ein Komplex elementarer und notwendiger Kenntnisse (Intelligibilia) auf, wie es etwa dem Zustand des unterscheidungsfähigen Knaben in der Pubertät entspricht. Ein Beispiel für diese Fähigkeit des Knabens zeigt sich in seinem Verhältnis zum Schreiben, nachdem er das Tintenfaß, den Bleistift und die einzelnen Buchstaben, nicht aber ihre Zusammensetzung (zu Wörtern) kennengelernt hat. In der Wiege war er nocht nicht so weit, denn er besaß nur eine allgemeine Fähigkeit zum Schreiben, die aber von der Umsetzung in die Tat weit entfernt war.

<u>Auf der dritten Stufe</u> entstehen in der Vernunft rationale Kenntnisse, die alle durch Handeln angeeignet werden. Sie sind so beschaffen, daß sie ih ihm (dem Jugendlichen) aufbewahrt

werden können. Wenn er will kann er auf sie zurückgreifen. Und wann immer er dies tut, beherrscht er sie. Sein Wissensstand ähnelt dem eines zuverlässigen Schreibers, der seinen Beruf nocht nicht ausübt. Er besitzt die Fähigkeit, unverzüglich anzufangen, in einer vollkommenen Weise zu schreiben. Das ist der Höhepunkt menschlicher Fähigkeiten. Diese Stufe teilt sich in unzählige Grade auf, die sich unterscheiden nach der Menge der Erkenntnisse — ob viele oder wenige —, nach ihre Größe oder Unbedeutsamkeit und nach dem Weg ihrer Aneignung — ob durch göttliche Inspiration oder durch Lernen und Selbtaneignung, die schnell oder langsam vonstatten gehen kann. Nach diesem Wissen unterscheiden sich die Gelehrten in der Wissenschaft nach Weisen, Gottesvertrauten und Propheten. Sie sind verschieden in ihirem Rang je nach ihrer Stellung in dem Wissen.

Die Stufen des Aufstiegs sind unbegrenzt und unzählbar. Die höchste Stufe ist die des Propheten, dem sich alle oder die Mehrheit der Wahrheiten ohne Selbstaneignung und Anstrengung, sondern durch göttliche Offenbarung sofort enthüllen. Das ist die Glückseligkeit, die dem Menschen zuteil wird und ihn in die Nähe des erhabenen Gottes rückt — eine Nähe, die weder in bezug auf den Ort noch auf die Distanz, sondern im geistigen und wahrhaftigen Sinne gemeint ist. Der Anstand fordert, sich zu hüten, darüber zu reden. Denn sonst endet die Sache wie folgt: Eine Gruppe kam dahin, nach der Nähe zu Gott auch die Identität (mit Ihm), zu behaupten, so daß einer (aus der Gruppe) sagte: "Wie erhaben ich bin! Wie großartig ich bin!" Ein anderer sagte: "Ich bin das Wahre!" Wieder ein anderer beschrieb seinen Zustand als Inkarnation. Die Christen gehen in ihrem Glauben an Gott von der Identität zwischen Göttlichem und Menschlichem aus, so daß sie von Jesus — Gottes Friede sei mit ihm — sagen, er sei ein halber Gott! Wie erhaben ist Gott über die Reden der Ungerechten, wie sehr! Freide seit mit Muhammad, mit Jesus und mit allen Propheten!"

Abū ʿAbd Allāh Muḥammad ibn ʿAlī ibn Muḥammad ibn al-ʿArabī al-Ḥātimī aṭ-Ṭāʾī

أبو عبد الله محمد بن علي بن محمد بن العربي الحاتمي الطائي
(Murcia 1165 - Damascus 1240)

49

Source: http://en.wikipedia.org/wiki/Ibn_Arabi

I quote from William Chittick "Ibn Arabi". In Stanford Encyclopedia of Philosophy (2008/2014):

"Ibn 'Arabî (1165–1240) can be considered the greatest of all Muslim philosophers, provided we understand philosophy in the broad, modern sense and not simply as the discipline of *falsafa*, whose outstanding representatives are Avicenna and, many would say, Mullâ Sadrâ. Western scholarship and much of the later Islamic tradition have classified Ibn 'Arabî as a "Sufi", though he himself did not; his works cover the whole gamut of Islamic sciences, not least Koran commentary, Hadith (sayings of Muhammad), jurisprudence, principles of jurisprudence, theology, philosophy, and mysticism. Unlike al-Ghazâlî, whose range of work is similar to Ibn 'Arabî, he did not usually write in specific genres, but tended rather to integrate and synthesize the sciences in the context of thematic works, ranging in length from one or two folios to several thousand pages. Nor did he depart from the highest level of discourse, or repeat himself in different works. The later Sufi tradition called him *al-Shaykh al-Akbar*, the Greatest Master, a title that was understood to mean that no one else has been or will be able to unpack the multi-layered significance of the sources of the Islamic tradition with such detail and profundity. Ibn 'Arabî's writings remained unknown in the West until modern times, but they spread throughout the Islamic world within a century of his death.

[...]
Several scholars have pointed to parallels between Ibn 'Arabî and figures like Eckhart and Cusanus (Sells 1994, Shah-Kazemi 2006, Smirnov 1993, Dobie 2009), and others have suggested that he anticipates trends in physics (Yousef 2007) or modern philosophy (Almond 2004, Coates 2002, Dobie 2007). The most serious attempt to fit him into the history of Western philosophy

argues that his notion of *barzakh* (see section 3.4) offers a viable solution to the problem of defining the indefinable, which has dogged epistemology from the time of Aristotle and led to the despair of modern philosophers like Rorty (Bashier 2004). Other scholars have compared him to Eastern thinkers like Shankara, Zhuangzi, and Dôgen (Shah-Kazemi 2006, Izutsu 1966, Izutsu 1977). Nor were the similarities to Eastern thought lost on premodern scholars; during the eighteenth and nineteenth centuries, the Muslims of China established a Chinese-language school (the *Han Kitab*) that drew from Ibn ʿArabî's legacy and presented the Islamic worldview in terms drawn from Confucian thought (Murata et al. 2008). Implications of his thought for contemporary concerns have been addressed by a diverse array of scholars and devotees in the Journal of the Muhyiddin Ibn ʿArabi Society, which has been published since 1983. What follows is an outline of some of the topics that he addresses.
[...]
2. Methodology

Qûnawî differentiates Ibn ʿArabî's position from that of *falsafa* and scholastic theology (Kalam) by calling it *mashrab al-tahqîq*, "the school of realization". *Tahqîq* is indeed the cornerstone of Ibn ʿArabî's vast corpus, so it is important to have a sense of what it means. The word is derived from the same root as *haqq* and *haqîqa*, key terms in all the sciences. *Haqq* means true, real, right, worthy, and appropriate (in modern times, it is used to speak of human "rights"); *haqîqa* means reality and truth. The Koran uses *haqq*, the conceptual opposite of *bâtil* (false, vain, unreal, inappropriate), in a variety of senses, not least as a divine name, "the Real, the True", and to designate the content of revelation (the Koran and earlier scriptures).

[...]
Another *hadith* explains that the primary *haqq*, upon which all other *haqqs* are based, is that "There is no god but God", which is to say that there is nothing truly real but the Real, there is nothing truly right but the Right. In Islamic theology, understanding this notion is called *tawhîd* or "the acknowledgement of [divine] unity" and is considered the first of the three principles of faith; *tawhîd* also underlies the standpoints of the philosophers, even if some of them seldom spoke of God. This particular *hadith* tells us that God's *haqq* against people (that is, their responsibility toward him) is for them to acknowledge *tawhîd*, and, if they do so, their right against God (his responsibility toward them) is for them to receive everlasting happiness, saʿâda—the term philosophers used to translate *eudaemonia*.

[...]
2.2. Deiformity

Ibn ʿArabî's basic project is to map out the possibilities of human becoming, to clarify the distinction between *haqq* and *bâtil*—truth and falsehood, reality and unreality, right and wrong—and to point his readers toward perfection, that is, realization of the Real "to the extent of human capacity" (*ʿalâ qadr tâqat al-bashar*), as the philosophers liked to put it. This in turn requires becoming characterized by the divine names (*al-takhalluq bi asmâ' Allâh*), a process discussed by al-Ghazâlî among others and called by Avicenna *al-taʾalluh*, being like unto God, or deiformity. God created human beings in the form of the name Allah itself, which is called "the all-comprehensive name" (*al-ism al-jâmiʿ*), because it is the referent of all other divine names. Realization is then the process of actualizing knowledge of the Three Books and bringing the soul into perfect harmony with the Real, a harmony that becomes apparent in the transformation of character and the flowering of virtue. The science of "ethics" (*akhlâq*, pl. of *khuluq*, character) does not concern itself simply with knowledge of right behavior, but aims rather at understanding the soul's rootedness in the divine names and mapping out the path of becoming characterized by them. The Koran sets up Muhammad as the perfect model here with the words it directs at him, "You have a magnificent character [*khuluq ʿazîm*]" (68:4). This can be nothing but the full realization of the divine speech, "the magnificent Koran" (*al-qurʾân al-ʿazîm*, 15:87). According to Ibn ʿArabî, this is why Muhammad's wife ʿÂʾisha said about him, "His character was the Koran."

[...]
6. Human Perfection

Like the philosophers, Ibn ʿArabî sees the human soul as an unlimited potential and understands the goal of life to lie in the actualization of that potential. Avicenna sums up the philosophical view in a passage found in two of his major works:

> The perfection specific to the rational soul is for her to become an intellective world within which is represented the form of the All, the arrangement intelligible in the All, and the good that is effused upon the All…. She turns into an intelligible world, parallel with the entire existent world, and witnesses what is unconditioned comeliness, unconditioned good, and real, unconditioned beauty while she is unified with it, imprinted with its likeness and guise, strung upon its thread, and coming to

> be of its substance. (Avicenna, *al-Shifâ'*, 350; Avicenna, *al-Najât*, 3:293)

Ibn 'Arabî agrees with this general picture, but he considers it barren, because it fails to take into account those dimensions of reality—the vast majority of dimensions, as he sees it—that do not properly belong to the world of intellection; all the intermediary realms, not to speak of the sensible realm itself, are essentially imaginal, not intelligible. He insists, in fact, that "Imagination is the widest known thing" because "it exercises its properties through its reality over every thing and non-thing. It gives form to absolute nonexistence, the impossible, the Necessary, and possibility; it makes existence nonexistent and nonexistence existent" (Ibn 'Arabî, *al-Futûhât*, 1911 edition, 1:306.17, 306.6).

[...]
6.2 Perfect Man

As the model of human possibility, Perfect Man represents the individual who has traversed the circle of existence, reached the station of Two-Bows' Length, and returned to his origin, the Reality of Realities. Standing in the Station of No Station, he is He/not He, Eternal/newly arrived, Infinite/finite. He alone functions as God's "vicegerent" (*khalîfa*) or representative, the intermediary between God and creation, which is precisely the role for which Adam was created (Koran 2:30).
[...]
To put this in another way, Perfect Man is the spirit that animates the cosmos. This is the theme that begins the first chapter of Ibn 'Arabî's Ringstones, which explains the manner in which Adam—the human being—manifests the wisdom of the all-comprehensive name."

On the concept of "perfect man" see: Iskandar Arnel "The Concept of the Perfect Man in the Thought of Ibn 'Arabi and Muhammad Iqbal: A Comparative Study", MacGill University, Montreal, May 1997 ([online](#)).

The *epistemological* concept of truth as "adaequatio intellectus et rei" (Thomas Aquinas) can be reformulated as "adaequatio intellectus ad vitam" following Ibn Arabi's criticism of intellectualismm from an *existential* perspective.

Muhammad Iqbal

Sialkot 1877- Lahore 1938

I quote from http://en.wikipedia.org/wiki/Muhammad_Iqbal:

"Sir Muhammad Iqbal (Urdu: محمد اقبال) (9 November 1877 – 21 April 1938), widely known as Allama Iqbal (علامہ اقبال), was a philosopher, poet and politician in British India who is widely regarded as having inspired the Pakistan Movement. He is considered one of the most important figures in Urdu literature, with literary work in both the Urdu and Persian languages.

Iqbal is admired as a prominent classical poet by Pakistani, Indian, Iranian, and other international scholars of literature. Though Iqbal is best known as an eminent poet, he is also a highly acclaimed "Muslim philosophical thinker of modern times.
[...]

Iqbal was influenced by the teachings of [Sir Thomas Arnold](#), his philosophy teacher at Government college Lahore, Arnold's teachings determined Iqbal to pursue higher education in the West. In 1905, he travelled to England for his higher education. Iqbal qualified for a scholarship

from Trinity College, University of Cambridge and

obtained Bachelor of Arts in 1906, and in the same year he was called to the bar as a barrister from Lincoln's Inn. In 1907, Iqbal moved to Germany to study doctorate and earned Doctor of Philosophy degree from the Ludwig Maximilian University, Munich in 1908. Working under the guidance of [Friedrich Hommel](#), Iqbal published his doctoral thesis in 1908 entitled: The

> Development of Metaphysics in Persia. During Iqbal's stay in Heidelberg, Germany in 1907 his German teacher Emma Wegenast taught him about Goethe's Faust, Heine and Nietzsche. During his study in Europe, Iqbal began to write poetry in Persian. He prioritized it because he believed he had found an easy way to express his thoughts. He would write continuously in Persian throughout his life."

The thesis "The Development of Metaphysics in Persia. A Contribution to the History of Muslim Philosophy" (London 1908) is online available. These are the Contents of the book with some quotes.

Part I: Pre-Islamic Persian Philosophy

Chapter I: Persian Dualism

1. Zoroaster
"To Zoroaster - the ancient sage of Iran - must always be assigned the first place in the intellectual history of Iranian Aryans who, wearied of constant roaming, settled down to an agricultural life at a time when the Vedic Hymns were still being composed in the plains of Central Asia. This new mode of life and the consequent stability of the institution of property among the settlers, made them hated by other Arian tribes who had not yet shaken off their original nomadic habits, and occasionally plundered their more civilised kinsmen. Thus grew up the conflict between the two modes of life which found its earliest expression in the denunciation of the deities of each other - the Devasand the Ahuras. It was, really the beginning of a long individualising process which gradually severed the Iranian branch from other Aryan tribes, and finally manifested itself in the religious system of Zoroaster (1) - the great prophet of Iran who lived and taught i the age of Solon and Thales. In the dim light of modern oriental research we see ancient Iranians - divided between two camps- partisans of the powers of good, and partisans of the powers of evil when the great sage joins their furious contest, and with his moral enthusiasm stamps out once for all the worship of demons as well as the intolerable ritual of the Magian priesthood.

[...]

Geiger, in his "Civilisation of Eastern Iranians in Ancient Times", points out that Zoroaster inherited two fundamental principles from his Aryan ancestry:- (1.) There is law in Nature. (2.) There is conflict in Nature. It is the observation of law and

conflict in the vast panorama of being that constitutes the philosophical foundation of his system. The problem before him was to reconcile the existence of evil with the eternal goodnes of God. His predecessors worshipped a plurality of good spirits all of which he reduced to a unity and called it [Ahuramazda]. On the other hand he reduced all powers of evil to a similar unity and called it [Druj-Ahriman]. Thus by a process of unification he arrived at two fundamental principles which, as Haug shows, he looked upon not as two independent activities, but as two parts or rather aspects of the same Primary Being. Dr. Haug therefore, holds that athe Prophet of ancient Iran was theologically a monotheist and philosophically a dualist (1). But to maintain that there are "twin" (2) spirits - creators of reality and nonreality - and at the same time to hold that these two spirits are united in the Supreme Being, (3) is virtually to say that the principle of evil constitutes a part of the very essence of God; and the conflict between good and evil is othing more that a struggle of God against mimself." (p. 3-5)

2. [Mani] and [Mazdak]

"Turning now to the remarkable socialist of ancient Persia, *Mazdak*. This early prophet of communism appeared during the reign of Anushirwan the just (531-578 A.D.), and marked another dualistic reaction against the prevailing Zarwanian doctrine (1). Mazdak, like Mani, taught that the diversity of things springs from the mixture of two independent, eternal principless which he called Shid (Light) and Tar (Darkness). But the differs from his predecessor in holding that the fact of their mixture as well as their final separation, are quite accidental, and not the result of choice. Mazdak's God is endowed with sensation, and has four principal energies in his eternal presence-power of discrimination, memory, understanding and bliss. These four energies have four personal manifestations who, assisted by four other persons, superintend the course of the Universe. Variety in things and men is due to the various combinations of the original principles. But the most characteristic feature of the Masdakite teaching is its communism, which is evidently an inference from the cosmopolitan spirit of Mani's Philosophy. All men, said Mazdak, are equal; and the notion of individual property was introduced by hostile demons whose object is to turn God's Universe into a scene of endless misery. It is chiefly this aspect of Mazdak's teaching that was most shocking to the Zoroastrian conscience, and finally brought about the destruction of his enormous following, even though the master was supposed to have miraculously made the sacred Fire talk, and bear witness of the truth of his wisdom." (p.16-17)

3. Retrospect

"The principle of Unity as a philosophical ground of all that

exists, is but dimly perceived at this stage of intellectual evolution in Persia. the controversy among the followers of Zoroaster indicates that the movement towards a monistic conception of the Universe had begun; but we have, unfortunately, no, evidence to make a positive statement concerning the pantheistic tendencies of Pre-Islamic Persian thought. We know that in the 6th century A.D. Diogenes, Simplicius and other Neo-Platonic thinkers were drivent by the persecution of Justinian, to take refuge in the court of the tolerant Anushirwan. This great monarch, moreover, had several works translated for him from Sanskrit and Greek, but we have no historical evidence to show how far these events actually influenced the course of Persian thought. Let us, therefore, pass on to the advent of Islam in Persia, which completely shattered the old order of things, and brought to the thinking mind the new concept of an uncompromising monotheism as well as the Greek dualism of God and matter, as distinguished from the purely Persian dualism of God and Devil." (p. 17-18)

Part II: Greek Dualism

Chapter II: Neo-Platonic Aristotelians of Persia

"It must, however, be rememberd that Greek wisdom flowed towards the Moslem east through Harran and Syria. The Syrians took up the latest Greek speculation i.e. Neo-Platonism and transmitted to the Moslem what they believed to be the real philosophy of Aristotle. It is surprising that Mohammedan Philosoophers, Arabs as well as Persians, continued wrangling over what they believed to be the real teaching of Aristotle and Plato, and it never occurred to them that for a thorough comprehension of their Philosophies, the knowledge of Greek language was absolutelty necessary. So great was their ignorance that an epitomised translation of the Enneads of Plotinus was accepted as "Theology of Aristotle." It took them centuries to arrive at a clear conception of the two great masters of Greek thought; and it is doubtful whether they ever completely understood them. Avicenna is certainly clearer and more original that Al-Farabi and Ibn Maskawaih; and the Andelusian Averroes, though he is nearer to Aristotle than any of his predecessors, is yet far from a complete grasp of Aristotle's philosophy. It would, however, be unjust to accuse them of servile imitation. the history of their speculation is one continuous attempt to wade through a hopeless mass of absurdities that careless translators of Greek Philosophy had introduced. They had largely to rethink the Philosophies of Aristotle and Plato. Their commentaries consitute, so to speak, an effort at discovery, not exposition. The very circumstances which left them no time to think out independent systems of thought, point to a subtle mind, unfortunately cabined and

cribbed by a heap of obstructing nonsense that patient industry had gradually to eliminate, and thus to window out truth from falsehood." (p. 22-23)

1. Ibn Maskawaih

2. Avicenna

Chapter III: Islamic Rationalism

1. Metaphysics of Rationalism-Materialism

2. Contemporary Movements of Thought

3. Reaction against Rationalism - The As'arite

Chapter IV: Controversy between Realism and Idealism

Chapter V: Sufiism

1. The origin and Quranic justification of Sufism

2. Aspects of Sufi Metaphysics

A. Reality as Self-conscious Will

B. Reality as Beauty

C. (1) Reality as Light

(Return to Persian Dualism - Al-Ishraqi)

(2) Reality as Thought - AlJili

Chapter VI: Later Persian Thought

Conclusion

Thomas Aquinas

1225 Roccasecca near Aquino - 1274 Fossanova

Detail from Valle Romita Polyptych by Gentile da Fabriano (circa 1400)
Source http://en.wikipedia.org/wiki/Thomas_Aquinas

I quote from the online version of Rafael Capurro and Birger Hjørland: The Concept of Information, Annual Review of Information Science and Technology (ARIST) Ed. Blaise Cronin, Vol. 37 (2003) Chapter 8, 343-411.

"Throughout the Middle Ages *informatio* and *informo* are commonly used in the aforementioned epistemological, ontological, and pedagogical contexts by several authors (see Capurro, 1978 for details). The Aristotelian influence on the higher-level philosophical concept of *informatio* is shown at best in the work of Thomas Aquinas (1225-1274). Bussa (1975) lists in his Index Thomisticus 66 references on *informati*o — 15 of them in nominative — and 454 references on *informo*. Schütz (1958) distinguishes in his Thomas-Lexikon between *informatio* in the sense of "providing something with a form" in an epistemological or ontological context and the pedagogical sense of education or instruction.

Following Thomas Aquinas' interpretation of the Aristotelian concepts of form (*eidos* or *morphe*) and matter (*hyle*), both principles cause the unity of an individual being (*informatio materiae*) in the sense listed by the OED: 'the action of 'informing' with some active or essential quality' (OED II, 7). The Aristotelian theory was called *hylomorphism*. From a theological point of view it is important for Thomas to distinguish between the biological

process giving life on the basis of something that already exists (*per modum informationis*) and the act of creation out of nothing (*per modum creationis*) (In de causis 18/94). In other words, there is an ontological difference — i.e. a difference concerning the meaning of being, not just a difference between beings — between *informatio* and *creatio*. Because of the unity of the human body with the soul as substantial form (*forma substantialis*) Thomas underlines, in contrast to Augustine, the unity of the knowledge process conceived as a double movement of abstracting ("*abstractio*") the forms (*forma*, *species*) — the Aristotelian *eidos* or *morphe* — of things and of going back to the things in a process of sensory-bounded intellectual re-cognition ("*conversio ad phantasmata*"). Thomas' *termini technici* for these processes are *informatio sensus* and *informatio intellectus possibilis* (Summa theol. I, 14.2.co/4). He underlines the role of the active intellect (*intellectus agens*) in the (re-)cognition process. Finally, he conceives information processes, similarly to Augustine, in a large pedagogical and moral context, where *informatio* means the forming of virtues (*informatio virtutum*) as well as of moral life as a whole (*informatio morum*) (Summa theol. III, 110.4.co/15). [...]

The action of 'informing' with some active or essential quality" had, according to the *Oxford English Dictionary* "a quite restrictive use" not only in English, but also in other modern European languages, and references on "formation or molding of the mind or character, training, instruction, teaching" date from the 14th century. Probably the most intriguing question from the point of view of the history of ideas concerns the ontological use of *informatio* — both in the lower-level sense of "molding matter" as well as in the higher-level sense used by Scholastics as *informatio materiae* — which became obsolete not only in modern languages that, like English, inherited the Latin word and slightly transformed it into *information*, retaining the epistemological meaning, but also, for instance, in German where the word *Information* was actually used in the sense of education and communication since the 15th century. *Informatio* was literally translated — first in a mystical context as *in-Bildunge* or *in-Formunge*; later on in a general pedagogical sense, such as used by Christoph Martin Wieland (1733-1813) — with *Bildung*, a term heavily charged with higher-level meaning (Capurro 1978, p. 176). A plausible explanation for the loss of the ontological higher-level sense is the decline of Scholastic philosophy caused by the rise of modern empirical science. As Peters (1988, p. 12) states:

In the feverish demolition of medieval institutions in the seventeenth and eighteenth centuries, the notion that information consisted in the activity or process of endowing some material entity with form remained largely unchanged. But the notion that the universe was ordered by forms fell into disrepute, and the context of this in-forming shifted from matter to mind. Both changes inaugurated a massive inversion in the meaning of information.

This transition from Middle Ages to Modernity in the use of the concept of information — from "giving a (substantial) form to matter" to "communicating something to someone" — can be detected in the natural philosophy of René Descartes (1596-1650), who calls ideas the "forms of thought," not in the sense that these are "pictured" ("depictae") in some part of the brain, but "as far as they inform the spirit itself oriented to this part of the brain" ("sed tantum quatenus mentem ipsam in allem cerebri partem conversam informant." (Descartes 1996, VII, 161). As Peters (1988, p 13) states:

> The "doctrine of ideas," developed initially by Descartes, was central to early modern philosophy, both rationalist and empiricist. Abandoning the "direct perception" of the scholastics — the immediate communion of Intellect and Nature — Descartes interposed "ideas" between the two. An "idea" was something present to the mind, an image, copy, or representation, with a problematic relation to real things in the world. For empiricists (like Locke), the stream of ideas was the raw material from which genuine knowledge could be built; for rationalists (like Descartes), it was a veil of illusion, to be pierced by logic and reason.

Nevertheless, the concept of information ceases to be a higher-level concept until the rise of information theory in the 20th century. Philosophers such as Francis Bacon (1561-1626), John Locke (1632-1704), George Berkeley (1685-1753), David Hume (1711-1776), and Thomas Reid (1711-1796) criticize scholastic hylomorphism and particularly the theory of abstraction. Peters (1988, p. 12) asserts that Bacon's (1967) "Great Instauration":

> criticizes the logicians of his day for receiving "as conclusive the immediate informations of the sense..." Instead, those "informations" must be subjected, according to Bacon, to a sure plan that will sort the true

form the false. Though Bacon's usage may not appear irreconcilable with our own, the inverted pluralization should tip us off that he does not completely share our prejudices (we should say "the information of the senses"). In fact, this locution exemplifies a perfectly hylomorphic notion of the workings of the senses: they are a kind of matter (wax being a favorite empiricist instance) on which objects of the world may leave their shapes or stamps. What is interesting here is that the site of information is being shifted from the world at large to the human mind and senses. This shift requires no break with scholastic notions of mind or nature.

Indeed this epistemological notion of information(s), particularly the wax metaphor, was a key higher-level concept throughout the Middle Ages. Consider Locke's (1995, p. 373) statement: "No existence of anything without us, but only of GOD, can certainly be known further than our senses inform us." Peters (1988, pp. 12-13) concludes:

Information was readily deployed in empiricist philosophy (though it played a less important role than other words such as impression or idea) because it seemed to describe the mechanics of sensation: objects in the world in-form the senses. But sensation is entirely different from "form" — the one is sensual, the other intellectual; the one is subjective, the other objective. My sensation of things is fleeting, elusive, and idiosynchratic [*sic*]. For Hume, especially, sensory experience is a swirl of impressions cut off from any sure link to the real world... In any case, the empiricist problematic was how the mind is informed by sensations of the world. At first informed meant shaped by; later it came to mean received reports from. As its site of action drifted from cosmos to consciousness, the term's sense shifted from unities (Aristotle's forms) to units (of sensation). Information came less and less to refer to internal ordering or formation, since empiricism allowed for no preexisting intellectual forms outside of sensation itself. Instead, information came to refer to the fragmentary, fluctuating, haphazard stuff of sense. Information, like the early modern worldview more generally, shifted from a divinely ordered cosmos to a system governed by the motion of corpuscles. Under the tutelage of empiricism, information gradually moved from structure to stuff, from form to substance, from intellectual order to sensory impulses.

Later developments on etymology are partly covered by the next section. Here we will conclude that the modern uses of information show a transition period in which the medieval ontological concept of "molding matter" is not just abandoned but reshaped under empirical and epistemological premises. It has been extremely interesting

to observe how the concept of information is closely connected to views of knowledge. This conclusion is important when we later analyze the concept of information in information science, because it indicates a severly neglected connection between theories of information and theories of knowledge."

On Thomas Aquinas discussing the issue of forming the intellect with the "species intelligibiles" in dialogue with Aristotle, Plato, Averroes and Avicenna, I quote, as an example, from the *Summa Contra Gentiles*:

Liber II, c. LXXIII: Quod intellectus possibilis non est unus in omnibus hominibus.

"Ex praemissis autem evidenter ostenditur non esse unum intellectum possibilem omnium hominum qui sunt et qui erunt et qui fuerunt, ut Averrhoes fingit. [...] *Amplius*, nihil recipit quod jam habet, quia recipiens oportet esse denudatum a recipiendo secundum Aristotelem (*De anima*, iii, text. comm. 4). Sed species intelligibiles, ante meum sentire vel tuum, fuerunt in intellectu possibili; non enim qui fuerunt ante nos intellexissent, nisi intellectus possibilis fuisset reductus in actum per species intelligibiles. (Nec potest dici quod species illae, prius receptae in intellectu possibili, esse cessaverunt; quia intellectus possibilis non solum recipit, sed conservat quae recipit; unde, in tertio *De anima* (text. comm. 6), dicitur esse locus specierum. Igitur ex phantasmatibus nostris non recipiuntur species in intellectu possibili). Frustra igitur per intellectum agentem fiunt intelligibilia actu nostra phantasmata."

Liber II, c. LXXIV: De opinione Avicennae qui posuit formas intelligibiles non conservari in intellectu possibili.

"Praedictis autem rationibus obviare videntur quae Avicenna ponit. Dicit enim in suo libro *De anima* (c. 6), quod in intellectu possibili non remanent species intelligibiles, nisi quandiu actu intelliguntur.   [...]
Constat autem quod intellectus possibilis est virtus apprehensiva, et quod non habet organum corporeum; unde concludit quod impossibile est quod species intelligibiles conserventur in intellectu possibili, nisi quamdiu intelligit actu. Oportet ergo quod vel ipsae species intelligibiles conserventur in aliquo organo corporeo sive in aliqua virtute habente organum corporeum; vel oportet quod formae intelligibiles sint per se existentes, ad quas comparetur intellectus possibilis noster sicut speculum ad res quae videntur in speculo; vel oportet quod fluant in species intelligibilesintellectum possibilem de novo ab aliquo agente separato, quandocumque actu intelligit.

Primum autem horum trium es impossibile, quia formae existentes in potentiis utentibus organis corporalibus sunt intelligibiles in potentia tantum. Secundum autem est opinio Platonis, quam reprobat Aristoteles (*Metaphys.*, i, text. comm. 25 et infra). Unde concludit tertium, quod, quandocumque intelligimus actu, fluunt species intelligibiles in intellectum possibilem nostrum ab intellectu agente quem ponit ipse quandam substantiam separatam. [...]

Sed si diligenter consideretur haec positio, quantum ad originem, parum aut nihil differt a positione Platonis. Posuit enim Plato formas intelligibiles esse quasdam substantias separatas, a quibus scientia fluebat in animas nostras; hic (Avicenna) autem ponit ab una substantia separata, quae est intellectus agens secundum ipsum, scientiam in animas nostras fluere. Non autem differt, quantum ad modum acquierendi scientiam, utrum ab una vel pluribus substantiis separatis nostra causetur scientia; utrobique enim sequetur quod sciencia nostra non causetur a sensibilibus; cujus contrarium apparet per hoc quod qui caret aliquo sensu, caret scientia sensibilium quae cognoscuntur per sensum illum."

Liber III, c. LXXVI: Quod intellectus agens non sit substantia separata, sed aliquid animae.

"Potest autem dici quod intellectus agens semper agit quantum in se est, sed non semper phantasmata fiunt intelligibilia actu, sed solum quando sunt ad hoc disposita; disponuntur autem ad hoc per actum cogitativae virtutis, cujus usu est in nostra potestate; et ideo intelligere actu est in nostra potestate, et ob hoc etiam contingit quod non omnes intelligunt ea quorum habent phantasmata; quia non omnes habent actum virtutis cogitativae convenientem, sed solum qui sunt instructi et consueti.

Videtur autem quod haec responsio non sit omnino sufficiens. Haec enim dispositio quae fit per cogitationem ad intelligendum, oportet quod sit vel dispositio intellectus possibilis ad recipiendum formas intelligibiles ab intellectu agente fluentes, ut Avicenna dicit (*De anima*, I, 5), vel quia disponuntur phantasmata ut fiant intelligibilia actu, sicut Averrhoes et Alexander dicunt. Primum autem horum non videtur esse conveniens, quia intellectus possibilis secundum suam naturam est in potentia ad species intelligibiles actu; unde comparatur ad eas sicut diaphanum ad lucem vel ad species coloris. Non autem indiget aliquid, in cukus natura est recipere formam aliquam, disponi ulterius ad formam illam nisi forte sint in illo contrariae dispositiones; sicut materia aquae disponitur ad formam aeris per remotionem frigiditatis et densitatis. Nihil autem contrarium est in intellectu possibili, quod posit impedire cujuscumque speciei intelligibilis succeptionem; nam species intelligibles, etiam contrariurum, in intellectu non sun

contraraie, ut probat Aristoteles (Metaphys., VII, text. comm. 23), quum unum sit ratio cognoscendi aliud; falsitas autem quae accidit in judicio intellectus componentis et dividentis, provenit non ex eo quod in intellectu possibili sint aliqua intellecta, sed ex eo quod ei aliqua desunt. Non igitur, quantum in se est, intellectus possibilis indiget aliqua praeparatione ut suscipiat species intelligibiles ab intellectu agente fluentes. [...]

Item, secundum hoc, phantasmata non essent per se necessaria ad intelligendum et per consequens nec sensus, sed solum per accidens, quasi excitantia et praeparantia intellectum possibilem ad recipiendum; quod est opinionis platonicae et contra ordinem generationis intellectus et scientiae, quem ponit Aristoteles (*Metaphys*., I, text. comm. 1; et *Poster*. II, text. comm. 27), dicens quod ex sensu fit memoria, ex multis memoriis unum experimentum, ex multis experimentis universalis acceptio, quae est scientiae et intellectus. Est autem haec positio Avicennae (Metaphys. IX, 5) consona his quae de generatione rerum naturalium dicit ; ponit enim quod omnia agentia inferiora solum per suas actiones praeparant materiam ad suscipiendas formas quae effluunt in materias ab intelligentia agente separata; unde eadem ratione ponit quod phantasmata praeparant intellectum possibilem, formae autem fluunt a substantia separata. Similiter autem quod per cogitationem disponantur phantasmata ad hoc quod fiant intelligibilia actu et moventia intellectum possibilem, conveniens non videtur, si intellectus agens ponatur substantia separata; hoc enim videtur esse conforme positioni dicentium quod inferiora agentia sunt solum disponentia ad ultimam perfectionem, ultima autem perfectio est ab agente separato; quod est contra sententiam Aristotelis (*Metaphys*., VII, text. comm. 28); non enim videtur imperfectius se habere anima humana ad intelligendum quam inferiores naturae ad proprias operationes.
[...]

Adhuc, intentio effectus demonstrat agentem; unde animalia generata ex putrefactione non sunt ex intentione naturae inferioris, sed superioris tantum, quia producuntur ab agente superiori tantum; propter quod Aristoteles (*Metaphys*., VII, text.comm. 30) dicit ea fieri casu; animalia autem quae fiunt ex semine, sunt ex intentione naturae superioris et inferioris. Hic autem effectus qui est abstrahere formas universales a phantasmatibus, est in intentione nostra, non solum in intentione agentis remoti. Igitur oportet in nobis ponere aliquod proximum principium talis effectus. Hoch autem est intellectus agens. Non es igitur substantia separata, sed aliquia virtus animae nostrae.
[...]

Operatio autem propria hominis est intelligere, cujus primum principium est intellectus agens, qui facit species intelligibiles a quibus patitur quodammodo intellectus possibilis, qui factus in actu movet voluntatem. Si igitur intellectus agens est quaedam substantia extra hominem, tota operatio hominis dependet a

principio extrinseco. Non igitur erit homo agens seipsum, sed actus ab alio; et sic non erit dominus suarum operationum, nec meretur laudem aut vituperiium; et peribit tota scientia moralis et conversatio politica; quod es inconveniens. Non est igitur intellectus agens substantia separata ab homine. (I part., q. LXXIX, art. 4.)".

Although the concept of *informatio* is not used by Thomas Aquinas in this text, the discussion shows clearly the importance of the issue regarding the forming —"suscipiat", "ad recipiendum", "fluunt", "abstrahere", "patitur" — of the *intellectus possibilis* with the "intelligible forms" thanks action to the action — "fluunt", "abstrahere" — of the *intellectus agens*. The process of "abstractio" and "conversio ad phantasmata", i.e., the unity of "informatio sensus" and "informatio intellectus possibilis" builds the core of his theory of knowledge and is intimately related to his ethics ("qui factus in actu movet voluntatem"). See: Karl Rahner: Geist in Welt. Zur Metaphysik der endlichen Erkenntnis bei Thomas von Aquin (Munich 1939/1957, Engl. transl.: Spirit in the World, 1968) and my comments in Information pp. 124ff.

The autonomy of the human will ("dominus suarum operationum") is based on understanding the "intellectus agens" *as* an "intrinsic principle" upon which humans are responsible for what they do. Otherwise, moral philosophy ("scientia moralis") and the political discourse ("conversatio politica") are meaningless.

On the topic of this research question see also:

Thomas Aquinas: ["Reasons for the Faith against Muslim Objections (and one objection of the Greeks and Armenians) to the Cantor of Antioch"](link), particularly chapter 3: How Generation applies to God.

Joseph Kenny: [Thomas Aquinas, Islam and the Arab Philosophers](link)

"7.4 The human soul

Ibn-Sīnā rejects "the impression of the soul in the body", and thus "matter designated by quantity" which Thomas maintains is the principle of individuation. Ibn-Sīnā rejects reincarnation, taking more or less the same line of argumentation that Saint Thomas takes.

Ibn-Rushd rejects spontaneous generation, saying that it has "no evident proof" *(ghayr al-mushāhada)*," but Thomas Aquinas accepts the idea without question.

As for the immortality of the human soul, the problem that Thomas Aquinas faced was to reconcile two facts: (1) that the human soul is the substantial form of man, and (2) that the act of intellection transcends matter and the subject of this act can survive without the body. Since act must correspond to potency, according to the first fact the soul should be a material form, but according to the second fact the act of intelligence requires an immaterial subject.

First of all, Thomas did not identify the rational soul with the intellect, as the Arab philosophers did, but distinguished the substance of the soul from its powers, as he distinguished these powers from their habits and acts. For him a single soul is the substantial form of the body. By its vegetative powers it is the source of the vital functions of the body; by its sensitive knowing and appetitive powers it is the source of its animal functions, and by the passive and active intellects and the will it exercises properly human activities.

Thus the soul has some activities that are purely material and others that are spiritual. Against Ibn-Sīnā, man is essentially soul and body; there is no room for dualism. To solve the problem how the form of matter can have an operation which transcends matter and can exist without matter, Thomas makes an exception to his general teaching that the act of existence is the act of the composite of matter and form. Since the human soul has an act which is not that of the body, the existence is attached first and directly to the human soul, and through the soul to the body which participates in it, being animated by the soul. Thus at death the soul retains its existence apart from the body.

Another point of sharp difference between Thomas and the Arab philosophers was his position that the intellect, whether passive or active, is a personal power of every man. Instead of Ibn-Sīnā's theory of continual dependence on an exterior agent intellect, Thomas holds that man retains a habitual knowledge; nevertheless he admits that man, apart from his normal knowledge acquired from sense experience, can receive angelic inspiration.

As for the origin of the human soul, Thomas is in agreement with Ibn-Sīnā that it is created with the body.

As for heavenly spirits, Thomas holds that there are incorporeal intellectual creatures, each unique in its own species, whose number is not limited to the movers of the heavenly bodies.

The perfection of human life, for Thomas Aquinas, is to

know God. Since this knowledge is not possible to achieve by philosophy, by faith, or by conjunction with separated intellects (as Ibn-Rushd taught), it is not possible for man to achieve it in this life. Even in the future life, the vision of God cannot be acquired by knowing the angels or other separated souls, but only God himself can give it. That is through the gift of glory, which is an adaptation of the soul to see God. This vision is not comprehensive, but it is available to every soul to the extent of its readiness."

David B. Burrell: Thomas Aquinas and Islam, in *Modern Theology* 20:1 January 2014, p. 86-87:

"Ours is a very different world from Aquinas', yet his ability to see the presence of interlocutors from other faiths as a spur to understanding of his own tradition offers us a model which deftly eschews intellectural colonizing, and displays the way in which every living tradition grows by carefully responding to challenges fro without. Yes what must animate that approach is a lively confidence in the truth of one's own tradition, together with the realization that such a truth will continue to outstrip any standing articulation of it. So one seeking the truth of matters revealed will always have something to learn from others; the polar opposite (again from Lonergan) is to *need*certitude. Yet a proper phenomenology of a living religious faith will be able to identify needs of that sort as obstructions to the internal development of the faith itself, exposed so netly in KierkegaardÄs ridiculing of anymone intent on "defending the faith". [...] No wonder his [Thomas Aquinas] synthesis of Christian doctrine, once shown to be the intercultural, interfaith achievement it is, has proven to be normative for subsequent generations as well."

Muhammad Taghi Fa'ali: The Definition of Knowledge from the Point of View of Muslim Theologians and Philosophers. In: Studies in Islamic Philosophy. Translated By: Dr. Fazel Asadi Amjad & Mehdi Dasht Bozorgi. Tehran: Alhoda International Cultural, Artistic & Publishing Institution, 2011, pp. 49-67:

"Research on the nature of knowledge in Islamic philosophy has been followed irregularly in different disciplines of Islamic studies. Avicenna was the leading philosopher in this respect. [...]
In the world of Islam and among the Muslim scholars, four groups deliberated the question of knowledge seriously: the theologians, the Peripatetic philosophers, the Illuminationist philosophers, and the transcendental theosophists.

The First Group: The Theological Point of View

Theological books usually started with a discussion of knowledge, raising many questions, one of these being the definition of knowledge.

Ghazzali (450 - 505 AH) in his definition of knowledge writes, "the acquisition of a form of an object by the intellect." [...] This definition does not include presentational knowledge. The important question needing to be answered is, what is the fundamental distinction between presentational knowledge and acquired knowledge, and what is the difference between the two? [...]

Summing Up

So far, different definitions have been given of knowledge, which can be classified. Some define knowledge as "the acquisition of the form of an object by intellect or mind." Ghazzali, Abhairi, Avicenna, Sheikh Eshraq and some other philosophers have accepted this view. Some theologians, such as Baqillani, Ashaari, and Fakhr-e-Razi - in one perspective have defined knowledge as "Perceiving the thing as it is." Ibn Forak and Eedji have also suggested two other views, which were explained and analised. AH and his understanding of knowledge being 'the presence of the immaterial for the immaterial.' We have two options to deal with this problem. We could suppose that knowledge has no need for a definition arguing for this view based on the two quoted argumetns presented by Mulla Sadra; "A is self-evident," and accepting that 'this judgement taht A is self-evident is a theoretical one.' Obviously that which is theoretical is capable of being demonstrated, and we can present some evidence to substantiate this. So, the first option is that we leave the issue of knowledge on the grounds of its self-evidence, saying that it does not need a definition. The second option is that we decide to provide a 'semi-definition'; in this case, among the five definitions given, Mulla Sadra's is the best because contrary to all other definitions, this definition includes presentational knwledge as well as acquired knowledge. Secondly. secondary intelligibles, philosophical or logical, like primary intelligibles, are included in this definition and thirdly, regarding concepts and affirmations, it is a comprehensive definition, unlike the definitions given by the Mutazilites, which includes only affirmations. We can add one more point here, that is, in contemporary epistemology; the current understanding is that "knowledge is true justified belief." This definition is true only of statements, propositions, and affirmative knowledge, and it does not include concepts; Mulla Sadra's definition, however, has not such deficiency, for it also includes concepts. Finally, this definition does not fall into a vicious circle referring to the essential quality of knowledge, namely 'presence'. This definition is also

compatible with the principle of the fundamentality of existence."

2. What happened regarding the interpretation of the concepts *taṣawwur* and *taṣdīq* after the Middle Ages?

I quote from [The Isfahan School—Islamic philosophy revived](#)

"Islamic philosophy flourished in the Safavid era in what scholars commonly refer to the [School of Isfahan](#). [Mir Damad](#) is considered the founder of this school. Among luminaries of this school of philosophy, the names of Iranian philosophers such as Mir Damad, [Mir Fendereski](#), [Shaykh Bahai](#) and [Mohsen Fayz Kashani](#) standout. The school reached its apogee with that of the Iranian philosopher [Mulla Sadra](#) who is arguably the most significant Islamic philosopher after Avicenna. [Mulla Sadra](#) has become the dominant philosopher of the Islamic East, and his approach to the nature of philosophy has been exceptionally influential up to this day. He wrote the [Al-Hikma al-mutaʿaliya fi-l-asfar al-ʿaqliyya al-arbaʿa](#) ("The Transcendent Philosophy of the Four Journeys of the Intellect"), a meditation on what he called 'meta philosophy' which brought to a synthesis the philosophical mysticism of Sufism, the theology of Shi'a Islam, and the Peripatetic and Illuminationist philosophies of Avicenna and [Suhrawardi](#).

According to the Iranologist Richard Nelson Frye:

"They were the continuers of the classical tradition of Islamic thought, which after Averroes died in the Arab west. The Persians schools of thought were the true heirs of the great Islamic thinkers of the golden age of Islam, whereas in the Ottoman empire there was an intellectual stagnation, as far as the traditions of Islamic philosophy were concerned."

I would like to mention particularly Mullā Ṣadrā (1572-1640) and his treatise *al-Tasawwur wa'l-tasdiq*.

Ṣadr ad-Dīn Muḥammad Shīrāzī, also called Mullā Sadrā
ملا صدرا;
(1572-1640)
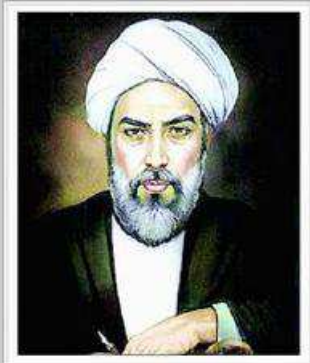
I quote from http://en.wikipedia.org/wiki/Mulla_Sadra

"Mullā Sadrā [...] was the most prominent Iranian Shia Islamic philosopher, theologian and 'Ālim who led the Iranian cultural renaissance in the 17th century. According to Oliver Leaman, Mulla Sadra is arguably the single most important and influential philosopher in the Muslim world in the last four hundred years.

[...]

Mullā Sadrā metaphysics gave priority "Ab initio" to existence, over quiddity. That is to say, essences are determined and variable according to existential "intensity", (to use Henry Corbin's definition), and as such essences are not immutable. The advantage to this schema is that it is acceptable to the fundamental statements of the Qur'an, even as it does not necessarily debilitate any previous Islamic philosopher's Aristotelian or Platonic foundations.

Indeed, Mullā Sadrā provides immutability only to God, while intrinsically linking essence and existence to each other, and God's power over existence. In so doing, Mullā Sadrā simultaneously provided for God's authority over all things, while also solving the problem of God's knowledge of particulars, including those that are evil, without being inherently responsible for them — even as God's authority over the existence of existences that provide the framework for evil to exist. This clever solution provides for Freedom of Will, God's Supremacy, the Infiniteness of God's Knowledge, the existence of Evil, and a definition of existence and essence which leaves two inextricably linked insofar as Man is concerned, but fundamentally separate insofar as God is concerned.

Perhaps most importantly, the Primacy of Existence solution provides the capacity for God's Judgement without God being

directly, or indirectly, affected by the evil being judged. God does not need to possess Sin to know Sin: God is able to judge the intensity of Sin as God perceives Existence.

One result of this Existentialism is "The unity of the intellect and the intelligible" (Arabic: *Ittihad al-Aaqil wa l-Maqul*. As Henry Corbin describes:

> "All the levels of the modes of being and perception are governed by the same law of unity, which at the level of the intelligible world is the unity of intellection, of the intelligizing subject, and of the Form intelligized — the same unity as that of love, lover and beloved. Within this perspective we can perceive what Sadra meant by the unitive union of the human soul, in the supreme awareness of its acts of knowledge, with the active Intelligence which is the Holy Spirit. It is never a question of an arithmetical unity, but of an intelligible unity permitting the reciprocity which allows us to understand that, in the soul which it metamorphoses, the Form—or Idea—intelligized by the active Intelligence is a Form which intelligizes itself, and that as a result the active Intelligence or Holy Spirit intelligizes itself in the soul's act of intellection. Reciprocally, the soul, as a Form intelligizing itself, intelligizes itself as a Form intelligized by the active Intelligence."

I quote John Cooper in:
http://www.muslimphilosophy.com/ip/rep/H027.htm

> "Mullā Sadrā's radical ontology also enabled him to offer original contributions to epistemology, combining aspects of Ibn Sina's theory of knowledge (in which the Active Intellect, while remaining utterly transcendent, actualizes the human mind by instilling it with intellectual forms in accordance with its state of preparation to receive these forms) with the theory of self-knowledge through knowledge by presence developed by al-Suhrawardi. Mullā Sadrā's epistemology is based on the identity of the intellect and the intelligible, and on the identity of knowledge and existence. His theory of substantial motion, in which existence is a dynamic process constantly moving towards greater intensity and perfection, had allowed him to explain that new forms, or modes, of existence do not replace prior forms but on the contrary subsume them. Knowledge, being identical with existence, replicates this process, and by acquiring successive intelligible forms - which are in reality modes of being and not essential forms, and are thus successive intensifications of existence - gradually moves the human intellect towards identity with

the Active Intellect. The intellect thus becomes identified with the intelligibles which inform it.

Furthermore, for Mullā Sadrā actual intelligibles are self-intelligent and self-intellected, since an actual intelligible cannot be deemed to have ceased to be intelligible once it is considered outside its relation to intellect. As the human intellect acquires more intelligibles, it gradually moves upwards in terms of the intensification and perfection of existence, losing its dependence on quiddities, until it becomes one with the Active Intellect and enters the realm of pure existence. Humans can, of course, normally only attain at best a partial identification with the Active Intellect as long as they remain with their physical bodies; only in the case of prophets can there be complete identification, allowing them to have direct access to knowledge for themselves without the need for instruction. Indeed, only very few human minds attain identification with the Active Intellect even after death."

I quote from Sayeh Meisami: Mulla Sadra. In the *Internet Encyclopedia of Philosophy* http://www.iep.utm.edu/sadra/

"Mulla Sadra was determined to construct a spacious house of "transcendental philosophy" that could accommodate the apparently conflicting paths in Islamic history towards the ultimate wisdom. He was also heir to a long tradition of philosophy in Persia which had adopted the methodology of Greek philosophy and interpreted it not only in accordance with the Islamic faith, but also implicitly and partly in continuation of the antique Persian traditions. Similar to his past philosophical masters Ibn Sina (d. 1037) and Suhrawardi (d. 1191), but unaware of Ibn Rushd's (d.1198) criticism of Neoplatonism in Islamic philosophy, Mulla Sadra relied on Neoplatonic precepts which had been taken for Aristotelian ideas by preceding philosophers. In particular, he followed Suhrawardi by adopting a holistic method of philosophy in which reason is accompanied by intuition, and intellection is the realization of the quintessence of the human soul, with prophecy (nubuwwa) and sainthood (wilaya) as the noblest manifestations of it. It is based on this holistic attitude that on the one hand, Mulla Sadra synthesizes the two main schools of Islamic philosophy, namely, the Peripatetic and Illuminationist schools, and on the other hand, bridges the gaps between philosophy, theology, and mysticism. While Mulla Sadra's philosophical methodology is rational in the sense of building his arguments on premises that consist in evident propositional beliefs, he does not reduce philosophical process to mere abstract logical reasoning. The pivotal place

of intuition in his philosophical methodology is especially reflected by the influence of Ibn Arabi (d. 1240) throughout his works and by the fact that he regarded Ibn Arabi's writings as having a philosophical character with a "demonstrative force" (al-Asfar I 315). Whether we understand Mulla Sadra's use of intuition as "a higher form of reason" in the Platonic sense (Rahman 1975, 6), or as a prophetic experience that turns philosophy into "theosophy" (Nasr 1997, 57), in reality there is no actual separation between reason and intuition in Mulla Sadra's philosophy. Rather than considering ratiocination (that is, the process of exact thinking) and intuition as independent ways leading to different visions of the truth, for him they merge into one path complementing and completing each other. [...]

Mulla Sadra's epistemology is not prior to but based on his findings about the nature of reality. Though this may sound like begging the question from the perspective of modern philosophy, it is consistent with the totality of Mulla Sadra's system in which everything including knowledge itself is a form of being. It is for this reason that he studies knowledge as a subject of first philosophy, namely, the study of being qua being. He diverges from what he criticises in Ibn Sina as the negative process of abstraction (al-Asfar III 287) in favour of the positive presence of noetic or mental beings in the mind. For Mulla Sadra, knowledge is the realization of an immaterial being which corresponds to the extra-mental reality because it is the higher grade of the latter being.

Mulla Sadra's main contribution to Islamic epistemology lies in his diversion from the Aristotelian dualism of subject and object, in other words, knower and the known (ʿaqil wa ma'quil). He rejected the dominant theory of knowledge as the representation of the abstracted and universal form of particular objects to the mind. This innovation, though on a different ground and based on a different foundation, is comparable to the 20th century efforts made in the area of phenomenology and existentialism to get over the epistemological scepticism resulting from [Cartesian dualism](#).

a. Mental Being

In classical Islamic epistemology knowledge is divided into "knowledge by presence" that consists only in the immediate access of the soul to itself in the sense of self-consciousness, and "knowledge by acquisition" that originates in sense perception and provides the subject with an abstracted representation of the external objects, that is, the intelligible universal at the level of intellect. In line with the Neoplatonic trend of thought adopted by Suhrawardi,

Mulla Sadra replaced representation by direct presentation (hudur). For Mulla Sadra, all knowledge is, at bottom, knowledge by presence because our knowledge of the world is a direct access to what is called mental beings.

In contrast to the Peripatetic mental form or concept as a universal produced by abstraction, mental being is an immaterial and particular mode of existence with a higher intensity than the external object corresponding to it. According to Mulla Sadra, mental being is the key to the realization of all levels of knowledge including sense perception, imagination, and intellection. Upon encounter with the external world, the soul creates mental beings in a similar manner that God creates the world of substantial forms both material and immaterial (al-Shawahid al-rububiyya 43). Thus, rather than correspondence between the external object and its represented form in the mind, for Mulla Sadra the credibility of knowledge lies in the existential unity of different grades of the same being, one created by the soul and the other existing in the external world.

Although the human soul has the potentiality of creating modes of existence also in the absence of the matter, as in the case of miracles, for the average human soul, as long as she lives in the material world, contact with matter is necessary for activating the creative process of generating mental beings. In this respect, Mulla Sadra's epistemology should not be conflated with subjective idealism in that for him the physical being is a reality though of a lesser intensity than its counterpart in the soul.

b. Unity of the Knower and the Known

Mulla Sadra revolutionized epistemology with regard to the relationship between the knowing subject and her object based on the doctrine of the unity of the knower and the known previously held by the Neoplatonic Porphyry (d. 305) but strongly rejected by Ibn Sina. Siding with the former, Mulla Sadra redefines the status of knowledge. Previously, mental form was defined as a psychic quality that occurs to the immaterial substance of the soul as a mere accident (ʻarad), incapable of making any changes to the soul's essence. Conversely, for Mulla Sadra, knowledge that is made up of mental beings functions as a substantial form that actualizes the potential faculties of the soul. Similar to form and matter in the physical world, there is no real separation between the knower (soul or mind) and the immediately known object of it, that is, the mental being. To put it in a nutshell, knowledge is a single reality that, in its potentiality, is called "the knower" (ʻlim) or "the intellect"

('aqil) while in its actuality, it is "the known" (ma'lum) or the "intelligible" (ma'quil). Owing to this unity, rather than being a fixed substratum for accidental mental forms, the mind in its reality is identical to the sum of all the mental beings that are realized in it. In other words, there is no such thing as an actual mind in the absence of knowledge.

This existential unification holds at all the levels of knowledge that is confined by Mulla Sadra to sense perception, imagination, and intellection. The faculty of sense perception is a potentiality of the soul that is unified with the perceptible forms (or beings) in the occasion of contact with the sensible world. Once sensible forms (beings) are realized, a higher grade of mental beings called "the imaginal beings" are actualized in unity with the imaginative faculty of the soul. The same unification holds at the level of intellection between the intelligible forms (beings) as the actual and the intellect as potential. From this level, the human soul is capable of acquiring higher degrees of knowledge that prepares her for the final unification with the Active Intellect that is the reservoir of all knowledge, and as a result, the activator of the human mind during the creative process of knowledge formation. This epistemic elevation is at the same time the journey of the soul towards higher grades of being and spiritualization."

See the recent book by Sayeh Meisami: Mulla Sadra. Oxford 2013 as well as the dialogue with her in the Conclusion.

See also the book by Joep Lameer:

گزارش یک کتاب: ترجمه "رساله فی تصور و تصدیق" ملاصدرا به انگلیسی
CONCEPTION AND BELIEF IN SADR AL-DIN SHIRAZI
AL-RESALA FI L-TASAWWUR WA-L-TASDIQ
INTRODUCTION, TRANSLATION, AND COMMENTARY BY JOEP LAMEER
Iranian Institute of Philosophy
Tehran, 2006
http://www.irip.ir/Home/Single/175

See quotes and comments of this book below.

And, last but not least, see the research on Mullā Sadra http://polylog.net/ by Sajjad Rizvy (University of Exeter, UK) and this dialogue with Peter Adamson (LMU, University of Munich, Germany).

A comparison between Mullā Sadrā and Martin Heidegger seems to me an interesting approach not only with regard to the relation between essence and existence but also to the relation between understanding / pre-understanding

and *tasawwur* / *tasdiq*. See more on this in the [Conclusion](#).

To sum up, I quote Hasse, Dag Nikolaus, "Influence of Arabic and Islamic Philosophy on the Latin West", The Stanford Encyclopedia of Philosophy (Fall 2014 Edition), Edward N. Zalta (ed.)
http://plato.stanford.edu/archives/fall2014/entries/arabic-islamic-influence/

"Arabic Philosophy was known in the Latin West through translations, and, to a small degree, through personal contacts between Christians and Muslims, as in the case of Frederick II Hohenstaufen, who was directly acquainted with a number of Muslim scholars. A small number of Christian scholars, such as Ramón Martí and Ramón Llull, knew Arabic themselves and drew on Arabic sources when composing Latin works. Translations, however, were far more influential. The first Arabic-Latin translations to transport philosophical material into Latin Europe were the translations of texts on medicine and natural philosophy produced towards the end of the eleventh century in Italy, most of them by the translator Constantine the African, who, in contrast to later translators, tried to disguise the Arabic origin of his texts (Burnett 2006, 22–24). In Spain, in the first half of the twelfth century, several important astrological texts were translated, such as Albumasar's Great Introduction to Astrology, which incorporated much material of the Aristotelian tradition (Lemay 1962).

The translations of philosophical texts proper, such as by al-Kindī, by the anonymous author of theLiber de causis, by al-Fārābī, Isaac Israeli, al-Ghazālī and Avicenna, but also of Greek works transmitted in Arabic, assumed full pace in Toledo in the second half of the twelfth century, where two very prolific translators worked: Dominicus Gundisalvi and Gerard of Cremona. It is likely that al-Fārābī's treatise Enumeration of the Sciences, translated twice, by Gundisalvi and Gerard, served as a model for a coherent translation program. An indication of this is that later Toledan translators such as Alfred of Shareshill, Michael Scot and Hermannus Alemannus filled in gaps in al-Fārābī's list of disciplines which the earlier translators had not covered (Burnett 2001). The translation movement was also influenced by the philosophical preferences of Jewish scholars. Gundisalvi worked together with the Jewish scholar Avendauth when translating Avicenna's De anima, which Avendauth had recommended for translation, and Gundisalvi's other translations may also go back to such recommendations. The impressive Spanish translation movement was motivated and fostered by several factors: the personal interest of individual translators; the demand

for scientific texts by the French schools; the availability of Arabic manuscripts in cities newly conquered by the Christians; the patronage of the archbishop of Toledo; and by clerical interests in promoting Latin scientific culture in an Arabic-speaking Christian environment (Hasse 2006, 79–84).

The next important phase of the transmission were the translations made in Sicily and southern Italy by several translators associated with the Hohenstaufen or the papal court, the most productive of which were the Averroes translators Michael Scot and William of Luna (Hasse 2010). It was only about thirty years after Averroes' death in 1198 that Latin Averroes translations became available in the newly developing universities (Gauthier 1982b). In 1255, the statutes of the Parisian arts faculty declared all known works of Aristotle mandatory reading for the students – a very influential move, which much contributed to the rise of Averroes' commentaries as the principal secondary literature of Latin university culture.

After about 1300, Arabic-Latin translation activities ceased almost entirely, to resume again after 1480. The Renaissance translations were mostly produced by Italian Jews from Hebrew versions of Arabic texts, an exception being Andrea Alpago's Avicenna translations from Arabic, which were produced in Damascus (Tamani 1992; Burnett 1999). The social context of these translations was the vibrant philosophical culture of Italian universities and especially of Padua, and the patronage of Italian scholars belonging to the Italian nobility, who had been educated in these universities (Hasse 2006). The impact of these Renaissance translations, which is weaker than that of the medieval translations, remains largely unexplored. It has aleady been shown that the new translations influenced the logical and zoological discussions of the sixteenth century (Perfetti 2000, 106-109; Perfetti 2004, XVII-XVIII; Burnett 2013). In the second half of the sixteenth century, interest in Arabic philosophy and sciences declined, and with it the Arabic-(Hebrew-)Latin translation movement. At the same time, the new academic study of Arabic culture developed, which was motivated primarily by historical and philological, but not by philosophical interests. From the seventeenth century onwards, translations into vernacular languages gradually replaced Latin translations from Arabic (Bobzin 1992).

The corpus of Arabic philosophical texts translated into Latin was substantial: A recent publication lists 131 textual items (Burnett 2005; see Kischlat 2000, 53–54, 196–198 for manuscript distribution; on Avicenna translations see

Bertolacci 2011). The introduction of Arabic philosophy into Latin Europe led to the transformation of almost all philosophical disciplines. The influence is particularly dominant in natural philosophy, psychology and metaphysics, but is also felt in logic and ethics. The Arabic impact is particularly strong in the thirteenth century, but some Arabic traditions, such as Averroes' intellect theory, reach the high point of their influence in Latin Europe as late as around 1500 (The influence of Jewish philosophers writing in Arabic, such as Ibn Gabirol and Maimonides, is not covered in this article)."

3. How would a discourse on message theory ('angeletics') in a Iranian context look like?

Darius I, the Great
Old Persian: Dārayava(h)uš; New Persian داریوش یکم هخامنشی c. 550–486 BC
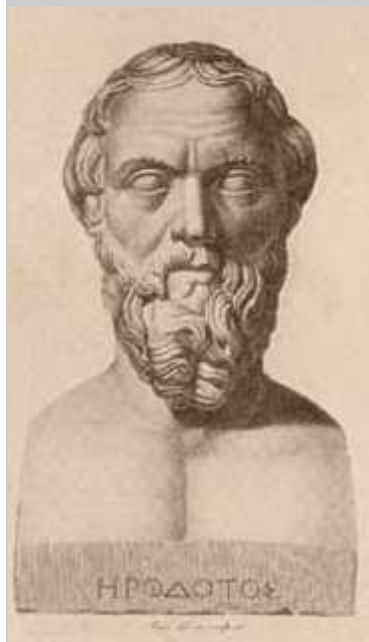

Source: http://en.wikipedia.org/wiki/Darius_I

created the Persian Royal Road

The map of Achaemenid Empire and the section of the Royal Road noted by Herodotus
Source: http://en.wikipedia.org/wiki/Royal_Road

praised by Herodotus - Ἡρόδοτος
c. 485 Halicarnassus - 424 BC

Source: http://www.sacred-texts.com/cla/hh/

"There is nothing in the world that travels faster than these Persian couriers. Neither snow nor rain nor heat nor gloom of night stays these couriers from the swift completion of their appointed rounds"[...] "sometimes thought of as the United States Postal Service creed." http://en.wikipedia.org/wiki/Royal_Road

Herodotus, History, Book 8, Urania:

98. [1] ταῦτά τε ἅμα Ξέρξης ἐποίεε καὶ ἔπεμπε ἐς Πέρσας **ἀγγελέοντα**τὴν παρεοῦσάν σφι συμφορήν. **τούτων δὲ τῶν ἀγγέλων ἐστὶ οὐδὲν ὅ τι θᾶσσον παραγίνεται θνητὸν ἐόν· οὕτω τοῖσι Πέρσῃσι ἐξεύρηται τοῦτο**. λέγουσι γὰρ ὡς ὁσέων ἂν ἡμερέων ᾖ ἡ πᾶσα ὁδός, τοσοῦτοι ἵπποι τε καὶ ἄνδρες διεστᾶσι κατὰ ἡμερησίην ὁδὸν ἑκάστην ἵππος τε καὶ ἀνὴρ τεταγμένος· τοὺς οὔτε νιφετός, οὐκ ὄμβρος, οὐ καῦμα, οὐ νὺξ ἔργει

80

μὴ οὐ κατανύσαι τὸν προκείμενον αὐτῷ δρόμον τὴν ταχίστην. [2] ὁ μὲν δὴ πρῶτος δραμὼν παραδιδοῖ τὰ ἐντεταλμένα τῷ δευτέρῳ, ὁ δὲ δεύτερος τῷ τρίτῳ· τὸ δὲ ἐνθεῦτεν ἤδη κατ᾽ ἄλλον καὶ ἄλλον διεξέρχεται παραδιδόμενα, κατά περ ἐν Ἕλλησι ἡ λαμπαδηφορίη τὴν τῷ Ἡφαίστῳ ἐπιτελέουσι. τοῦτο τὸ δράμημα τῶν ἵππων καλέουσι Πέρσαι ἀγγαρήιον.

99. [1] ἡ μὲν δὴ πρώτη ἐς Σοῦσα **ἀγγελίη** ἀπικομένη, ὡς ἔχοι Ἀθήνας Ξέρξης, ἔτερψε οὕτω δή τι Περσέων τοὺς ὑπολειφθέντας ὡς τάς τε ὁδοὺς μυρσίνῃ πάσας ἐστόρεσαν καὶ ἐθυμίων θυμιήματα καὶ αὐτοὶ ἦσαν ἐν θυσίῃσί τε καὶ εὐπαθείῃσι. [2] ἡ δὲ δευτέρη σφι **ἀγγελίη** ἐπεσελθοῦσα συνέχεε οὕτω ὥστε τοὺς κιθῶνας κατερρήξαντο πάντες, βοῇ τε καὶ οἰμωγῇ ἐχρέωντο ἀπλέτῳ, Μαρδόνιον ἐν αἰτίῃ τιθέντες. οὐκ οὕτω δὲ περὶ τῶν νεῶν ἀχθόμενοι ταῦτα οἱ Πέρσαι ἐποίευν ὡς περὶ αὐτῷ Ξέρξῃ δειμαίνοντες.
(emphasis added)

98. While Xerxes was doing thus, he sent a messenger to the Persians, to announce the calamity which had come upon them. Now there is nothing mortal which accomplishes a journey with more speed than these messengers, so skilfully has this been invented by the Persians: for they say that according to the number of days of which the entire journey consists, so many horses and men are set at intervals, each man and horse appointed for a day's journey. These neither snow nor rain nor heat nor darkness of night prevents from accomplishing each one the task proposed to him, with the very utmost speed. The first then rides and delivers the message with which he is charged to the second, and the second to the third; and after that it goes through them handed from one to the other, as in the torch-race among the Hellenes, which they perform for Hephaistos. This kind of running of their horses the Persians call angareion.

99. The first message then which came to Susa, announcing that Xerxes had Athens in his possession, so greatly rejoiced the Persians who had been left behind, that they strewed all the ways with myrtle boughs and offered incense perpetually, and themselves continued in sacrifices and feasting. The second message however,

which came to them after this, so greatly disturbed them that they all tore their garments and gave themselves up to crying and lamentation without stint, laying the blame upon Mardonios: and this the Persians did not so much because they were grieved about the ships, as because they feared for Xerxes himself.

Source: http://www.sacred-texts.com/cla/hh/hh8090.htm (emphasis added)

Rafael Capurro — John Holgate (eds.). *Messages and Messengers. Angeletics as an Approach to the Phenomenology of Communication*. Munich 2011.

What concepts of message and messenger were used in the Arabic and Persian pre-Islamic and Islamic traditions?

See:
Capurro, Rafael: Angeletics: a message theory. Persian translation by Mohammad Khandan. in: Mohammad Khandan (Ed.) *Epistemological Explorations in the Realm of Information Studies*. Tehran: Chapar (2010). Capurro, Rafael: What is angeletics? Persian translation by Mohammad Khandan. In: *Science Communication.* The monthly journal of Irandoc. Vol. 45, September-October 2009.

An important source for this issue is

[Ibn Khaldūn](#) أبو زيد عبد الرحمن بن محمد بن خلدون الحضرمي), Abū Zayd ʿAbdu r-Raḥmān bin Muḥammad bin Khaldūn Al-Ḥaḍrami; May 27, 1332 CE – March 19, 1406 CE)

I quote from Wikipedia Ibn Khaldun:

"The Kitābu l-ʿibār (full title: Kitābu l-ʿibar wa Diwānu l-Mubtada' wa l-Ḥabar fī tarikhi l-ʿarab wa l-Barbar wa man ʿĀsarahum min Đawī Ash-Sha'n l-Akbār "Book of lessons, Record of Beginnings and Events in the history of the Arabs and Berbers and their Powerful Contemporaries"), Ibn Khaldūn's main work, was originally conceived as a history of the Berbers. Later, the focus was widened so that in its final form (including its own methodology and anthropology), to represent a so-called "universal history". It is divided into seven books, the first of which, the Muqaddimah, can be considered a separate work. Books two to five cover the history of mankind up to the time of Ibn Khaldūn. Books six and seven cover the history of the Berber peoples and the Maghreb, which remain invaluable to present-day historians, as they are based on Ibn Khaldūn's personal knowledge of the Berbers."

I quote from the Preliminary Remarks of Book One of the *Kitab al-'Ibar*;

> "IT SHOULD be known that history, in matter of fact, is information about human social organization, which itself is identical with world civilization [**'umrān**]. It deals with such conditions affecting the nature of civilization as, for instance, savagery and sociability ['asabīya], group feelings, and the different ways by which one group of human beings achieves superiority over another It deals with royal authority and the dynasties that result (in this manner) and with the various ranks that exist within them. (It further deals) with the different kinds of gainful occupations and ways of making a living, with the sciences and crafts that human beings pursue as part of their activities and efforts, and with all the other institutions that originate in civilization through its very nature.

Untruth naturally afflicts historical information. There are various reasons that make this unavoidable. One of them is partisanship for opinions and schools. If the soul is impartial in receiving information, it devotes to that information the share of **critical investigation the information deserves**, and its truth or untruth thus becomes clear. However, if the soul is infected with partisanship for a particular opinion or sect, it accepts without a moment's hesitation the information that is agreeable to it. Prejudice and partisanship obscure the critical faculty and preclude critical investigation. The result is that falsehoods are accepted and transmitted.

Another reason making untruth unavoidable in historical information is reliance upon **transmitters**. Investigation of this subject belongs to (the theological discipline of) personality criticism.

Another reason is unawareness of the purpose of an event. Many a transmitter does not know the real significance of his observations or of the things he has learned about orally. He transmits the information, attributing to it the significance he assumes or imagines it to have. The result is falsehood.

Another reason is unfounded assumption as to the truth of a thing. This is frequent. It results mostly from reliance upon transmitters.

Another reason is ignorance of how conditions conform with reality. Conditions are affected by ambiguities and artificial distortions. The informant reports the conditions as he saw them but on account of artificial distortions he himself has no true picture of them.

Another reason is the fact that people as a rule approach great and high-ranking persons with praise and encomiums. They embellish conditions and spread the fame (of great men). The information made public in such cases is not truthful. Human souls long for praise, and people pay great attention to this world and the positions and wealth it offers. As a rule, they feel no desire for virtue and have no special interest in virtuous people.

Another reason making untruth unavoidable - and this one is more powerful than all the reasons previously mentioned is ignorance of the nature of the various conditions arising in civilization. Every event (or phenomenon), whether (it comes into being in connection with some) essence or (as the result of an) action, must inevitably possess a nature peculiar to its essence as well as to the accidental conditions that may attach themselves to it. If the student knows the nature of events and the circumstances and requirements in the world of existence, it will help him to distinguish truth from untruth in investigating the historical information critically. This is more effective in critical investigation than any other aspect that may be brought up in connection with it.

Students often happen to accept and transmit absurd information that, in turn, is believed on their authority. AlMas'udi, for instance, reports such a story about Alexander. Sea monsters prevented Alexander from building Alexandria. He took a wooden container in which a glass box was inserted, and dived in it to the bottom of the sea. There he drew pictures of the devilish monsters he saw. He then had metal effigies of these animals made and set them up opposite the place where building was going on. When the monsters came out and saw the effigies, they fled. Alexander was thus able to complete the building of Alexandria.

It is a long story, made up of nonsensical elements which are absurd for

various reasons. Thus, (Alexander is said) to have taken a glass box and braved the sea and its waves in person. Now, rulers would not take such a risk . Any ruler who would attempt such a thing would work his own undoing and provoke the outbreak of revolt against himself, and (he would) be replaced by the people with someone else. That would be his end. People would not (even) wait one moment for him to return from the (dangerous) risk he is taking.

[...]

There are many similar things. Only knowledge of the nature of civilization makes critical investigation of them possible. It is the best and most reliable way to investigate historical information critically and to distinguish truth and falsehood in it. It is superior to investigations that rely upon criticism of **the personalities of transmitters**. Such personality criticism should not be resorted to until it has been ascertained **whether a specific piece of information is in itself possible, or not**. If it is absurd, there is no use engaging in personality criticism. Critical scholars consider absurdity inherent in the literal meaning of historical information, or an interpretation not acceptable to the intellect, as something that makes such information suspect. Personality criticism is taken into consideration only in connection with the soundness (or lack of soundness) of Muslim religious information, because this religious information mostly concerns injunctions in accordance with which the Lawgiver (Muhammad) enjoined Muslims to act whenever it can be presumed that the information is genuine. The way to achieve presumptive soundness is to ascertain the probity (`adalah) and exactness of the transmitters.

On the other hand, to establish the truth and soundness of information about factual happenings, **a requirement to consider is the conformity (or lack of conformity of the reported information with general conditions)**. Therefore, it is necessary to investigate whether it is possible that the (reported facts) could have happened. This is more important than, and has priority over, personality criticism. For the correct notion about something that ought to be can be derived only from (personality criticism), while the correct notion about something that was can be derived from (personality criticism) and external (evidence) by (checking) the conformity (of the historical report with general conditions).

If this is so, the normative method for distinguishing right from wrong in historical information on the grounds of (inherent) possibility or absurdity, is to investigate human social organization, which is identical with civilization. We must distinguish the conditions that attach themselves to the essence of civilization as required by its very nature; the things that are accidental (to civilization) and cannot be counted on; and the things that cannot possibly attach themselves to it. If we do that, we shall have a normative method for distinguishing right from wrong and truth from falsehood in historical information by means of a logical demonstration that admits of no doubts. Then whenever we hear about certain conditions occurring in civilization, we shall know what to accept and what to declare spurious. We shall have a sound yardstick with the help of which historians may find the path of truth and correctness where their reports are concerned." (emphasis added)

See   also:
Charles Issawi, Oliver Leaman: Ibn Khaldun. 'Abd al-Rahman (1332-1406) in: Muslim Philosophy, Routledge 1998.

85

"However, it is Ibn Khaldun's views on the nature of the state and society which reveal most clearly both his profundity and the originality that marks him off so sharply from his Muslim predecessors and successors. Ibn Khaldun fully realised that he had created a new discipline, **'ilm al-'umran, the science of culture**, and regarded it as surprising that no one had done so before and demarcated it from other disciplines. **This science can be of great help to the historian by creating a standard by which to judge accounts of past events.** Through the study of human society, one can distinguish between the possible and the impossible, and so distinguish between those of its phenomena which are essential and those which are merely accidental, and also those which cannot occur at all. He analysed in detail the sources of error in historical writings, in particular partisanship, overconfidence in sources, failure to understand what is intended, a mistaken belief in the truth, the inability to place an event in its real context, the desire to gain the favour of those in high rank, exaggeration, and what he regarded as the most important of all, ignorance of the laws governing the transformation of human society. Ibn Khaldun's attitude to the study of social phenomena is suffused with a spirit which has caused several commentators to call him the founder of sociology. His attempt at creating a theoretical structure for the analysis of history is a very impressive contribution to the philosophy of history (see History, philosophy of; Society, concept of).

For Ibn Khaldun, human society is necessary since the individual acting alone could acquire neither the necessary food nor security. Only the division of labour, in and through society, makes this possible. The state arises through the need of a restraining force to curb the natural aggression of humanity. A state is inconceivable without a society, while a society is well-nigh impossible without a state (see Political philosophy in classical Islam). Social phenomena seem to obey laws which, while not as absolute as those governing natural phenomena, are sufficiently constant to cause social events to follow regular and well-defined patterns and sequences. Hence a grasp of these laws enables the sociologist to understand the trend of events. These laws operate on masses and cannot be significantly influenced by isolated individuals. There is very little talk of 'great men' in Ibn Khaldun's books; while individuals do affect the course of events, their influence is very limited.

The overwhelming impression given by Ibn Khaldun's writings is that society is an organism that obeys its own inner laws. These laws can be discovered by applying human reason to data either culled from historical records or obtained by direct observation. These data are fitted into an implicit framework derived from his views on human and social nature, his religious beliefs and the legal precepts and philosophical principles to which he adheres. He argues that more or less the same set of laws operates across societies with the same kind of structure, so that his remarks about nomads apply equally well to Arab Bedouins, both contemporary and pre-Islamic, and to Berbers, Turkomen and Kurds. These laws are explicable sociologically, and are not a mere reflection of biological impulses or physical factors. To be sure, facts such as climate and food are important, but he attributes greater influence to such purely social factors as cohesion, occupation and wealth. This comes out very clearly in his discussion of national characters, for example of Arabs, Persians and Jews, where he is careful to point out that what are regarded as characteristic features can be explained by sociological factors such as nomadism, urbanization and oppression. Similarly, different social groups, such as townspeople, nomads and traders, have their own characteristics derived from their occupations.

Ibn Khaldun sees the historical process as one of constant cyclical change, due mainly to the interaction of two groups, nomads and townspeople. These form the two poles of his mental map; peasants are in between, supplying the towns with food and tax revenue and taking handicrafts in return. Nomads are rough, savage and uncultured, and their presence is always inimical to civilization; however, they are hardy, frugal, uncorrupt in morals, freedom-loving and self-reliant, and so make excellent fighters. In addition, they have a strong sense of **'asabiya**, which can be translated as **'group cohesion' or 'social solidarity**'. This greatly enhances their military potential. Towns, by contrast, are the seats of the crafts, the sciences, the arts and culture. Yet luxury corrupts them, and as a result they become a liability to the state, like women and children who need to be protected. Solidarity is completely relaxed and the arts of defending oneself and of attacking the enemy are forgotten, so they are no match for conquering nomads.

Ibn Khaldun then traces very clearly the political and social cycle. Nomads conquer territories and their leaders establish a new dynasty. At first the new rulers retain their tribal virtues and solidarity, but soon they seek to concentrate all authority in their own hands. Increasingly they rule through a bureaucracy of clients - often foreigners. As their former supporters lose their military virtues there is an increasing use of mercenaries, and soldiers come to be more important than civilians. Luxury corrupts ethical life, and the population decreases. Rising expenditure demands higher taxes, which discourage production and eventually result in lower revenues. The ruler and his clients become isolated from the groups that originally brought them to power. Such a process of decline is taken to last three generations, or about one hundred and twenty years. Religion can influence the nature of such a model; when 'asabiya is reinforced by religion its strength is multiplied, and great empires can be founded. Religion can also reinforce the cohesion of an established state. Yet the endless cycle of flowering and decay shows no evolution or progress except for that from the primitive to civilized society.

Ibn Khaldun does occasionally refer to the existence of turning points in history, and thought that he was himself witnessing one of them. The main cause for this great change was the Black Death, which had a profound effect upon Muslim society, together with the Mongol invasions; and he may also have been impressed by the development of Europe, whose merchants and ships thronged the seaports of North Africa and whose soldiers served as mercenaries in the Muslim armies. He suggests that a general change in conditions can produce an entirely new social and political scene, rather as if a new world had been created. [...]
Ibn Khaldun is also critical of Neoplatonic philosophy (see Neoplatonism in Islamic philosophy). The main object of his criticism is the notion of a hierarchy of being, according to which human thought can be progressively purified until it encompasses the First Intellect which is identified with the necessary being, that is, God. He argued that this process is inconceivable without the participation of revelation, so that it is impossible for human beings to achieve the highest level of understanding and happiness through the use of reason alone. Interestingly, the basis of his argument here rests on the irreducibility of the empirical nature of our knowledge of facts, which cannot then be converted into abstract and pure concepts at a higher level of human consciousness.

Ibn Khaldun also had little respect for the political theories of thinkers like al-Farabi (§4), with their notions of rational government being based upon an ideal prophetic law. He saw little point in using theories

which dealt with ideals that have nothing to do with the practicalities of contemporary political life. Although Ibn Khaldun rarely agrees with Ibn Rushd, there is no doubt that his thought is strongly marked by the controversy between him and al-Ghazali, the latter being acknowledged as the surer guide to the truth. The basis of Ibn Khaldun's critique of philosophy is his adherence to the notion of the state. Religion has a vital role in society, and any argument that it can be identified with either reason or contact with God is to threaten that function. This is doubtless the basis of his attack on Islamic philosophy and on mysticism.

Although Ibn Khaldun is hostile to a version of Islamic philosophy, his discussion of society is full of observations and ideas which clearly have as their source philosophical distinctions. For example, his account of the three stages in the development of the state, from the nomadic to the militant and finally to the luxurious and decadent is modelled on the three types of soul in Greek thought (see Soul in Islamic philosophy §2), as is his notion of **'asabiya, of the spirit of cohesion**, as a point of equilibrium between different aspects of the soul. One of the features of Ibn Khaldun's work which makes it so thought-provoking is the tension, which he never finally resolved, between a concern to acknowledge the facts of historical change while at the same time bringing those facts under very general theoretical principles. His contribution to the philosophy of history is outstanding." (emphasis added)

See also: Annemarie Schimmel: Ibn Chaldun. Ausgewählte Abschnitte aus der muqaddima. Tübingen: Mohr 1951. Her translation of Chapter 1, First Prepatory Discussion of the Kitab al-'Ibar:

"Die Philosophen drücken das aus, indem sie sagen: 'Der Mensch ist von Natur ein Städter', d.h. er braucht unbedingt den Zusammenschluß, der in ihrer Terminologie mit 'Stadt' bezeichnet wird; das ist gleichbedeutend mit Kultur ('umrān)."(2) (S. 18)

(2) πόλις wird hier im Arabischen wörtlich mit madīna, Stadt, wiedergegeben."

To be compared with:

"HUMAN SOCIAL ORGANIZATION is something necessary. The philosophers expressed this fact by saying: "Man is `political' by nature." That is, he cannot do without the social organization for which the philosophers use the technical term "town" (*polis*). This is what civilization means."
http://www.muslimphilosophy.com/ik/Muqaddimah/Chapter1/Ch_1_01.htm

See also: Mohamed Turki: Convivencia und Toleranz in Al-Andalus. In: Polylog. Zeitschrift für interkulturelles Philosophieren, 32, 2014, 5-26:
"Es waren die "charistmatische" Macht des Islam und das Gefühl des Zusammenhalts, das sie miteinander verband, und was der Historiker Ibn-Khaldun (1336-1406) später in der berühmten Einleitung (*al-Muquadimma*) zu seiner Geschichtschronik *Buch der Beispiele* (13)"'Aṣabiyya"(14) nannte, welche ihnen zum Sieg verhalf. Diese 'Aṣabiyya, die "nur durch enge Verbundenheit, die aus gemeinsamer Abstammung oder etwas Ähnlichem herrührt, zustande" (15) kommt, war in der damaligen Zeit eine Grundkraft für die islamische Ausdehnung, obwohl sie in der Überlieferung als ausgrenziende Stammes-Solidarität vom Propheten Muhammad als Sünde verworfen wurde. Sie erinnerte nämlich an die vorislamische

Stammestradition und stand im Grunde dem islamischen Prinzip der Gleichheit der Menschen vor Gott entgegen. Dennoch spielte sie bei der Eroberung neuer Gebiete eine entscheidende Rolle. So konnte das islamische Heer in nur drei Jahren das westgotische Reich in Spanien überrollen und seine Herrschaft über weite Teile der iberischen Halbinsel ausstrecken. Toledo wurde dann zur Hauptstadt des neuen Gouverneurs von Al-Andalus gewählt, der in Vertretung des Umayyaden-Kalifen in Damaskus regierte." (S. 8)

(13) Abdulrahman Ibn Khaldūn: *Buch der Beispiele, Die Einführung, al-Muqaddima,* Übersetzung, Auswahl, Vorbemerkungen und Anmerkungen von Mathias Pätzold, Reclam Verlag, Leipzig 1992.

(14) Zur näheren Bestimmung des 'Asabiyya-Begriffs im Werk von Ibn Khaldūn siehe: T. Khemiri: Der 'Aṣabiyya Begriff in der Muqadimma des Ibn Khaldūn, in: *Der Islam*, Nr. 23 (1936), S. 163-188.

(15) Ibn Khaldūn: *Buch der Beispiele, Die Einführung, al-Muqaddima*, Fn. 13, S. 78.

See also: Peter Enz: Religion und Rebellion. Ibn Khaldun und die revolutionäre Bewerung. In: Polylog. Zeitschrift für interkulturelles Philosophieren, 30 (2013), 105-115:

"Ganz zu Beginn war es der Anspruch Ibn Khalduns, aus der Geschichtswissenschaft eine zuverlässige Wissenschaft zu machen, indem er ihr beibringt, einzelne geschichtliche **Ereignisse** aus Kausalketten herzuleiten und so zu erklären. Manche Ereignisse lassen sich aber so nicht herleiten, auch wenn sie massive Folgen auf die politischen, kulturellen, wirtschaftliche und sozialen Entwicklungen haben, wie etwa das religiöse Ereignis bei Ibn Khaldun. Badiou würde sagen: Auch das revolution#re Ereignis fällt in diese Kategorie. Das wird deutlich, wenn man sich als Beispiel die Revolten des Arabischen Frühlings ansieht. [...]

Wie das Ereignis seine *Asabiya* färbt (in den Worten Ibn Khaldungs) ist beim revolutionären Ereignis besonders deutlich. Das hereinbrechende Ereignis ist immer **ein Aufruf**, es bringt immer **eine Botschaft**, die Anerkennung fordert. Es prägt die *Asabiya*, die aus dem Ereignis entspringt, ein Set von Regeln und Idealen, eine Utopie und ein Ziel auf.[...]

Der Gefahr der Vereinnahmung und des Missverständnisses, nämlich dass sich damit die Wahrheitsansprüche beliebiger extremistischer Bewegungen rechtfertigen lassen, entgehen beide, Ibn Khaldun und Badiou, indem sie verkünden, dass eine wahre religiöse oder politische Botschaft immer ein bestimmtes Gepräge hat. Gewisse Werte sind allen wahren Ereignissen gemeinsam, so untesrchiedlich sie in ihren Details auch sein mögen. Laut Badiou ist jede wahre Politik auf Gleichheit und Gerechtigkeit ausgerichtet. Diese gemeinsame Wahrheit fehlt falschen oder Scheinereignissen. Ibn Khaldun erwägt nur ein religiöses Ereignis und dessen Wahrheit als Zündfunken einer *Asabiya*. Über Ibn Khaldun hinausgehend kann man sich nun auch andere Zündfunken vorstellen, d.h. andere, revolutionäre Ereignisse mit anderen, **revolutionären Botschaften**, Forderungen und Zielen, von denen die *Asabiya* einer Gruppe geprägt ist." (p. 114-115, emphasis added).

ON THE DIFFERENCE BETWEEN MESSAGE AND INFORMATION

I draw a difference between message and information. I quote from my [Angeletics - A Message Theory](#) (2003):

"Message and information are related but not identical concepts:

- a message is sender-dependent, i.e. it is based on a heteronomic or asymmetric structure. This is not the case for information: we receive a message, but we ask for information,
- a message is supposed to bring something new and/or relevant to the receiver. This is also the case for information,
- a message can be coded and transmitted through different media or messengers. This is also the case for information,
- a message is an utterance that gives rise to the receiver's selection through a release mechanism or interpretation."

The term information as used in modern Western languages such as English or Spanish ('información') in the sense of 'communication of new and relevant knowledge' is derived from the Latin 'informatio' and the Greek *eidos*, *idea*, *typos* and *morphe* from which the ontological meaning ('moulding matter') was rejected in Modernity whereas the epistemological meaning ('moulding the soul' or 'educating') remained. In modern Greek the term used for information is *plerophoria*. I quote from [Wikipedia](#):

"The ancient Greek word for information is πληροφορία, which transliterates (plērophoria) from πλήρης (plērēs) "fully" and φέρω (phorein) frequentative of (pherein) to carry-through. It literally means "fully bears" or "conveys fully". In modern Greek language the word Πληροφορία is still in daily use and has the same meaning as the word information in English. Unfortunately biblical scholars have translated (plērophoria) into "full assurance" creating a connotative meaning of the word. In addition to its primary meaning, the word Πληροφορία as a symbol has deep roots in Aristotle's semiotic triangle. In this regard it can be interpreted to communicate information to the one decoding that specific type of sign. This is something that occurs frequently with the etymology of many words in ancient and modern Greek language where there is a very strong denotative relationship between the signifier, e.g. the word symbol that conveys a specific encoded interpretation, and the signified, e.g. a concept whose meaning the interpretant attempts to decode."

According to [The Online Liddell-Scott-Jones Greek-English Lexikon](#) *plerophoria* is used only three times in The New Testament and not in 'ancient Greek'. There was no 'unfortunate' translation by 'biblical scholars'. *Plerophoria* is the word used for information in *present* Greek. It was probably from this New Testament meaning of 'fullness of assurance, certainty' (Liddell-Scott-Jones) that the word came to be used in modern Greek in the sense of information, not the other way around. It is also not clear why this word that was not used in classical Greek should have "deep roots" in Aristotle's 'semiotic triangle'. A critical analysis of Aristotle's rhetoric and modern semiotics is lacking. See my [Hermeneutik der Fachinformation](#) (1986), Ch. II, 1, b:

"wenn anstatt von Sprecher und Hörer, von "Sender" und "Empfänger" die Rede ist, wird das aristotelische Verständnis der zwischenmenschlichen Kommunikation aus seinem spezifischen Zusammenhang gerissen. Dieser Zusammenhang ist die vom Sprecher und Hörer gemeinsam erfahrene Welt, auf deren jeweilige Bezüge das Gesprochene hinweist.[131] Die mögliche Korrespondenz zwischen dem Gesprochnen und den anvisierten Dingen selbst ist keine Eins-zu-Eins-Beziehung wie bei einem Code-Vorrat. Ziel der menschlichen Kommunikation im Sinne eines Re-konstitutions- prozesses ist nicht die Dekodierung vermittelter Zeichen, sondern die gemeinsame Erkenntnis der Dinge (*prágmata*), auf die die Worte (möglicherweise) verweisen. Diese gemeinsam erfahrene Realität wird jeweils durch unterschiedliche Erkenntnishaltungen (*pathémata*) auf verschiedene Art vernommen. Obwohl Aristoteles die Abbild-Metaphorik insbesondere in Zusammenhang mit dem Prozeß der sinnlichen Wahrnehmung verwendet,[132] erkennt der Mensch nicht durch Angleichung der "Seele" an ein physisches Ding, eine wohl phantastische Vorstellung, sondern aufgrund eines anderen menschlichen Verhaltens, nämlich des Denkens, wodurch das Allgemeine am Vernommenen selbst erfahren wird.

[131]Vgl. L.W. Rosenfield: Aristotle and Information Theory (The Hague 1971), S. 79: "Meaning in this Greek view is logically limited by the constraints of reality. And because it is so limited, the meaning of a word also attains a degree of permanence, in a logical sense, which is characteristic of a denotative reference."

[132] Vgl. Aristoteles: De Anima 430a;

ders.: [De memoria 450a](#):

ἡ γὰρ γιγνομένη κίνησις ἐνσημαίνεται οἷον τύπον τινὰ τοῦ αἰσθήματος, καθάπερ οἱ σφραγιζόμενοι τοῖς δακτυλίοις. The process of movement (sensory stimulation) involved the act of perception stamps in, as it were, a sort of impression of the percept, just as persons do who make an impression with a seal. ([Transl. J.I. Beare](#))

Another critical note on the Wikipedia [Information article](#). I quote:

"The English word was apparently derived from the Latin stem (information-) of the nominative (informatio): this noun is derived from the verb informare (to inform) in the sense of "to give form to the mind", "to discipline", "instruct", "teach". Inform itself comes (via Frenchinformer) from the Latin verb informare, which means to give form, or to form an idea of. Furthermore, Latin itself already contained the word informatio meaning concept or idea, but the extent to

which this may have influenced the development of the word information in English is not clear. The ancient Greek word for form was μορφή (morphe; cf. morph) and also εἶδος (eidos) "kind, idea, shape, set", the latter word was famously used in a technical philosophical sense by Plato (and later Aristotle) to denote the ideal identity or essence of something (see Theory of Forms). "Eidos" can also be associated with thought, proposition, or even concept."

The English word was not "apparently derived from the Latin stem (information-)." It was indeed derived from it, i.e., from the Latin stem 'informo', not: 'information-'. "To give form to the mind" is the epistemological meaning of 'informare' that remained in Modernity until the ontological meaning was rediscovered in the 20th century (See pp. 240-268 of my [Information](#)).

In regard to "the extent to which this may have influenced the development of the word in English," the matter becomes clear if the author(s) reads [The Concept of Information](#) and my [Information](#) (Ch. 4.1.2, pp. 144ff, quoting the Oxford English Dictionary). In my [Epistemology and Information Science](#) (1985) I write:

> "In his famous English dictionary dated 1755, Dr Johnson (1709-1784) (4) mentions three uses of the word information, namely:
>
> - o Intelligence given; instruction
> - o Charge or accusation exhibited
> - o The act of informing or actuation.
>
> The second meaning is a special application in the field of law of the first epistemological sense. The third use refers to ontology which has not changed since ancient times. Both meanings have their roots in Greek philosophy but I shall not deal with the ontological meaning in this lecture.
>
> According to Dr Johnson, information means intelligence given, that is, it indicates the act of telling something to somebody who (probably) ignores the content of the message. The use of this term in everyday English goes back to the end of the 14th century. The term *instruction* is related to the process of education. Let us now look at one of Dr Johnson's quotations from Shakespeare's Coriolanus. An imprisoned slave seems to know about a forthcoming invasion. Brutus does not trust him and suggests that he should be "whipp'd" or beaten. Menenius answers Brutus in the following way:

"(...) But reason with the fellow,
Before you punish him, where he heard this,
Lest you shall chance to whip your information,
And beat the messenger who bids beware
Of what is to be dreaded."

 (Coriolanus, Act IV, Scene VI).

As we can hear, information is familiarly related to concepts such as: to reason with somebody, to listen to what somebody has to say, to a messenger and to his message. There is a context of ignorance and expectation but also of common knowledge to which the information is supposed to be significant. Information is a concept situated in the field of human language and intersubjectivity. It refers to the process of telling something to somebody and to the content being transmitted. In short, it indicates a major human characteristic."

A final critical note concerning plagiarism. The Wikipedia article on [Information History](#) states:

In their seminal book The Study of Information: Interdisciplinary Messages,[4] Machlup and Mansfield (1983) collected key views on the interdisciplinary controversy in computer science, artificial intelligence, library and information science, linguistics, psychology, and physics, as well as in the social sciences. Machlup (1983,[5] p. 660) himself disagrees with the use of the concept of information in the context of signal transmission, the basic senses of information in his view al referring "to telling something or to the something that is being told. Information is addressed to human minds and is received by human minds." All other senses, including its use with regard to nonhuman organisms as well to society as a whole, are, according to Machlup, metaphoric and, as in the case of cybernetics, anthropomorphic.

This text is taken *without quotation marks* from the [online version](#) of "Capurro, Rafael & Hjørland, Birger (2003). The concept of information. Annual review of information science and technology (p. 343-411). Medford, N.J.: Information Today. A version retrieved November 6, 2" as quoted in [1] but not with regard to this text which is indeed a quotation without quotation marks. This is the original text:

In their seminal book The Study of Information: Interdisciplinary Messages, Machlup and Mansfield (1983) collected key views on the interdisciplinary controversy in

computer science, artificial intelligence, library and information science, linguistics, psychology, and physics, as well as in the social sciences. Machlup (1983, p. 660) himself disagrees with the use of the concept of information in the context of signal transmission, the basic senses of information in his view al referring "to telling something or to the something that is being told. Information is addressed to human minds and is received by human minds." All other senses, including its use with regard to nonhuman organisms as well to society as a whole, are, according to Machlup, metaphoric and, as in the case of cybernetics, anthropomorphic.

 The online source is mentioned before as follows:

The Latin roots and Greek origins of the word "information" is presented by Capurro & Hjørland (2003).[1] References on "formation or molding of the mind or character, training, instruction, teaching" date from the 14th century in both English (according to [Oxford English Dictionary](#)) and other European languages. In the transition from Middle Ages to Modernity the use of the concept of information reflected a fundamental turn in epistemological basis – from "giving a (substantial) form to matter" to "communicating something to someone".

See my contributions in English:

[Beyond Humanisms](#) (2010)

[Digital hermeneutics: an outline](#) (2010)

[The Dao of the Information Society in China and the Task of Intercultural Information Ethics](#) (2010)

[Towards a Comparative Theory of Agents](#) (2009)

[Past, present and future of the concept of information](#) (2009)

[Interpreting the Digital Human](#) (2008)

[On Floridi's Metaphysical Foundation of Information Ecology](#) (2008)

[Towards an Ontological Foundation of Information Ethics](#) (2005)

[The Concept of Information](#) (2003)

[Ethical Issues of Online Communication Research](#) (2002)

[Philosophical Presuppositions of Producing and Patenting Organic Life](#) (2002)

[What is Angeletics?](#) (2000)

Beyond the Digital (1999)

On the Genealogy of Information (1996)

On Artificiality (1995)

More in my Digital Library.

See also the following translations and contributions by Mohammad Khandan:

Capurro, Rafael: Information Technologies and Technologies of the Self. Persian translation by Mohammad Khandan. In: Journal of Librarianship. A Quarterly Journal on Academic Librarianship. Vol. 39 (Spring & Summer) 2005, pp. 77-93.

Khandan, Mohammad: (2009). Philosophy of Information in Luciano Floridi and Rafael Capurro's Thought. Tehran: Chapar Publication; Iran Public Libraries Foundation.

Khandan, Mohammad (2009): A Comparative Study on Luciano Floridi and Rafael Capurro's informatology thoughts *Quarterly Research on Information Science and Public*, Volume 15, Number 1 (56), pp. 149-183.

Khandan, Mohammad; Horri, A. (2009): Rafael Capurro's Hermeneutic-Existential Theory ofInformation. *Library and Information Science*. Vol. 11, pp 133-154.

Khandan, Mohammad; Fadaie, Gholamreza (2009). A look at the foundations of information philosophy of Luciano Floridi. *Faslnameye Pajooheshhaie Falsafi va Kalami*, 39, 5-39.

«نگاهي به مبادي و مسائل فلسفۀ اطلاعات لوچيانو فلوريدي». تأليف محمد خندان و غلامرضا فدايي. فصلنامه پژوهش‌هاي فلسفي- كلامي. شمارۀ39 (بهار 1388)، ص 5-39.

online

Khandan, Mohammad (2009). Nature of Information in the view of Rafael Capurro. *Informology*, 20: 87-118.

«ماهيت اطلاعات در نظر رافائل كاپورو». تأليف محمد خندان. اطلاع‌شناسي. شمارۀ 20 و21 (تابستان و پاييز 1387)، ص 87- 118.

online

Khandan, Mohammad (2010). Normative ethical theories and ethical challenges in the field of information management. *Journal of Academic Librarianship and Information Research*, 44 (3): 87-121.

«نظريه‌هاي اخلاق هنجاري و چالش‌هاي اخلاقي در عرصۀ مديريت اطلاعات». تأليف محمد خندان. فصلنامه تحقيقات كتابداري و كتابخانه‌هاي دانشگاهي. شمارۀ 53 (پاييز 1389).

4. How would a discourse on Information Ethics in an Iranian context look like?

What were the major changes in the principles, norms and values of communication in pre-Islamic and Islamic Iran and how were and are such changes reflected in ethical thinking in Iran today? Is there an information ethics in Iran in dialogue with other ethical traditions and vice versa?

I quote from: Rafael Capurro, Michael Eldred and Daniel Nagel: 'IT and Privacy from an Ethical Perspective: Digital Whoness: Identity, Privacy and Freedom in the Cyberworld' in: Johannes Buchmann (ed.) *Internet Privacy*, Berlin 2012, pp. 113ff.

"Recent research in information ethics shows that the notion and practices of privacy vary in different cultural traditions, thus having an impact also on digitally mediated whoness and freedom.
This intercultural discussion is still in its initial stages with regard to the 'Far East' and also African and Latin American cultures, just as it is in comparative studies between, for instance, Europe and the United States as addressed, for instance, by Helen Nissenbaum (cf. 2.4.7 An appraisal of Nissenbaum's Privacy in Context) and Beate Rössler (cf. 2.2.10

Privacy as protection of individual autonomy – On Rössler's The Value of Privacy). How and as whom we reveal and conceal ourselves and our selves is not just an abstract conceptual matter, but is always concretized and rooted in cultural traditions. What is common and what is different shines forth from different perspectives that in some cases appear to be incompatible, although not necessarily contradictory. But even in these cases, as we shall see in the following analyses, various options for common practices and regulations are possible. The emphasis on the latter should not overlook, however, the deeper cultural layers as well as the foundational narratives on privacy and publicness.

We are still far from a global digital culture of mutual respect, validation and appreciation based on trust with regard to such cultural differences. Trust is engendered by an understanding of the otherness of the other(s) self/selves, enabling new forms of interplay between personal and socio-cultural whoness and opening new spaces of freedom to show ourselves and our selves off and also withdraw from such selfdisplay in both the cyberworld and the physical world.

[...]

Homi Bhabha, director of
the Humanities Center at Harvard University, has proposed a "global ethics that extends 'hospitality' to all those who lost their place where they belong due to an historical trauma, injustice, genocide or death".

Privacy understood from the perspective of whoness in the digitized cyberworld calls for an ethics of reciprocal hospitality, not only with regard to diverse ethical norms and principles, but also with regard to those who are marginalized in a global society in which digital technology has a dominating presence. Intercultural information ethics adopts a critical stance toward all kinds of destruction of the human habitat in the world, particularly such ways of thinking and life-practices that exclude others from their use or impose on them a particular way of playing out the interplay of whoness, thus thwarting their becoming free selves.

The thoughtful and practically oriented search for common values and principles should not overlook or 'forget' the complexity and variety of human cultures that are a genuine expression of humaneness, and not something to be overcome. This concerns, in particular, the notion of privacy conceived as what is proper to human self-understanding in being able to withdraw from others' gaze and lead one's own life shared with certain freely chosen others. An intercultural view of privacy must pay attention to what is in between cultures, allowing the individually and socially moulded self to transform and enrich

its identity through the cultural interplay both within and between cultures."

Abridged version of Rafael Capurro, Michael Eldred and Daniel Nagel: Digital Whoness: Identity, Privacy and Freedom in the Cyberworld. Frankfurt 2013. Extensive parts can be previewed here.
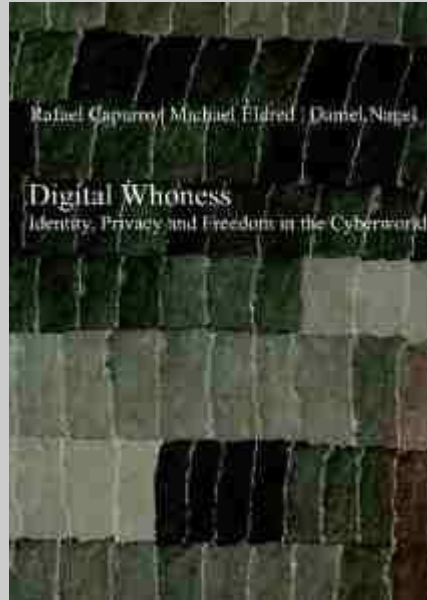
III. QUESTIONS AND ANSWERS

NOTES FROM A DIALOGUE BETWEEN
RAFAEL CAPURRO AND MAHMOOD KHOSROWJERDI

RC

Do you know the original Arabic writing for *taṣawwur* or *at-taṣawwur bi-l'-'aql* and *taṣdīq*? Are these terms still used in Arabic today?

MK

The term *taṣawwur* means conception or conceptualization and drawing in mind . In Persian we say كردن خيال (*khyal krdn*) or تصور. (*taṣawwur).* The original writing for *taṣawwur* in the view of Ibn-Sina in his book *al-Najat* (Book of Salvation), is as follows:

<div dir="rtl">

فصل في التصور والتصديق

كل علم فإنه إما تصور لمعنى ما أو تصديق وربما كان تصور بلا تصديق مثل من يتصور القائل إن الخلاء موجود ولا يصدق به ومثل ما يتصور معنى الانسان وليس فيه ولا في شيء من المفردات تصديق ولا تكذيب وكلتصديق وتصور فإما مكتسب يبحث ما – وإما واقع ابتداء والذي يكتسب به التصديق هو القياس وما يشبهه منالأمور التي ذكرناها والذي يكتسب به التصور فهو الحد وما يشبهه من الأمور التي سنذكرها وللقياس أجزاء مصدق بها ومتصورة وللحد أجزاء متصورة وليس يذهب ذلك إلى غير نهاية حتى تكون تلك النهاية ولكن الأمورتنتهي إلى مصدقات بها ومتصورات بلا واسطة ولنعد المصدق بها بلا واسطة. فصل في المحسوسات المحسوسات هي أمور أوقع التصديق بها الحس كقولك الثلج أبيض وكقولك إن الشمس نيرة. فصل في المجربات المجربات هي أمورأوقع التصديق بها الحس بشركة من القياس وذلك أنه إذا تكرر في إحساسنا وجود شيء لشيء مثل الاسهال للسقمونيا والحركات المرصودة للسماويات تكرر ذلك منا في الذكر وإذا تكرر منا ذلك في الذكر حدثت لنا منه تجربة بسبب قياس اقترن بالذكر وهو أنه لو كان هذا الأمر كالاسهال مثلاً عن السقمونيا اتفاقياً عرضياً لا عن مقتضى طبيعته لكان لا يكون في أكثر الأمر من غير اختلاف حتى أنه إذا لم يوجد ذلك استندرت النفس الواقعة فطلبتسبباً لما عرض من أنه لم يوجد وإذا اجتمع هذا الاحساس وهذا الذكر مع هذا القياس أذعنت النفس بسبب ذلك التصديق بأن السقمونيا من شأنها إذا شربت أن تسهل صاحبها.

الصفحة : 53

</div>

([Full text](#))
([Works](#))

"Every knowledge consists in either a conception (*taṣawwur*) of some idea or assertion (*taṣdīq*) [of it]. There could be conception without assertion like in the case of someone who claims to have conceived of the existence of the void (*khala'*) but he does not assert it; or the case of someone who has a conception of the idea of mankind without including things and terms that show assertion or negation. And every conception and assertion is

100

either acquired through examination [(or discursive thinking)], or it is there in the very beginning. That through which assertion is obtained is syllogism (*qīyās*) and what is similar to it from those things that we have already mentioned; And conception is acquired through definition (*ḥadd*) and those things similar to it as we shall discuss later; And syllogism consists of parts that have been asserted and parts that have been conceived; And definition consists of parts that have been conceived which is not continuing forever until there is an end. Thus, things go back (end) to assertions and conceptions of them without mediations (*bi lā wāsiṭa*) and the assertion goes back to a conception without mediation. [Meaning, that all syllogistic arguments should start from immediately accepted postulates that in turn consist of evident conceptions].

Chapter on sensible objects (*maḥsūsāt*): Sensible objects are those things that are asserted by the sense [perception], for example, when we say that "snow is white," or "the sun is bright."

Chapter on experiences (*mujarrabāt*): Experiences are those things that are asserted through sense [perception] together with syllogism as when the existence of something for something [else] is repeated in our senses, for example the laxative [effect] of Convolvulus Scammonia -[a plant that heals constipation used in traditional medicine]-, or the motions observed in heavenly bodies. And this [sensory repetition] repeats in our memory and from the repetition in our memory comes experience owing to the conjuction of syllogism with memory. [This is the inductive process]. This is such that if the laxativeness of Scammonia were accidental rather than required by its nature, the same thing would not happen in the majority of cases to the point that it did not happen, one would wonder what could have caused this accident. Thus, when the [above-mentioned] sense perception and the memory join together with syllogism, the mind will admit as a result of the assertion that it is in the nature of Scammonia to relax [heal constipation] the person who takes it."

(English transl. Sayeh Meisami)

And, yes, it is used today in Arabic.

RC
Do you know which Persian terms they used? Are such terms still used in Persian today? If yes, are they used only in a specific philosophical context or also in everyday life?

MK

We use also *taṣawwur* (in Persian: تصور) in all aspects of life which need imagination and conception (in mind). It is not applicable just in the philosophical domain.
The exact alternative of *taṣawwur* or *at-taṣawwur bi-l'-'aql* and *taṣdīq* in Arabic is تصور بالعقل و التصديق which is the chapter's title of Ibn-Sina's book *al-Najat* I just quoted.

Let me quote also the following text by [Miklós Maróth](#):

"Taṣawwur and *taṣdĭq* are the two basic concepts in the center of the traditional Arabic logic, "but the origin of these two Arabic terms has baffled modern scholarship for over a century", as [H. A. Wolfson](#) writes [1]. They are mentioned first by al-Fārābĭ,[2] but even Ali Sāmĭ al-Nassār's discussion of logical methodology, written as late as in 1947, has been centered round   them. [3]

Our knowledge, as al-Fārābĭ says, can be divided into *taṣawwur* (e.g. sun, moon, intellect, soul) and *taṣdĭq* (e.g. "the heaven consists of spheres" or "the world is compound and every compound thing is created, consequently, the world is created".[4] As his examples show *taṣawwur* refers to concept and *taṣdĭq* refers to a phrase or group of phrases. Assent, the traditional translation of *taṣdĭq*, comprises both "phrase" and "group of phrases".

Concept and *assent* are mentioned in al-Fārābī's works, which from the logical point of view are not of primary importance. In this respect the situation has been completely changed with Ibn Sīnā. We can see these terms discussed in the first chapters of his logical works, showing that they became the guiding principles of his logic. "Every knowledge consists of concept and assent" - as he wrote in his *Kitāb al-nagā*t. "Concept is a knowledge comprised in a definition or similar things, assent is a syllogism or a similar thing. Definition and syllogism are the two instruments to acquire new knowledge."[5]
[...]
This structure of Arabic logic differs from that of the Greek. It is the reason why the question was raised: what was the origin of the Arabic system. There are two answers given.

Modern scholarship seeks to identify these two terms with φαντασία and συγκατάθεσις. [8] These expressions - especially the second one - have been well known in Stoic epistemology, it means, they are to be explained in terms of Stoic logic. [...] Since the Stoic philosophy did not admit the universals, this knowledge referred to individuals, whereas in Arabic logic *concept* was always universal. In Stoic epistemology *synkatathesis* is to assent to a *phantasia* evoked in our sou by an individual being, whereas *taṣdĭq* means connection of *phantasiai*, i.e. "sentence" or "syllogism".[10] If we attach ourselves to the *communis opinio*, then we should find an explanation of these structural differences between the Stoic and Arabic systems.

According to my knowledge there has been no effort to reconcile them, so it seems to me that the Stoic line is to be rejected, as it has been done by F. Jadaane. He pointed out that *taṣawwur* was based on a definition, which consists of *genus proximum* et *differentia specifica*, so it had to have an Aristotelian origin. And this is the second answer.[11]
[...]
Taṣawwur and *taṣdĭq*, as our quotations show, are not only central concepts of logic. They are two basic notations of Greek and Arabic psychology as well. So, we can summarize as follows: in the late Greek and Arabic philosophy there is a tripartite structure of the soul with hierarchically ordered faculties. The sensitive part of soul abstracts elementary *taṣawwurāt* and *taṣdĭqāt* by the divine intellect.
Taṣawwurāt and *taṣdĭqāt* acquired from sense perception and divine intellect through induction and deduction are arranged in Tabulas, which constitute the basis for Sciences.

The Neoplatonic concept of logic together with late Greek and Arabic psychology can give a clearer and system bound account for the difficulties connected with the terms *taṣawwur* and *taṣdĭq*.

[1] H. Wolfson: "The Terms Taṣawwur and Taṣdiq in Arabic Philosophy and their Greek, Latin and Hebrew equivalents." *The Muslim World* 33 (1943), p. 114.

[2] al-Fārābĭ: *Uyūn al-masā'il*, p. 56. Ed. in: *Alfārābĭ's philosophische Abhandlungen*. F. Dieterici. Leiden 1890.

[3] Ali Sāmǐ Nassar: *Man'ahig al-baht 'inda mufakkiri al-islam*. Cairo 1947. p. 25. and p. 46."

[4] al-Fārābī: *loc.cit.*

[5] Ibn Sīnā. *Kitāb al-nagā*t: Cairo 1938, p. 3. See also: I. Madkour: L'organon d'Aristote dans le monde arabe. 2Paris 1969, 53-56.

[8] Wolfson: *op.cit.* P. Kraus: *Revue des études islamiques.* 1935 No. 4, p. 220. Simon van den Bergh: Averroes' *Tahafut al-Tahafut*. Vol. II. London 1954, p.1. A.S. Nassar: *op.cit.* p. 23. etc.

[10] A. Graeser: "The Stoic Categories", in: *Les Stoïciens et leur Logique. Actes du colloque de Chantilly 18-22 septembre 1976*. Paris 1978, p. 201: "Sextus reports that a 'true presentation is one of which it is possible to make a true affirmatio (katégorian).'" The passage shows the difference between our terminology and that of the Stoics.

[11] F. Jadaane: *L'influence du stoicisme sur la pensée musulmane.* Beyrouth 1968, p. 106-113.

Source: Miklos Maroth: *Taṣawwur* and *taṣdǐq*. In: Simo Knuuttila, Reijo Työrinoja, Sten Ebbese (eds.): Knowledge and the Sciences in Medieval Philosophy. Proceedings of the eighth international congress of medieval philosophy (S.I.E.P.), Vol. II, Helsinki 1990, pp. 265-274 (quote: p. 265) (online)

RC
The article by Harry Wolfson "The Terms Taṣawwur and Taṣdīq in Arabic Philosophy and their Greek, Latin and Hebrew equivalents" published in *The Muslim World* 33 (1943), 114-128 and quoted by Miklós Maróth, is a key reference. I quote it *in extenso* including some footnotes:

"Throughout the history of Arabic philosophy, beginning with Alfarabi, works on Logic open with the formula that knowledge is devided into *taṣawwur* and *taṣdīq*. These two terms lend themselves to various translations,[1] of which "formation" and "affirmation" are closest to the original Arabic. The distinction , on the whole, corresponds to the distinction usually made by logicians between "simple apprehension" and "judgement." But the origin of these two Arabic terms has baffled modern scholarship for over a century.   [...]
As the basis for our investigation we shall take eight texts of five Arabic authors:

I. Alfarabi's (1) *'Uyūn al-Masā'il*, [2],

II. Avicenna's (2) *Shifā'*,[3] *Najāt* and [4] *Ishārāt,* [5]

III. Algazali's (5) *Maqāṣid*   *al-Falāsifah,* [6]
IV. Shahrastani's (6) *Kitāb al-Milal wal-Nihal,*[7]

and

V. Averroes' (7) *Faṣl al-Maqāl wal-Taqrīr* m*ā* bain al-Sjarī'ah wal-Hikmiah min al-Ittiṣāl,* [8]*,   and* (8) *Epitome   of   the   Organon.*

Of these eight texts *'Uyūn* and the *Maqāṣid* give complete treatments of the subject; the others contain abridged or fragmentary treatments of it.

To begin with, there are two terms which are used in the various Arabic texts as a description of that which is divided into *taṣawwur* and *taṣdīq*. They are the terms doctrine (*ma'rifah*) and discipline (*'ilm*),[10] though sometimes only the term doctrine (*ta'ālīm)* [11] or only the term discipline ('ilm) [12] or disciplines (*'ulūm)* is used.

Then, in the various definitions of the *taṣawwur* and *taṣdīq* in these Arabic texts, we find certain characteristic terms which describe the distinction between them. As contrasteed with *taṣdīq*, *taṣawwur* is called the first knowledge (*al-ilm al-awwal*).[14] It is said to imply that there is (1) a thing (*al-shai*, [15], *res* [16]) or a simple thing (*amr sādij)* [17] and that that simple thing is designated by (2) a term (*ism*,[18] *nomen* [19]) or by a single term (*dictio separata* [20]), which conveys to the mind (3) the meaning (*ma'na*, [21]*intentio* [22]) or the essence (*substantia* [23]) of that thing, in which meaning, however, (4) there is no truth or falsehood.[24] In contradistinction to this, *taṣdīq* is said to be the "assertion or the denial of something about something." [25]

Besides the main distinction between *taṣawwur* and *taṣdīq*, each of these two is further subdivided into primary (*awwaliyy*) and acquired (*muktasib*).[26]The primary kind of *taṣawwur* is described as that which "comes to a stop and is not connected with any preceding *taṣawwur*," [27] whereas acquired *taṣawwur* is that which "is completed only by some preceding *taṣawwur*,"[28] and similarly primary *taṣdīq* is that which "is not preceded by another *taṣdīq* upon whichit is dependent,"[29] whereas acquired *taṣdīq* is that "which one cannot comprehend without having comprehended some other things."[30]

Or, the distinction between primary *taṣawwur* and *taṣdīq* is said to be between "that which is comprehended primarily without investigation and search and that which is obtained only by investigation."[31] There is thus altogether a fourfold division: (1) primary *taṣawwur*, (2) acquired *taṣawwur*, (3) primary *taṣdīq,* and (4) acquired *taṣdīq*.

Each of these four kinds of knowledge is illustrated in the various Arabic texts by certain examples. Let us examine these examples.

Primary *taṣawwur* is illustrated in the *'Uyūn* by the terms "necessity" (*al-wujūb),* *"existence"* (*al-wujūd)* and possibility (*al-mukn*), [29] and these are described as "self-evident and true concepts which are implanted in the mind." [30] In the *Maqāṣid,* it is illustrated by the terms being (*al-maujūd*) and thing (*al-shai*).[31] Now, the term "that which exists" or "being" (τό ὄν, ens, *al-maujūd*), together with the term "unity", is described by Aristotle as one of the most generic term, transcending even the categories.[32] Similarly the term "thing" (*res*) is included in what in post-Aristotelian philosophy is known as the six *transcendentales*, which, like the terms "being" and "unity" in Aristotle, are described as the most generic terms. [33] Consequently in these Arabic texts, the primary kind of *taṣawwur* refers to those concepts which, like "being" and "one" in Aristotle and like the six *transcendentales* in post-Aristotelian philosophy are most generic and therefore conceived without the aid of anything prior to them.

The acquired kind of *taṣawwur* is illustrated in the *'Uyūn* by term body (*al-jism*), which, it says, implies a prior knowledge of the terms "length, breadth and depth,"[34] and to this kind of *taṣawwur* also evidently belong the terms sun, moon, soul and intellect, mentioned there previously as illustrations of the term *taṣawwur* in general.[35] In the *Maqāṣid* it issimilarly illustrated by the terms body, tree, jinn, and spirit, [36] for all of these it says, depend upon "the conception of the things which reveal their essences."[37] In the *Shifā'*, it is illustrated by the term "man."[38] [...]

In the *Faṣl taṣawwur* is illustrated by the terms "[1] the thing itself (*al-shai nafsuhu*) and [2] the image thereof (*mith-āluhu*)." [42] Here, I take it, the term "the thing itself" should be understood in the sense of "the concept of thing" and as the equivalent of the term "thing" used in the *Maqāṣid,* where, as we have shown, it is used in the sense of what is known as the *transcendentales*, and hence this term should also be understood as being used by Averroes as an illustration of the primary kind of *taṣawwur*. Accodingly, the term "the image thereof" is to be taken here as referring to some perceptible thing, analogous to the term "body" in the *'Uyūn* and the *Maqāṣid*, and hence as being used by Averroes as an illustration of the acquired kind of *taṣawwur*.

If our interpretation of this statement of Averroes is correct, then the terms "the thing itself" and "the image thereof" are survivals of the Platonic philosophic vocabulary in a system of philosophy which is not Platonic. The term *al-shai nafsuhu* reflects exactly such Platonic terms as αὐτὸ τὸ τὸ καλόν [43] and πῦρ αὐτό [44] which in Plato mean "the idea of beauty" and "the idea of fire," and the term *mitāhal* is an exact translation of the Greek εἰκών, which is used by Plato as a description of perceptible objects.[45] [...]
The first passage in Aristotle with which Averroes connects the distinction of formation and affirmation is *De Interpretatione*, ch. 4. In that chapter, Aristotle makes a distinction between a sentence (λόγος, *qaul*) and word (φάσις, *lafzah*). [65] A sentence, he says, if it is enunciative (ἀποφαντικός,*jāzim),* as in it either truth or falsity,[66] whereas a word, though it has meaning (σημαντική), expresses no affirmation or negation.[67] Commenting upon this, Averroes in the Latin translation of his Middle Commentary on *De Interpretatione* says that what Aristotle calls "word" is *per modum intelligentiae et conceptionis* (or *intellectus et formationis*), *non per modum affirmationis et negationis*.[68] The Latin term conceptio or formatio here reflects the Arabic *taṣawwur*. [...]

The second passage in Aristotle with which Averroes connects conception and judgement is *De Anima* III, 6. In that passage of De Anima, Aristotle says: "The thinking (νόησις) of indivisibles is in both cases in which there is no falsehood, but in cases in which both truth and falsehood are possible, there is already some combining of notions into one."[70]

[70] De Anima III, 6, 430a, 26-28

Then later Aristotle explains these two statements. With regard to the second statement, he says: "The assertion (φάσις) of something about something, as, e.g., an affirmation, as well as every composite sentence, is either true or false."[71]

[71] *Ibid*., 430b, 26-27. In the Latin translation from the Arabic, this passage reads: "Et dicere aliquid de aliquo, sicut affirmatio, et omne compositum est verum vel falsum". In this translation, the Greek πᾶσα (1.27), which underlies the Latin *omne compositum*, was evidently taken by the Arabic translator to refer to λόγος σύνθετος in *De Interp*. 5, 17a, 22, i.e., a proposition consisting of both an affirmation and a negation, as, e.g., A is B, not C, My translation of this passage follows the Latin translation from the Arabic. Cf. the same passage in English translations of *De Anima*.

With regard to the first statement, he says that in the case of thought (νοῦς), i.e., in the case of thinking (νόησις), "the assertion of the quiddity of a thing is true."[72]

[72] *Ibid*., 430b, 27-29. In the Latin translation from the Arabic (Text. 26) this passage reads: *sed qui dicit quidditatem rei est verus*. Evidently the expression *quidditatem rei* is a translation of the entire Greek expression τοῦ τί ἐστι κατὰ τὸ τί ἦν εἶναι in 1,28. My translation of this passage here follows the Latin translation from the Arabic.

Now in the Arabic translation of *De Anima*, as may be judged from the Latin [73]

[73] Liber III, Text 21, in *Aristotelis opera*, Venice, 1574, Vol. VI, p. 165F.

as well as the Hebrew [74] translation of it which is included in Averroes' Long Commentary on it, the term νόησις in this passage was translated by *taṣwīr,* for the Latin it is *formare* and in the Hebrew *ẕayyer*.

[74] MS. Berlin, Cod.Heb. 1387-8

By *formare* and its underlying Arabic *taṣwīr* is meant here the process of forming a concept in the mind, for in Arabic the term *taṣwīr* by itself may mean both the forming of an image and the forming of a concept,[75] though, through usage, it is often associated with the formation of images.

[75] Cf. *The Moslem World*, XXXI (1941), 38.

Commenting on this passage, Averroes identifies Aristotle's distinction between these two actions of the mind, namely, that of thinking (νόησις) of indivisibles or the thought (νοῦς) of them, and that of the assertion of something concerning something with what he describes as the "more renowned" distinction between *formatio* and *fides*—two terms which reflect respectively the Arabic terms *taṣawwur* and *taṣdīq*—[76]

[76] *De Anima*, III, Comm. 21. The corresponding terms in the Hebrew translation are *ẕiyyur* and *ha'amatah* (but *immut* in comm. 26). St. Thomas, in his restatement of this passage of Averroes (*De Veritate*, XIV, 1, c), has the term *imaginatio* in place of *formatio*: "Unde etiam et apud Arabes prima operatio intellectus vocatur imaginatio, secunda autem vocatur fides, ut patet ex verbis Commentatoris in III: De Anima (com. XXI)".

Similarly, in his comment upon the statement in which Aristotle contrasts the "assertion of something about something" and "the assertion of the quiddity of a thing." Averroes

refers to these two as *fides* and *formatio*, that is to say, *taṣdīq* and *taṣawwur*. [77]

[77] *Ibid*., Comm. 26

Furthermore, in his comment on Aristotle's expression "thinking of the indivisibles," the term indivisibles (ἀδιαίρετα) is explained by him by the term simple things (*res simplices*).[78]

[78] *Ibid.,* Comm. 21. Hebrew: *ha-debarim ha'bilti mitḥalḳim.*

In this passage then, we have the source of the distinction between e *taṣawwur* and *taṣdīq* in Arabic texts, the use of terms "simple" and "quiddity" in the description of *taṣawwur* in some of those texts. Though the *taṣawwur* in the Arabic texts is said to be neither true nor mals, whereas the νόησις of simple things is said here bei Aristotle to be "in those things in which there is no falsehood," this statement must have been understood by Arabic philosophers to mean that there is in them neither falsehood nor truth. In fact, this how this statement is interpreted by Averroes.[79]

[79] Ibid., Comm. 21. But in Comm. 26, Averroes says: **"sed actio quae est informatio, est semper vera"**—an inconsistency to which attention is called on the margin of the 1574 Venice edition, p. 169B-C. [emphasis added]

On the basis of this passage, too, we may assume that the Arabic *taṣawwur* is a translation of the Greek νόησις and is the equivalent of νοῦς. This will explain the use of the expression *per modum intelligentiae* (or *intellectus*) *et conceptionis* (or *formationis*) used by Averroes in the passage of his Middle Commentary on the *De Interpretatione* referred to above. In that passage *conceptio* or *formatio* (*taṣawwur*) represents νόησις, whereas *intellectus* (*'aql)*) represents νοῦς, both of which are used interchangeably here in *De Anima*.

The third passage in Aristotle with which Averroes connects the distinction between *taṣawwur* and *taṣdīq* is in *Analytica Priora* [sic RC] I, 1-2

In that passage Aristotle begins with the statement that "all doctrine (διδασκαλία) and all intellectual discipline (μάθησις) arise from pre-existent knowledge (προϋπαρχούση   γνῶσις).[80]

[80] *Anal. Post.* I, 1, 71a, 1-2.

The terms "doctrine" and "intellectual discipline" are explained by him to refer to (1) mathematical sciences and other arts, (2) logical reasoning and (3) rhetorical persuasion.[81] Then "pre-existent knowledge" is said by him to be of two kinds: (1) "with some things we must presuppose that they are, but (2) with others we must understand that which is spoken of."[82] and as an illustration of the first kind of pre-existent knowledge he quotes the proposition stating the law of excluded middle, [83] and as illustration of the second kind of pre-existent knowlede he mentions the term triangle.[84] In the course of his discussion he also mentions the geometrical proposition

tht the angles of every triangle are equal to two right angles as a previously known major premise in a syllogism,[85] but evidently this proposition, though described here as a previously known major premise in a syllogism, is itself subject to demonstration.[86]

[86] In Euclid (I, 32) this is given as a geometrical proposition and not as a common notion or postulate. So also in *Metaph.* IX, 9, 1051a, 24-26.

In his Long Commentary on this passage Averroes quotes Alfarabi to the effect that the distinction drawn here by Atristotle refers to the distinction between primary and acquired under both *taṣawwur* and *taṣawwur* and *taṣdīq*. Averroes, however, disagrees with him, contending that in the *Analytica Posteriora* Aristotle deals only with *taṣdīq*.[87]

[87] Long Commentary on *Analytica Posteriora* I, Comm. 19, Burana's translation: "Enuntiatio haec, quemadmodum dixit Abunazar, comprehendit sub subiecto suo omnia, quaecunque sunt in hoc libro et hoc, quia cum dixit: Omnis doctrina et omnia disciplina, comprehendit sub se omnes species quaesitorum, quae procedunt viam verificationis et secundum viam formationis" (p. 12E) Sed oportet etiam, ut consyderemus de hac enuntiatione quae dixit Abunazar et alij, an comprehendat verificationem inductam et formationem. Quoniam verba Aristotelis et exempla, quibus utitur, videntur esse ex materia verificationis, non ex materia formationis" (p. 13F)

In his Middle Commentary, commenting upon Aristotle's two kinds of pre-existent knowledge, he says of the proposition stating the law of excluded middle that it is what is called *verificatio*, i.e., *taṣdīq*, and of the term triangle that it is what is called *formatio*, i.e. *taṣawwur*.[88]

[88] Middle Commentary on *Analytica Posteriora* I, p. 1E-G, Burana's translation: "Cognitio autem, quam oportet praecedere in omni eo, quod assequimur per cogitationem ac syllogismum, est duobus modis: aut enim cognoscitur quod res sit, aut non sit, et haec cognitio vocatur verificatio, aut cognoscitur quid significet nomen ipsius, et focatur formatio. Oportet autem discipulum in quibusdam praecognoscere quod sunt tantum, quemadmodum in propositione, quae dicit de omni vera est aut affirmatio, aut negatio, propterea quod in huiuscemodi propositionibus, opus est, ut cognoscamus veritatem ipsorum tantum, quodque nemo ipso renuit praeter Sophistas. In quibusdam vero oportet ut praecognoscat quid significent nomina eorum tantum, quaemadmodum oportet Geometram praecognoscere, quid significet nomen circuli in arte sua, et nomen trianguli." It is evidently on the basis of this pasage of Averroes that Narboni in his Hebrew commentary on the *Maqāṣid*, 1, c. (MS Jewish Theological Seminary) says: "Ẓiyyur (*taṣawwur*) is the knowledge of quiddity; *immut* (*taṣdīq*) is the knowledge of existence."

From Averroes' distinction of this passage we may gather that the main distinction between *taṣawwur* and *taṣdīq* is already assumed and that all that his passage does is to introduce the subdivision of "primary" and "acquired" either both *taṣawwur* and *taṣdīq* according to Alfarabi, or only under *taṣdīq* according to Averroes.

[...]

We have now collected from the writings of Aristotle all the strands from which were woven together the various discussions in Arabic literature of the distinction between *taṣawwur* and *taṣdīq*. In Aristotle, too, we have found the prototype of these two Arabic terms. Of *taṣawwur* it is νόησις; of *taṣdīq* it is ἀποφαντικός λόγος. [...]

In conclusion we may now give the genealogy of these two terms in Greek, Arabic, Hebrew and Latin.

Taṣawwur

Greek—

(a) Aristotle: νόησις

(b) Stoics: φαντασία λογική

Arabic—from Greek: (a) *taṣawwur*.

Hebrew—from Arabic: *ẓiyyur*

Latin—
(a) from Arabic:

(1) *imaginatio* (Algazali's *Maqāṣid*).
(2) *formatio* (Averroes' Long Commentary on *De Anima* III, Comm. 21).
(3) **informatio** (*Ibid.*, Comm. 26) [emphasis added]

(b) from Hebrew:

(1) *conceptio* (Abraham de Balmes' translation of the Long Commenary on *Analytica Posteriora* I, Comm. 1).

(2) *formatio* (Burana's translation of the same).

(3) *notitia* (Mantinus' translation of the same)

(4) *conceptus* (*ibid.*); also *formatio*.

Taṣdīq

Greek—

(a) Aristotle: ἀποφαντικός λόγος.

(b) Stoics: ἀξίωμα

Arabic—from Greek: (b): *taṣdīq.*

Hebrew—from Arabic: *ẓidduḵ*, (also *haẓdaḵa, heẓdeḵ)*[110] *immut, ha'amatah*(cf. above n. 76)

Latin——
(a) from Arabic:

(1) *credulitas* (Avicenna's *Shifā'*; Algazali's *Maqāṣid*).

(2) *fides* (Averroe's Long Commentary on *De Anima* III, Comm. 21 an 26).

(b) from Hebrew:

(2) *verificatio* (Burana, *loc. cit.*)

(3) *certificatio* (Mantinus, *loc. cit.*)

(4) *certitudo* (*ibid.*); also *fides."*

See the book by Joep Lameer:

گزارش یک کتاب: ترجمه "رساله فی تصور و تصدیق" ملاصدرا به انگلیسی
CONCEPTION AND BELIEF IN SADR AL-DIN SHIRAZI
AL-RESALA FI L-TASAWWUR WA-L-TASDIQ
INTRODUCTION, TRANSLATION, AND COMMENTARY BY JOEP LAMEER
Iranian Institute of Philosophy
Tehran, 2006
http://www.irip.ir/Home/Single/175

Some quotes and comments on this book:

p.22 *prohypolambanein*: presupposition - pre-understanding : belief that something
is *tassawwur* but also *tasdiq* in Farabi.

Aristotle, Post.An. I.1 71a-b

Πᾶσα διδασκαλία καὶ πᾶσα μάθησις διανοητικὴ ἐκ προϋπαρχούσης γίνεται γνώσεως. φανερὸν δὲ τοῦτο θεωροῦσιν ἐπὶ πασῶν· αἵ τε γὰρ μαθηματικαὶ τῶν ἐπιστημῶν διὰ τούτου τοῦ τρόπου παραγίνονται καὶ τῶν ἄλλων ἑκάστη τεχνῶν.

5
ὁμοίως δὲ καὶ περὶ τοὺς λόγους οἵ τε διὰ συλλογισμῶν καὶ οἱ δι᾽ ἐπαγωγῆς· ἀμφότεροι γὰρ διὰ προγινωσκομένων ποιοῦνται τὴν διδασκαλίαν, οἱ μὲν λαμβάνοντες ὡς παρὰ ξυνιέντων, οἱ δὲ δεικνύντες τὸ καθόλου διὰ τοῦ δῆλον εἶναι τὸ καθ᾽ ἕκαστον. ὡς δ᾽ αὕτως καὶ οἱ ῥητορικοὶ συμπείθουσιν· ἢ γὰρ

10
διὰ παραδειγμάτων, ὅ ἐστιν ἐπαγωγή, ἢ δι᾽ ἐνθυμημάτων, ὅπερ ἐστὶ συλλογισμός. διχῶς δ᾽ ἀναγκαῖον **προγινώσκειν**· τὰ μὲν γάρ, **ὅτι ἔστι**, **προϋπολαμβάνειν** ἀναγκαῖον, τὰ δέ, **τί τὸ λεγόμενόν ἐστι**, ξυνιέναι δεῖ, τὰ δ᾽ ἄμφω, οἷον ὅτι μὲν ἅπαν ἢ φῆσαι ἢ ἀποφῆσαι ἀληθές, ὅτι ἔστι, τὸ δὲ τρί-

15
γωνον, ὅτι τοδὶ σημαίνει, τὴν δὲ μονάδα ἄμφω, καὶ τί σημαίνει καὶ ὅτι ἔστιν· οὐ γὰρ ὁμοίως τούτων ἕκαστον δῆλον ἡμῖν. Ἔστι δὲ γνωρίζειν τὰ μὲν πρότερον γνωρίσαντα, τῶν δὲ καὶ ἅμα λαμβάνοντα τὴν γνῶσιν, οἷον ὅσα τυγχάνει ὄντα ὑπὸ τὸ καθόλου οὗ ἔχει τὴν γνῶσιν. ὅτι μὲν γὰρ πᾶν τρί-

20
γωνον ἔχει δυσὶν ὀρθαῖς ἴσας, προῄδει· ὅτι δὲ τόδε τὸ ἐν τῶι ἡμικυκλίωι τρίγωνόν ἐστιν, ἅμα ἐπαγόμενος ἐγνώρισεν. (ἐνίων γὰρ τοῦτον τὸν τρόπον ἡ μάθησίς ἐστι, καὶ οὐ διὰ τοῦ μέσου τὸ ἔσχατον γνωρίζεται, ὅσα ἤδη τῶν καθ᾽ ἕκαστα τυγχάνει ὄντα καὶ μὴ καθ᾽ ὑποκειμένου τινός.) πρὶν δ᾽ ἐπαχθῆναι

25
ἢ λαβεῖν συλλογισμὸν τρόπον μέν τινα ἴσως φατέον ἐπίστασθαι, τρόπον δ᾽ ἄλλον οὔ. ὁ γὰρ μὴ ᾔδει εἰ ἔστιν **ἁπλῶς**, τοῦτο πῶς ᾔδει ὅτι δύο ὀρθὰς ἔχει **ἁπλῶς**; ἀλλὰ δῆλον ὡς ὡδὶ μὲν ἐπίσταται, **ὅτι καθόλου ἐπίσταται, ἁπλῶς δ᾽ οὐκ ἐπίσταται**. εἰ δὲ μή, τὸ ἐν τῶι Μένωνι ἀπόρημα συμβήσεται·

30
ἢ γὰρ οὐδὲν μαθήσεται ἢ ἃ οἶδεν. οὐ γὰρ δή, ὥς γέ τινες ἐγχειροῦσι λύειν, λεκτέον. ἆρ᾽

οἶδας ἅπασαν δυάδα ὅτι ἀρτία ἢ οὔ; φήσαντος δὲ προήνεγκάν τινα δυάδα ἣν οὐκ ᾤετ᾽ εἶναι, ὥστ᾽ οὐδ᾽ ἀρτίαν. λύουσι γὰρ οὐ φάσκοντες εἰδέναι πᾶσαν δυάδα ἀρτίαν οὖσαν, ἀλλ᾽ ἣν ἴσασιν ὅτι δυάς. καίτοι

71b
ἴσασι μὲν οὗπερ τὴν ἀπόδειξιν ἔχουσι καὶ οὗ ἔλαβον, ἔλαβον δ᾽ οὐχὶ παντὸς οὗ ἂν εἰδῶσιν ὅτι τρίγωνον ἢ ὅτι ἀριθμός, ἀλλ᾽ ἁπλῶς κατὰ παντὸς ἀριθμοῦ καὶ τριγώνου· οὐδεμία γὰρ πρότασις λαμβάνεται τοιαύτη, ὅτι ὃν σὺ οἶδας ἀριθ-
5
μὸν ἢ ὃ σὺ οἶδας εὐθύγραμμον, ἀλλὰ κατὰ παντός. ἀλλ᾽ οὐδέν (οἶμαι) κωλύει, ὃ μανθάνει, ἔστιν ὡς ἐπίστασθαι, ἔστι δ᾽ ὡς ἀγνοεῖν· ἄτοπον γὰρ οὐκ εἰ οἶδέ πως ὁ μανθάνει, ἀλλ᾽ εἰ ὡδί, οἷον ᾗ μανθάνει καὶ ὥς.

All instruction given or received by way of argument proceeds from pre-existent knowledge. This becomes evident upon a survey of all the species of such instruction. The mathematical sciences and all other speculative disciplines are acquired in this way, and so are the two forms of dialectical reasoning, syllogistic and inductive; for each of these latter make use of old knowledge to impart new, the syllogism assuming an audience that accepts its premises, induction exhibiting the universal as implicit in the clearly known particular. Again, the persuasion exerted by rhetorical arguments is in principle the same, since they use either example, a kind of induction, or enthymeme, a form of syllogism.

The **pre-existent knowledge** required is of two kinds. In some cases **admission of the fact must be assumed**, in others comprehension of the meaning of the term used, and sometimes both assumptions are essential. Thus, we assume that every predicate can be either truly affirmed or truly denied of any subject, and that 'triangle' means so and so; as regards 'unit' we have to make the double assumption of the meaning of the word and the existence of the thing. The reason is that these several objects are not equally obvious to us. Recognition of a truth may in some cases contain as factors both previous knowledge and also knowledge acquired simultaneously with that recognition-knowledge, this latter, of the particulars actually falling under the universal and therein already virtually known. For example, the student knew beforehand that the angles of every triangle are equal to two right angles; but it was only at the actual moment at which he was being led on to recognize this as true in the instance before him that he came to know 'this figure inscribed in the semicircle' to be a triangle. For some things (viz. the singulars finally reached which are not predicable of anything else as subject) are only learnt in this way, i.e. there is here no recognition through a middle of a minor term as subject to a major. Before he was led on to recognition or before he actually drew a conclusion, we should perhaps say that in a manner he knew, in a manner not.

If he did not **in an unqualified sense** of the term know the existence of this triangle, how could he know without qualification that its angles were equal to two right angles? No: **clearly he knows not without qualification but only in the sense that he knows universally**. If this distinction is not drawn, we are faced with the dilemma in the Meno:

either a man will learn nothing or what he already knows; for we cannot accept the solution which some people offer. A man is asked, 'Do you, or do you not, know that every pair is even?' He says he does know it. The questioner then produces a particular pair, of the existence, and so a fortiori of the evenness, of which he was unaware. The solution which some people offer is to assert that they do not know that every pair is even, but only that everything which they know to be a pair is even: yet what they know to be even is that of which they have demonstrated evenness, i.e. what they made the subject of their premiss, viz. not merely every triangle or number which they know to be such, but any and every number or triangle without reservation. For no premiss is ever couched in the form 'every number which you know to be such', or 'every rectilinear figure which you know to be such': the predicate is always construed as applicable to any and every instance of the thing. On the other hand, I imagine there is nothing to prevent a man in one sense knowing what he is learning, in another not knowing it. The strange thing would be, not if in some sense he knew what he was learning, but if he were to know it in that precise sense and manner in which he was learning it. (transl. G.R.G Mure, [Source])

p. 23: *tasawwara* : *idein*, perceive, grasp (the essence of a thing)

"This being the case, I conclude that taġawwara and taġawwur (con-ception), as technical terms in the context of the acquisition and transmission of human knowledge, were most likely introduced with the aim of highlight-ing the precise character of fahima and fahm as referring to one's grasping (sunienai, idein) the essence or form of a thing (said) as one of the two pre-existing kinds of knowledge at the basis of all teaching and intellectual learning. In view of the above, taġawwur or "conception" may be said to have its philosophical origin in Posterior Analytics I.1 71a 11-13, while its origin as a term must lie in a desire to elucidate the precise meaning of fahima (which translates sunienai in that passage) by bringing in a verb that could convey the notion of the mental grasping of the essence of a thing. And it is taġawwara that must then have been considered eminently capable of fulfilling precisely that role."

This origin is new to me. I followed the path given by Albert on the source of the concept of 'informatio' in Aristotle's De Anima.

p. 40:
"I think that the combination of the Peripatetic doctrine of conception and belief and the Illuminationist account of the occurrence of universal forms in the soul is a fine illustration of the "merging" of different philosophical traditions in Shìråzì's thought as referred to in the Introduction."

Very interesting. Shirazi is sometimes Platonic and sometimes Aristotelic.

p. 41:
"This particular kind of self-knowledge, which precedes all knowledge by occurrence, results from a "dawning illumination" (ishråq), i.e. an illumination dawning upon the knowing subject, a kind of "inner revelation" (kashf),2 a light (nBr) pouring onto the knowing subject from the First Principle or Intellect through a succession of angelic intermediaries.

This is very interesting for me because it brings into the discussion the issue of 'intermediaries' from which I get my thinking on 'angeletics'.

p. 46:
"Shìràzì gives no examples of self-evident conceptions, but it would seem that "being", "thing-ness" and "becoming" as mentioned in his al-Ĕikma al-mutaЫĭåliya are examples of primary, self-evident conceptions."

This is very interesting with regard to the origin of the 'concept' of Being.

p. 47-48:
"This seems the more true because in other places in this same work, he emphasizes the fact that being does not have an existence in the mind in terms of a universal comparable to "man" or "horse"; it has no definition, and is not applied in the same way as universals;9 being as a "common" results from a mental consideration and isnot constitutive of the individuals (of which it is predicated);1 it does not have a universal essence, not even to speak of its being a genus, species, or accident;2 indeed, "being" and "exists" do not express essences, as genera and species do, even though they are "mental captions" (Ыanåwìn dhihniyya) that tell us about (ĕikåyåt li) individuals (in the outside world) which themselves have no existence in the mind.3 The fact that "being" and "exists", insofar as these occur in our discourse on the outside world, cannot be reduced to a universal essence, must be explained by the fact that beings partake in different degrees of "perfection" (kamål) or "intensity" (quwwa) of Being, which is why it is no surprise that the homonymy (tashkìk)4 of being is often discussed by Shìràzì."

This is interesting with regard to the question of Being as not dealing with a concept/universal essence, and the issue of homonymy as related to 'to on legetai pollachos'.

p. 56:
 "Fåråbì's understanding of conception and belief took its inspiration mostly from Aristotle's Posterior Analytics and his other syllogistical arts, without giving much attention to their description as phenomena in the soul. Shìràzì, on the other hand, even though broadly concurring with Fåråbì on the meaning of conception and belief as epistemological terms, turned out to spend most of his time on explaining their characteristics as events in and affections of the soul. This was because Ibn Sìnå's definition of belief as a conception accompanied by belief in the sense of a judgment had caused a lot of confusion in the works of his predecessors."

There is a back and forth relation between epistemological and psychological issues concerning both terms.

p. 102:
"You should understand that knowledge consists in the being-present-to-the-mind of [the forms of] things."

This is the issue about the traditional meaning of being as related to presence which is one of Heidegger's main discoveries. Was Mula Sadra aware of the issue of Being _as_ Time or did he inherit the traditional view Being _as_ being present or as the presence of what is present? and of the different forms of this relation between presence of the present concerning the

114

'adiareton' (or ideas) and the perception of 'material' things?

p. 103
"After all, each of these parts [corresponds to] an "impression"5 deriving from a thing [in the outside world]6 by which the soul is affected, which can only take place by virtue of the fact that some form of it7 manifests itself in the soul".

impression : athar : pathema

Impression was the term used by the British empiricists instead of 'informatio(n)' that was too aristotelic.

See: http://www.capurro.de/info4.html (p. 162 ff) (in German)

or http://www.triple-c.at/index.php/tripleC/article/view/113 (p. 130ff) (in English)

How does this thinking of Mula Sadra impact today's philosophical and political debate on the information and knowledge society in the Arab and Persian cultures?

Finally, let me also quote this text by Deborah Black

"3. Conceptualization and assent

While the close links between logic and linguistic studies emerge in the Islamic philosophers' consideration of the subject matter of logic, the links between logic and epistemology come to the fore in the consideration of the divisions within logic and the order of the books within Aristotle's Organon. All the principal Islamic Aristotelians organize their understanding of the divisions of logic around the epistemological couplet of *taṣawwur* (conceptualization), and *tasdiq* (assent), which constitute for them the two states of knowledge that logic aims to produce in the intellect.

Conceptualization is the act of the mind by which it grasps singular (though not necessarily simple) essences or quiddities, such as the concept of 'human being'. Assent, by contrast, is the act of the intellect whereby it makes a determinate judgment to which a truth-value can be assigned; in fact, conceptualization is defined in Islamic philosophy principally by contrast with assent. Thus, any act of knowledge that does not entail the assignment of a truth-value to the proposition that corresponds to it will be an act of conceptualization alone, not assent. More specifically, the Islamic philosophers link assent to the affirmation or denial of the existence of the thing conceived, or to the judgment that it exists in a certain state, with certain properties. Thus, assent presupposes some prior act of conceptualization, although conceptualization does not presuppose assent.

One of the purposes of including a consideration of the *tasawwur-tasdiq* dichotomy in introductory discussions of the purpose of logic is to provide an epistemological foundation for the two focal points of Aristotelian logic, the definition and the syllogism (see Logical form §1). The purpose of the definition is identified as the production of an

act of conceptualization, and the purpose of the syllogism is identified as causing assent to the truth of a proposition. However, since the definition and the syllogism are both considered in the *Prior* and *Posterior Analytics* and the works that come after them in the Organon, the study of the ways of producing conceptualization and assent presupposes as its foundation the study of single terms and propositions in the *Categories* and *De interpretatione*." (Source: Islamic Philosophy Online - Philosophia Islamica and "Logic in Islamic Philosophy" Routledge Encyclopedia of Philosophy. Ed. Edward Craig. 10 vols. London and New York: Routledge, 1998. 5:706–713.

Which are the present terms used in Persian and Arabic for information and for message/messenger? Which is the term you use for information society? Does it refer only or primarily to digital information?

MK

The exact terms for information in Persian are : اطلاعات or اطلاع (*ettela'at*) or اطلاع(*ettela'*). In addition, we have other related words such as knowledge دانش (*danesh*) which is higher than the level of اطلاعات. We name a person who is aware of something as مطلع (*mottale*) or آگاه (*a'gah*); and we name a person who has many knowledge as دانشمند (daneshmand) which means a person who has a lot of knowledge or علم (*lim*), i.e., awareness, not science.

The exact term for message in Persian is پیام or خبر (*paya'm*) in the sense of news and message. A person who has a message or who brings is called پیام آور or سفیر(*payam-a'var*) or رسول (safir) or رسول (*rasul*). The word رسول (*rasul*) means prophet too. It is more used in religious contexts. For example we say رسول اکرم (*rasul akram*, Great Prophet) which means the great messenger of God.

The رساله (*resa'la*) in Arabic means message too. And the man who has the رساله or transmit it is titled رسول (*rasul*) too.

I think in Arabic they use معلومات (*ma'lumat*) for information. You can see the final version of the UNESCO text on information literacy, where they write information literacy as مهارات المعلومات (*mahara't-al-ma'lumat*) in Arabic. But the meaning of معلومات (*m'elumat*) is a little bit different than تصور (*taṣawwur*). The second is more used in the sense of conceptualization and imagination.

RC

Which are the terms for information and message/messenger in Arabic and in Persian translation used in Quran? Is there such a difference? Are such terms used only in the context of Quran?

MK

I have discovered this issue and it is not yet completed. I'm not sure about the type of publication for it. I paste here a chart of the concept of knowledge in Quran which is designed for this purpose. See: Khosrowjerdi, Mahmood. Knowledge in Quran: A Scientometric Analysis. Research in Progress.
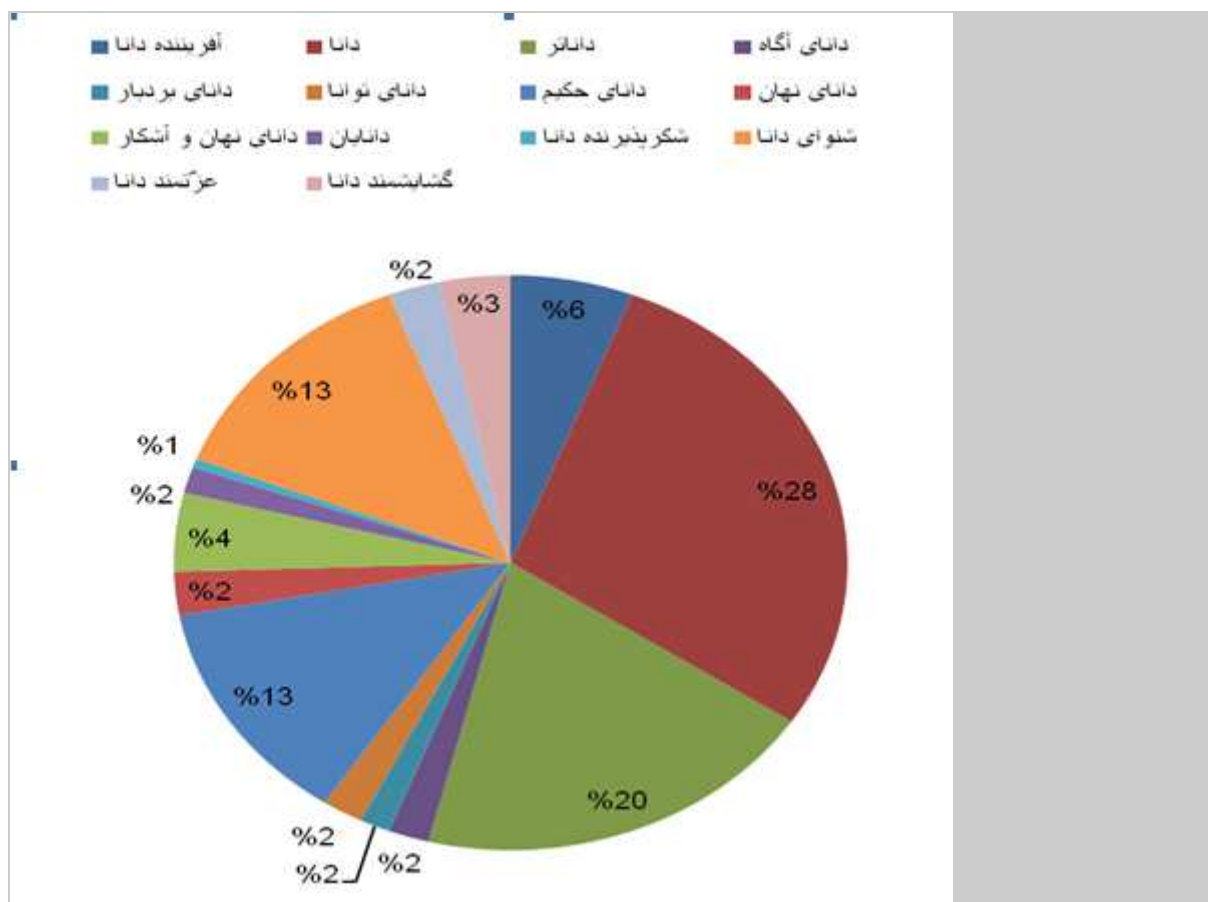
As you can see, the exact term for messenger and knowledgeable in Quran is علیم (*'elym*) which means دانا or آگاه (*guah*) in Persian. They are the characteristics of the Lord.

You can access a bilingual (English and Arabic) Quran here, http://quran.com/
In addition you can see an ontology-based approach to علم (*'elm*) in this link: http://corpus.quran.com/qurandictionary.jsp?q=Elm

But, as an interesting fact, in many cases, this term is preceded by other terms such as سمیع (*smy'e*) which means a person who hears everything, or بصیر (*bsir*) which means a person who sees all events, or حکیم (*hakym*) which means a knowledgeable person.

CONCLUSION

I would like to suggest that Aristotle's νόησις or, more precisely, νόησις τῶν ἀδιαιρέτων, the thinking of indivisibles, that was translated from Greek into Arabic with *taşawwur,* from Arabic into Hebrew with *ẓiyyur,* and from Arabic into Latin with *(in-)formatio* is an example of a complex history of interpretations and translations of a concept that has become

paradigmatic for our age.

The "thinking of the indivisibles," that is to say, of what precedes the action of the intellect dealing with the composition and division that takes place in predication, is closely related to Heidegger's no less fundamental difference between the "hermeneutical as" and the "apophantic as" as analized in "Being and Time" (1927) § 33. On Heidegger and Information Technology see my [Informatics and Hermeneutics](#).

The philosopher and theologian [Thomas Sheehan](#) writes in his "Hermeneia and Apophansis: The early Heidegger on Aristotle" (I quote in extenso):

"The noun hermeneia (or the verb hermeneuo) in Aristotle has a generic meaning and two specifications. Generically it means expression, manifestation, or communication (semainein). In increasingly determinate specification it can then mean: verbal semainein, called lexis or dialectos; and declarative verbal semainein, called apophansis or logos apophantikos. *That is: hermeneia-1 hermeneia-2 hermeneia-3 [semainein]: [legein]: [apophainesthai]: self-expression or communication in any form; self-expression or communication in discourse; self-expression or communication in declarative sentences*

.

This threefold meaning structures the introductory four sections of the treatise On Hermeneia. There Aristotle moves systematically from semainein in general, to legein as a particular form of semainein, to logos apophantikos as yet a further specification. The remainder of the treatise (sections 5-14) parses out the various forms of apophansis, but Heidegger almost never deals with those sections. Rather, he prefers to remain with the introduction, and his commentary generally retraces Aristotle's steps. But Heidegger's intention, of course, is to find out what judgment conceals. Therefore his interpretation, as a deconstruction and a retrieve, moves in the opposite direction: from judgment (hermeneia-3) to language in general (hermeneia2), to the question of "sign" (hermeneia-1) -- or better: from propositional truth, to the as-factor, to transcendence -- in order then to step back to what we may term hermeneia-0, not as a higher genus than self-expression but rather as that which makes any and all forms of self-expression possible, Hermeneia-0 is what Heidegger in 1925 called [das]

schon verstehende Sichbewegen" of human existence, the movement of authentic temporality, which is the meaning of transcendence: "eine eigentümliche Bewegung..., die das Dasein selbst ständig macht" (GA 21, 146f.). Heidegger's overarching purpose is, as he says at SZ 166, to show that the theory of meaning (Bedeutungslehre) is rooted in the ontology of human existence. [p. 72] We now take up the three meanings of hermeneia in Aristotle, and we link them up at each stage with Heidegger's interpretation.

IV *Hermeneia-1, the broadest and most general sense of the term in Aristotle, means to make manifest and therefore understandable, hence to communicate.* In this broadest sense hermeneia need not be communication in sound (it could be by a gesture of the hand of the raising of an eyebrow); and if it is in sound, it need not be in the articulate sounds of human language (it could be the roar of a lion or the chirping of a cricket). Hermeneia-1 means the same as semainein in the basic sense of indicating something to another (ti deloun, On Hermeneia, 17 a 18), with the overtones of both intelligibility and sociality. This basic meaning perdures (granted, with a very different root) in the Latin word interpretari. The verb root pretari (which does not exist independently in Latin but only with the prefix inter, "among" goes back to the Sanskrit prath: to spread out and thus to make flat or plain. Prath underlies such Greek words as platus (broad), platos (extension), and plateia (open space, plaza, piazza). The connotation of interpretari is: to lay out in the clear (cf. the etymology of the English word "ex-plain": to flatten out, make plain, make clear). For Aristotle hermeneia-1, the power of semainein, extends even to animals.

V. *The second and narrower sense of hermeneia is in fact the one that Aristotle privileges throughout his work: articulated linguistic self-expression and communication.* In On Sophistical Refutations 4, 166 b 11, 15, Aristotle describes hermeneia-2 as ti tei lexei semainein: to indicate or express something in speech, lexis (the Latin locutio), for which Aristotle uses equally the word dialektos (Latin articulatio). If the first meaning of hermeneia focused our attention on the key term semainein, this second meaning calls our attention to the word logos. That is to say, whereas hermeneia-1 was a possibility for any entity that had an animal psyche with pathos and phantasia, hermeneia-2 belongs only to zoion to ton logon echon. Or to reverse the proposition, human nature may be defined as a specific form of hermeneia: The genus of human beings is pathos and his specific difference is the power of logos. This means, finally, that a human being is the pathos that can speak, indeed that can speak itself as pathos: beyond itself, othered, decentered. Which is another way of saying that human beings,

qua openness (Dasein), can have a conscience. Before it indicates speech or word or the faculty of discursive thinking, logos means a relation or bond between two things. The basic meaning of legein is to collect or gather (cf. karpologos, a fruit picker, or in Aristophanes, andres korpologoi, dung-collectors ["Peace," 9]). But legein means not only to collect or synthesize into a unity but also to bring forth the synthesized. In its unity, for understanding (GA 9, 279). In Fragment 93 Heraclitus says that the Lord Apollo, whose oracle is at Delphi, oute legei, oute kryptei.... The parallelism of legein and kryptein shows that legein means the disclosure (un-hiding) of what has been gathered together. Logos: synthetic disclosure, and for that reason disclosure that can take the form of speech, where nouns and verbs are synthesized for the purpose of expressing one's pathos, one's disclosive submission to the world. Aristotle holds, as we have seen, that animals are capable of some [p. 75] egree of semainein: they too can give something forth to be "understood" by another. That is, even the inarticulate noises of animals (agrammatoi psophoi: On Hermeneia, 16 a 28; cf. The History of Animals, 400 a 33) can be phonai semantikai. But what is it that separates such "indicative voicings" from meaningful nouns, verbs, and sentences? What is the difference between a pathos that can merely express itself and a pathos that can actually speak?

What differentiates human beings from animals lies the changed character of the semainein and, deeper still, of the pathos. Pathos in the undifferentiated sense is world-openness. It is the first condition of animal psyche: the ability to have the world appear to one (cf. meta phantasias: On the Soul B 8, 420 b 33) or, as Heidegger puts it, to be captured by the world (GA 29-30, 344ff.). But in discussing the kind of semainein that distinguishes human being, Aristotle in the second section of On Hermeneia uses two words that Heidegger takes as clues to the condition of the possibility of language: (1) Syntheke: Aristotle says that, whereas some animals are capable of indicating their pathe in sound, those phonai are semantikai by nature (physei, 16 a 27) and as an instrument (organon, 17 a 1) of nature. However, a human sound such as a noun or verb signifies by convention or consensus (semantike kata syntheken, 16 a 19 and 27). (2) Symbolon: Just after the second usage of kata syntheken, and as if in apposition to it and in contrast to signification by nature, Aristotle states the condition of the possibility of such convention or coming-together: Sounds become words hotan genetai symbolon (16 a 28). Here is the key phrase that Heidegger takes as delineating the specific nature of human pathos and the birth of human semainein. Human nature is born only when symbolon emerges. In ordinary fifth-century usage a symbolon referred to each of the two halves of an object originally a knucklebone or vertebratum, later other objects such as rings - that two parties

to an agreement (=symbole) had broken between them, each party keeping one piece as proof of identification. In that case, symbalein meant to put the two pieces together to consummate the contract; and in general it meant to unite or synthesize, even to collect, like legein. Here in Aristotle's text Heidegger translates symbolon - taken as the ground of syntheke - to mean: the state of being held together (Zusammengehaltenwerden) such that meaning (Meinen) and agreement (übereinkommen) come about. Human beings, by their very nature, hold themselves together with something else insofar as they relate to another entity and, on the basis of this relation to the other, can intend this other as such. (GA 29-30, 446) [p. 76] and: What Aristotle saw under the rubric of symbolon - what he saw darkly and approximately and without giving any explanation, but with the insight of a genius - is nothing other than what today we call transcendence. Speech happens only in an entity that, by its very nature, transcends. That is the meaning of the Aristotelian thesis: A logos is kata syntheken [17 a 1f.] (ibid., 447) According to Heidegger, it is to the complex happening of symbolon as transcendence that the conventional words of a language accrue (rather than physical sounds getting "invested" with intelligible meaning); and it is this transcendence, one's being-in-the-world, that the words express. Moreover, the specific words are not only established by agreement but also are ordered to effect agreement. Thus at 16 b 20f. Aristotle adds, almost in passing, a phrase that illumines the teleology of language: Histesi gar ho legon ten dianoian, kai ho akousas eremesen: The speaker brings his discursive powers to rest (in the word with its power of signification), and the listener agrees. Symbolon as transcendence not only underlies the whole realm of syntheke - social agreement and convention - but in fact exists to effect it. This particular dimension of sociality is borne out as well by Aristotle's insistence that hermeneia-2 is not a matter of natural necessity but of well-being, the good-for-man (he d'hermeneia heneka tou eu: On the Soul, B 8 420 b 20). The range of logos, and therefore of hermeneia-2, is vast, and Aristotle implies that the field of its purposefulness extends, like sensation, as wide as does to eu (On Sense, 437 a 1). The multiplicity of living forms of logos (for example, the various forms of persuasion) and not just of logos as assertion, was dealt with in Aristotle's Rhetoric (cf. 17 a 5f.), which Heidegger reads as a treatise on the sociality of Dasein qua transcendence: Aristotle investigates the pathe in the second book of his Rhetoric. Contrary to the traditional approach to rhetoric, which conceives of it as an academic discipline, Aristotle's Rhetoric must be understood as the first systematic hermeneutic of everyday social existence. (SZ 138)

VI *There is in On Hermeneia a decisive narrowing of logos and hermeneia in the direction of one privileged form of expression and disclosure: apophansis. This is the meaning of hermeneia-*

3, and it takes the form of asserting an opinion about a state of affairs with the possibility that the [p. 77] claim may or may not be correct. Aristotle calls that kind of sentence a logos apophantikos, a declarative sentence (17 a 1-3). This is the exact meaning of the title of Aristotle's treatise: Peri Hermeneias means Peri Logou Apophantikou: Concerning (the forms of) declarative sentences. What kind of showing or apophansis is operative in a logos apophantikos? In a rough kind of literalism apo-phansis means "showing-from," like the Latin "de-monstratio," and in fact apophanesthai can have the broad and neutral meaning of "to show." But the specificity of apophansis as it is used in On Hermeneia lies in the apo-. Any logos (sentence), insofar as it is meaningful, puts forth a synthesis of pathemata for consideration and, in that sense, shows (expresses, communicates) something in speech. In considering hermeneia-2 we saw this kind of showing to be the general characteristic of any lexis at all, and it is operative even in, for example, the prayer "Please save me" or the wish "Would that I were king." But a logos apophantikos does more. The very structure of a declarative sentence expresses the claim that it is showing that which is being alleged just as it is in reality. Of course the claim is, in a Husserlian sense, an "empty" one that has the possibility of being fulfilled or not, supposedly by a check of reality. But in On Hermeneia Aristotle does not consider how one might check it out. Which is to say that On Hermeneia considers only the form or forms of declarative sentences along with their empty claims to truth and the very real possibility that they will be shown to be false. Insofar as we are dealing only with the form of the declarative sentence, we are being directed into the knotty issue of the relationship of the subject and the verb of the sentence and specifically into the grammatological question of the mode or mood (egklisis, "inclination"; Latin, modus) of the verb, expressed in its conjugated form. We cannot go into that here except to note that the main focus of On Hermeneia is on the one particular verb-mode of the indicative, what the later Greeks called he horistike egklisis, the form of the verb that expresses the intention to determine (horizein) things, i.e., to present them as they are, within their horos. (The Latins called this mode by a number of names: indicativus, pronuntiativus, definitivus, finitivus). Heidegger himself implicitly expresses the formal intention of apophansis taken in this sense when, in "What is Metaphysics?", he defines the attitude of scientific research: ...[I]t gives the subject-matter itself - explicitly and solely - the first and last word. This dedication to the subject-matter in questioning, defining, and grounding entails a peculiarly delimited submission to entities themselves, in order that these entities might reveal themselves. (GA 9, 104)

[p. 78] In On Hermeneia Aristotle is interested only in statements directed to pragmata, sentences that appeal to the

listener to give consent to the asserted content because of the nature of to pragma auto as it evidences itself, and not because one's feelings have been swayed by the eloquence of an orator or the beauty of a poem or the exigencies of religious convictions. That is why Aristotle in On Hermeneia focuses his attention on declarative sentences in the indicative mood. How, then, does a logos apophantikos show a pragma? What structure allows the showing to take place? The peculiarity of apophantic sentences (and for this reason they cannot be the primary co-performance of disclosure) is not that they can be true, but that they can be either false or true. The falsifiability of the truth-claim of apophantic sentences is the crucial point. An apophantic sentence has a specific claim-character. Not only does the sentence catch the listener's attention, as Aristotle says (16 b 20 f.) and call upon him or her to assent. Rather, it also makes the claim that what it is giving the listener to think about is in reality as it is presented in speech. Apophantic sentences are those that present a state of affairs as being true or false, whether or not the state of affairs is in fact the way the sentence presents it. Aquinas puts this succinctly in the Prooemium to his commentary on the Peri Hermeneias. Interpretatio in the real and full sense, he says, is not a matter simply of verbally proposing something for consideration (Boethius' vox...quae per se aliquid significat) but rather entails proposing something as true or false ([exponere] aliquid esse verum vel falsum). The real interpreter is one who makes a claim for what he or she shows. The claim could be correct or incorrect (in which case the interpreter, as interpreter, would be right or wrong). But in either case, what constitutes the possibility of correct hermeneia is the same as what constitutes the possibility of incorrect hermeneia: the structure of composing and dividing (synthesis, diairesis). Aristotle says that falsehood (and therefore truth in the narrow sense of correctness) is possibly only where there is synthesis, and he adds that synthesis in itself is also a diairesis (On the Soul, G 5, 430 b 1 ff.). It is not the case that affirmative judgments compose the subject and the predicate, whereas negative judgments divide them. Rather, composition and division both occur in every judgment, whether affirmative or negative, whether true or false. Hence, synthesis and diairesis, whatever that might be, is the condition for the possibility of both correct and incorrect hermeneia. That is, in apophansis I assert something about something (ti kata tinos legein). I perform an explicit act of synthesis in that I predicate a quality of the subject matter or simply the existence of non-existence of [p. 79] it. Of course, in the very act of predicative synthesis I also perform the distinction between the predicate and the subject. In the most obvious example, "Socrates is human," I certainly synthesize "Socrates" and "humanness," but in the very act of synthesizing ("Socrates is one human being") I recognize that humanness is not exhausted in Socrates but is repeatable in a potential infinity of other subjects, and thus,

without separating them, I keep the subject and predicate distinct. The unity of the bivalence of showing-[S and P]-as-belongingtogether and showing-them-as-distinct (synthesis and diairesis) is what Heidegger designates the unified as-structure. Once Heidegger had moved back from apophansis to its root in the bivalent apophantic as, the door was open for him to shift the discourse one step deeper to the hermeneutical as. The strategy that comes to the fore in SZ is clear, and I need not belabor it here. Briefly: To know an entity in the practical mode of comportment entails knowing that entity as for such and such a purpose. Indeed, the "as-for" dimension (Wozu) is what is priorly known when one knows an entity. That is, one can get involved with an entity only by being already beyond it, only by having already understood it as being for something. This primordial, unthematic, prepredicative understanding of an entity's practical essence (its "what-it-is-for-ness") is what Heidegger called the "hermeneutical as." It is evidenced in the fore-having of a usable entity; it can be explicated in praxis, without assertions. But it is also the underlying structure that ultimately makes possible assertoric composition of a subject with its logically distinguishable predicate: synthesis and diairesis.

To synthesize is to distinguish, and the assertoric synthesis-distinction (the "apophantic as" operative in hermeneia-3) rests on the prepredicative synthesis-distinction of entities and their practical essence; and for Heidegger that composition and division is performed on the basis of the original (i.e. the hermeneutical) as. This unified as-structure, rooted in praxis, that Heidegger retrieved from Aristotle's discussion of hermeneia led to the issues of transcendence and ultimately temporality.
Heidegger interpreted human beings, insofar as they already know the beingness-dimension of entities, as transcendence, i.e., as being already beyond entities and disclosive of the possibilities in terms of which entities can be understood. This kinetic exceeding of entities he called the human being's Immer-schon-vorweg-sein, his condition of being "always already ahead" of entities.
This movement is the co-performance of disclosure in humanely primordial sense, and it corresponds to the diairesis-moment of the hermeneutical as. In the oral version of his course *Die Grundbegriffe der Metaphysik* (February 27, 1930) Heidegger said that diairesis, seen as human transcendence, "pulls us as under, as it [p. 80] were, and grants us a stretching-ahead, takes us away into the possible... ."
But at the same time the human being returns from that

transcendence to entities so as to know them in terms of possibility, i.e., "so as to allow the possible - as what empowers the actual - to speak back to the actual in a binding way... , binding or bonding it: synthesis."

Clearly the unity of diairesis as transcendence to the essence of beings and synthesis as the return to beings in their essence points to the kinetic structure that grounds the hermeneutical as, just as the hermeneutical as in turn makes possible the truth and falsehood of Aristotle's hermeneia-3." (Thomas Sheehan: Hermeneia and Apophansis: The early Heidegger on Aristotle. In: Franco Volpi et al., *Heidegger et l'idée de la phénoménologie*, Dordrecht: Kluwer 1988, pp. 67-80. Online).

In other words, *informatio* can be understood from the perspective of Heidegger's existential phenomenology *as* "diairesis as transcendence to the essence of beings". Human existence is, according to Heidegger, not only being in time but being *as* three-dimensional space-time or "world openness". (See my Towards an Ontological Foundation of Information Ethics (2006); on Heidegger and Aristotle see my review of Franco Volpi). See also this text already quoted:

Martin Heidegger: Dasein und Wahrsein (nach Aristoteles) (1923/24). In: ibid.: III. Abteilung: Unveröffentlichte Abhandlungen. Vorträge und Gedachtes. Band 80.1 Vorträge, Teil 1: 1915-1932. Frankfurt am Main: Klostermann, 2016, p. 78:

"Zum Wisssen gehört die Lehr- und Lernbarkeit. Der Lernende bracuht nicht selbst wieder alles erst neu aufzufinden, sondern es kann ihm aufgezeigt werden (*apodeixis*) im Beweis. Der Beweis hängt in letzten Sätzen, Axiomen, Prinzipien, von denen das Wissen Gebrauch macht, die es aber nicht selbst thematisch erfaßt und gar aufdeckt. Das Lernbare im ausgezeichneten Sinne ist das Mathematische. Daher der Name *máthema*, das Gelernte. Aristoteles sah schon ganz klar, was die Heutigen immer nocht nicht verstehen, daß man Axiomatik nicht selbst wieder mathematisch behandeln kann. Damit ist schon deutlich geworden, daß man auch Wissenschaft nicht eigentliches Aufdecken sein kann. Sie macht Voraussetzungen; was in diesen Setzungen präsent wird, ist nicht Thema ihres Beweisens.

Wenn aber die ersten und äußersten Ausgänge aufgedeckt werden sollen, dann bedarf es dazu eines ausgezeichneten Aufweisens. Das nächste ist das in der *Rede*, im Durchsprechen von etwas *als etwas*. Das Erste und Äußerste aber kann nicht

mehr als etwas anderes angesprochen werden. Darin liegt: Das Aufdecken der Prinzipien muß ohne Rede (*áneu lógou*) sein. Ein Auseinandernehmen (*diaíresis*) im Besprechen ist hier nicht mehr möglich, die Ausgänge sind **un-auseinandernehmbar** (*adiaíreta*). Hier gibt es nur noch schlichtes Sich vor die Sache selbst bringen, ein direktes Hinführen zu ihr (*epagogé*) (nicht Induktion), kein *dia-noein*, kein durchsprechendes Vernehmen, sondern reines *noein*, Vernehmen." (emphasis added)

Human understanding is not permanent *in actu* but has the *possibility* of being 'informed' by a pre-understanding of beings *as* beings, transcending their *present* understanding *as* this or that. This hermeneutical or existential transcendence that goes beyond the mere presence of the present as well as of our usual understanding of being itself *as* presence, allows us to make an explicit judgement about what is or is not the case (*apophasis*).

Both, the "apophantic as″ that concerns our predicative capacity and the ″hermeneutical as″ that refers to our existential pre-understanding of being or our being 'informed' by it, are matters of individual and societal historical learning processes dealing with empirical *(empeiria)*, theoretical (*episteme*) and ethical (*phronesis*) *fallible* knowledge. See the relevance of this distinction for roboethics.

The interaction of both kinds of understanding makes possible critical theoretical thinking about truth and falsity, including paradigmatic presuppositions, as well as ethical reflection on well-doing and wrongdoing, including the ethical theories underlying such reflection. See the quote from Avicenna by Luca Tuninetti in paragraph 3 of the first part ([footnote 181](footnote181)) as well as the quotes from Thomas Aquinas in the [second part](secondpart) and, particularly, in the long quote from Harry Wolfson in the [third part](thirdpart) of these Notes. Epistemological, logical, rhetorical, ontological, aesthetical and ethical aspects are closely related having in common the reflection on the concept of information in the different facets of the history of its translation. See my ["Hermeneutic of Scientific Information"](link) (1986).

The insight into human existence *as* time is metaphysically and theologically preceded by understanding humans *as* already being and becoming part, after death, of a divine being with or without their individuality, an issue that was and is controversial and fundamental for Greek, Latin, Arabic, Hebrew, and Persian

thinkers of the Middle Ages no less than in the Islamic and Western tradition after Averroes all the way up until today. This research is not just historically relevant but also a key issue for an intercultural philosophical dialogue about the information society.

COMMENTS AND CRITICAL REMARKS

After finishing this paper, I asked several colleagues for comments and critical remarks.

Regarding the question about afterlife in al-Farabi, Jared Bielby (University of Alberta, Canada) sent me the following comment:

"This strikes me very much as similar to oriental eastern thought, specifically Buddhism, and I wonder why it is so similar, whether there is a mutual tradition between al-Farabi and Buddhism, and if that could be another connection to work you've already done in eastern Intercultural Information Ethics and the concept of information therein? I don't recall any relationship between the two from my comparative religion studies, but my education was not complete in that matter. I wonder if it would be something worth looking into?"

Sayeh Meisami, whose contribution on Mulla Sadra I quote in the second part and who is doing a second PhD at University of Toronto and works as Adjunct Professor in Queen's University (Canada), answered the following question:

"My question is about the issue of the tacit or explicit relationship between Arabic and Persian philosophers and Western philosophers after the Middle Ages. It is not a question whether there was an Islamic philosophy after Averroes but the about mutual ignorance. I cannot remember Western philosophers discussing books by, for instance, Mulla Sadra or even about the classics of the Middle Ages in Renaissance and Modernity. Am I right?

An exception, probably not the only one: Hegel in his "History of philosophy" discusses Maimonides and writes one page (sic) on the commentators of Aristotle.

One reason for this mutual (?) ignorance is, from the Western perspective, the rejection of Aristotle and his commentators and followers, Arabic or not, in Modernity. Did something similar happened in Persia? until the 19th century? Some seven hundred years of mutual ignorance or only from a historical perspective in encyclopedias?"

Her answer:

"Your question is actually a very important one and I believe it has not yet been addressed sufficiently. You're right, Mulla Sadra was introduced into the West only briefly in the late 19th century and it took several more centuries for him to be known in the academia. The "mutual ignorance" that you're correctly referring to must have been due to a complex of intellectual and even extra-intellectual factors.

In my opinion, the humanist tendency of the Renaissance followed by the empirical bend of the early modern, not to mention the naturalism of modern times, must have been among the most important causes of the ignorance. About the same time when Bacon and Descartes were trying to leave Aristotelian approach to science behind them, Mulla Sadra was going further back toward Plato! In the Middle Ages, both sides of the world were living in an Aristotelian sphere so no wonder they could understand each other and take each other seriously. I would also add the scientific significance of Ibn Sina for the Medieval world and the theological importance of Ibn Rushd for the rebellious ones among late Medieval thinkers to this factor, neither of which was present in later Islamic philosophy. Even today, Islamic philosophy, specially the later one is being ignored at philosophy departments and most of the works on Mulla Sadra are done by students of religion, history, or Middle Eastern studies.

As I mentioned above, the ignorance could not have been only due to intellectual divergences, so it would probably be great if someone investigated the issue further based on historical facts."

I asked a similar question to [Peter Adamson](#):

"Excuse me for bothering you again. I have been thinking about the issue of post-Averroes philosophy in Iran / Arabic culture. It is now clearer to me that there was a post-Averroes philosophy. And there was obviously a post-Thomas philosophy in the West.
But my question is if there was a philosophical dialogue between both cultures after Averroes, i.e., if Persian/Arabic philosophers discussed modern Western philosophers and vice versa.
It seems to me that concerning Western philosophers this was not the case since Aristotelian philosophy was not any more discussed (it was in fact rejected, as I can see concerning the

concept of information) in Modernity or only from a historical point of view. Is this correct? And, is it the same concerning islamic philosophers? Is it the case that we started (?) to get more interested in Islamic philosophy since the middle (?) of the 19th century? and that this was particularly from a historical perspective? I cannot remember any discussions of, say, Avicenna, in, for instance, Descartes, or Locke or Hegel or Marx... Do you know some sources that contradict this prejudice?

Am I completely wrong about this? Is there a lacuna of some 800 years of mutual ignorance excepting some "gelehrte Abhandlungen" of historical interest?

Thanks again for your help"

His answer:

"It's funny you should ask that because the podcast episode that is airing this coming Sunday is precisely on your question, i.e. interchange between Islamic and European intellectual culture, starting in about the 18th c. Probably the first influence comes more from science, with Copernican astronomy being considered pretty early on in the Ottoman empire and also known in India, and there were visitors from England and France across the Islamic world in early modern times.

This is something that still needs a lot of research. However, if you think about the close ties between the Ottoman empire in particular and European politics, over several centuries, it's clear that there would have been lots of opportunity for exchange of ideas."

See also his podcast from 28.9.2014.

And these are Heydar Shadi's comments:

"Das Thema Ihrer Präsentationen finde ich sehr interessant; ein philosophisch-historischer Zugang zur Information und Daten aber vor allem interkulturell. Ich muss die gelegentlich lesen. Nur eine kleine Bemerkung und Hinweis. Ich bin nicht sicher ob die Begriffe "Arabic" und "Persian" für diese Ideengeschichte richtig sind. Man kann vielleicht einfach im Titel "Islamic" verwenden. Konkret ist aber falsch al-Kindi und al-Farabi als persische Philosophen zu bezeichnen. Der erste war sicher Araber und der zweite ist umstritten zwischen Persern und Türken.

Sie schreiben über al-Kindi in derselben Seite unterschiedlich:

129

"What are the differences in this regard between Averroes and Persian thinkers such as Al-Kindi, Al-Farabi, Avicenna and al-Ghazali"

"Al-Kindi [...] known as "the Philosopher of the Arabs", was an Iraqi Muslim Arab philosopher, mathematician, physician, and musician."

Das ist aber kein essentielles Problem. "Islamic" zu verwenden kann helfen, um die nationalistische und ideologische Kontroverse zu vermeiden.

Aber ich muss noch sagen, dass das Thema noch komplizierter ist. 'Islamisch' als Adjektiv für die Kultur oder Wissenschaften im Mittleren und Nahen Osten ist auch nicht problemlos! So wurde die ganze Kultur und Wissen religiönisiert oder islamisiert. Um dieses Problem zu vermeiden, hat Marshal Hodgson "islamicate" erfunden. Manche benutzen lieber "Muslim".

"Der renommierte Islamhistoriker Marshall Hodgson beschrieb diese Spannung von religiösen versus weltlich-akademischen Gebrauch von Begriffen wie „islamisch" und „Muslim" in seinem dreibändigen Werk "Das Wagnis des Islam". Er schlug vor, diese Termini lediglich religiösen Phänomenen vorzubehalten, und schlug für die Beschreibung der kulturellen Aspekte der historischen muslimischen Völker den Begriff „Islamicate" vor. Diese Unterscheidung hat sich jedoch nicht durchgesetzt, daher bleibt eine gewisse Unschärfe beim Gebrauch dieser Begriffe bestehen." (http://de.wikipedia.org/wiki/Islamische_Kultur)
Vielleicht kann man stattdessen einfach "Orientalische" benutzen. Aber erst wenn man den Begriff "Orient" entkolonialisiert. Obwohl ein entkolonialisierter Orient-Begriff immer noch Probleme bereitet."

My answer:
"So sehe ich das auch. Es ist als ob wir 'christlich' für westliche Philosophen verwenden würden. 'Westlich' ist auch problematisch, nicht wahr? Wenn mein Beitrag auch in dieser Hinsicht zum Nachdenken anregt, bin ich sehr zufrieden."

What is information? It is one of the „untranslatables" addressed by Barbara Cassin in her „Vocabulaire européen des philosophies. Dictionnaire des intraduisibles" (Cassin 2004) when she writes:

„Parler d'intraduisibles n'implique nullement que les termes en question, ou les expressions, les tours syntaxiques et grammaticaux, ne soient pas traduits et ne puissent pas l'être – l'intraduisible, c'est plutôt ce qu'on ne cesse pas de (ne pas) traduire. Mais cela signale que leur traduction, dans une langue

ou dans l'autre, fait problème, au point de susciter parfois un néologisme ou l'imposition d'un nouveau sens sur un vieux mot: c'est un indice de la manière dont, d'une langue à l'autre, tant les mots que les réseaux conceptuels ne sont pas superposables […]" (p. xvii-xviii)

It is astonishing that the term information is not dealt with in Cassin's Dictionnary.

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