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Ahmed AARAB (Université Abdel Malek Esaadi, Tanger)

« Projet de dictionnaire historique des termes zoologiques arabes »

L'objectif de cet exposé est de présenter un projet de dictionnaire historique des termes zoologiques arabes.

Ce projet se propose de procéder à un inventaire systématique des termes zoologiques utilisés dans les divers traités et dictionnaires arabes classiques. L'outil informatique permettra d'observer et d'analyser notamment les diverses occurrences et leurs variations de sens, l'étendue et la richesse de ce lexique avec les différentes notions que recouvrent les divers termes. C'est ainsi que les termes et concepts zoologiques relevés seront analysés et comparés à ceux des lexiques modernes, notamment français et arabes. Cela va nous permettre de dégager les différents parcours empruntés par ces termes et concepts le long de leur histoire. On pourra ainsi distinguer une palette de cas : ceux qui ont conservé la même signification, ceux qui se sont maintenus mais dont la signification a changé et ceux qui sont absents.

La pluridisciplinarité constitue par ailleurs une dimension importante dans le présent projet qui fédère plusieurs entités de recherche. Il s'agit pour des zoologistes, des linguistes, des ethnozoologistes et des informaticiens de travailler ensemble autour d'un projet multidisciplinaire.

Ce travail de recherche permettra en outre d'établir les particularités et de mesurer le travail de conceptualisation chez les auteurs zoologiques arabes classiques.

Enfin ce projet a nécessité la mise en place de huit thèses de doctorat dont une est déjà soutenue et trois le seront cette année.

Philippe ABGRALL (CEPERC-UMR 6059, Université de Provence)

« Les études sur l'astrolabe et sa construction par Ibn ʿIrāq »

Ibn ʿIrāq (ca 965 – m. av. 1036) est un mathématicien et un astronome bien connu. Il a écrit plusieurs traités sur les problèmes de construction géométrique de l'astrolabe. J. Samso en a donné une traduction en espagnol (1969).

J'aimerais, ici, présenter en détail quelques aspects de ce travail d'Ibn ʿIrāq, notamment à propos des cercles azimuths (*dawāʾir al-sumūt*), en le reliant au traité d'al-Ṣaghānī sur la projection de la sphère (deuxième moitié du 10e siècle).

Peter ADAMSON (King's College London)

« Rāzī on Animals »

This paper will discuss al-Rāzī's innovative and attractive remarks on the topic of animals. Though the roughly contemporaneous Brethren of Purity (Ikhwān al-Ṣafāʾ) have received a good deal of attention for their writing on animals, al-Rāzī's discussion in his "Spiritual Medicine (al-Ṭibb al-Rūḥānī)" has been more or less overlooked. Al-Rāzī argues powerfully for the ethical treatment of animals, developing at length the reasons why it is wrong to cause animals harm. In the paper, I will contextualize these remarks in three ways. First, I will discuss other approaches to the treatment of animals in al-Rāzī's period, especially *kalām* discussions of whether animals can do and suffer wrong. Second, I will discuss the place of animals in al-Rāzī's psychology: how much common ground does he find between the souls of animals and the souls of humans? Third, I will suggest that al-Rāzī's discussion of how humans should treat animals depends on the idea that humans should imitate God. In this respect al-Rāzī anticipates ideas about animals found in Ibn Ṭufayl's "Ḥayy Ibn Yaqẓān."

Ahmed AL WISHASH (Pitzer College)

« Avicenna on Human Existence and Self-Awareness »

What is it to be a human being? Is there a defining aspect of being human? Can one be aware of her/his human existence? How does this awareness differ from the awareness of other entities (including the divine entity)? These questions were at center of Avicenna's writings on psychology, especially in *al-Nafs, al-Ta'liqāt,* and *al-Mubāḥathāt*. There, Avicenna presents a systematic and comprehensive theory on human existence and self-awareness. The lynchpin of this theory is the well-known thought experiment of the Floating Man (*al-Rajul al-ṭā'if*) and the subsequent discussions that circumnavigate it. In the past, several scholars have examined the Floating Man, focusing their attention on the standard version of *al-Nafs* and paying insufficient attention to the significance of the other three versions. In this paper I intend to present a new interpretation of the standard version by means of contextualizing it with the other versions of Floating Man. Two important conclusions result. First, the concept of *inniyyah* (the essential aspect of the individual existence/"I-ness") is crucial to Avicenna's notion of "what it is to be human." Unlike the *inniyyah* of the other temporal beings, human *inniyyah* has the capacity to be aware of its own existence as a whole and as a self-defined entity. Second, after associating self-awareness with the attributes of directness, unicity, certitude, and continuity, Avicenna deduces that self-awareness presupposes the possession of the "'I'." This referential "'I'" is immune from any failure of reference, on the grounds that there is a direct relationship between my awareness and the thing that I am aware of. In other words, "my awareness of my "'I"' is the same as my awareness."

Katia ASSELAH (CNRS, Sphère, Paris)

« L'émergence des nombres congruents à travers un manuscrit anonyme et une lettre d'Al-Khazin »

A partir du IX^{ème} siècle, dans une interprétation algébrique des *Arithmétiques* de Diophante, l'analyse diophantienne rationnelle se trouve intégrée à l'Algèbre par le moyen de l'Analyse indéterminée dans de nombreux ouvrages.

Au X^{ème} siècle, une nouvelle analyse diophantienne se constitue : l'analyse diophantienne entière. Cette nouvelle voie prend assise sur certains problèmes d'analyse diophantienne dont les solutions sont à chercher en nombres entiers. Ce courant semble être né chez des géomètres inscrits dans une tradition euclidienne (Al Khazin, Al Sijzi).

Les deux premiers traités arabes d'analyse diophantienne entière sont un manuscrit anonyme et une lettre d'Al Khazin (M.S. 2457, respectivement fol.81r. à 86r. et fol. 86v. à 92v.). Ces deux manuscrits étudient les hypoténuses des triangles rectangles numériques, leur aboutissement est le problème des nombres congruents : un nombre entier k est congruent s'il existe $(x, y, z) \in N^{*3}$ tel que :

$$\begin{cases} x^2 + k = y^2 \\ x^2 - k = z^2 \end{cases}.$$

Travaillant à l'édition du texte arabe, à la traduction française et à un commentaire historique et mathématique de ces deux manuscrits, je présente le fruit de ce travail.

Hassan ANSARI (FU, Berlin)

« Les réfutations des philosophes par les Zaydites mu'tazilites du Yémen du 6ème siècle de l'hégire : exemples al-Qāḍī Ǧa'far ibn ᶜAbd al-Salām et son élève al-Ḥassan b. Muḥammad al-Raṣṣāṣ »

Les philosophes ont été constamment sous la critique de certains théologiens mutazilites et asharites. Les œuvres du Qāḍī ᶜAbd al-Jabbār al-muᶜtazilī et certaines de ses élèves comme Abū Rašīd al-Nišabūrī sont une preuve de ce fait ; néanmoins, le regard critique concernant des idées philosophique islamique de la part des *mutakallimūn* ne fut pas toujours un refus direct ou visible. Dans les écrits des théologiens muʿtazilites de la période avant Maḥmūd al-Malāimī, l'auteure d'une réfutation contre les philosophes (*tuḥfat al-mutakallimīn*), nous ne disposons en aucune manière de citations directes des philosophes musulmans. Les sources muʿtazilites de la période mentionnée réagissent seulement à des parties dispersées des pensées des philosophes musulmans : à savoir quelques sujets qui renoncent explicitement à la pensée des *mutakallimūn*.

Dans mon article j'aborde, d'abord une brève histoire des critiques des *mutakallimūn* contre les idées philosophiques en appuyant sur l'importance du cas de Malāḥimī et puis je parle des liens entre le livre de ce dernier avec les traités concernés des deux théologiens cités dans le titre de mon article ; les deux théologiens mu'tazilites parmi les zaydites du Yémen qu'ils avaient une tendance bahšamite et qui avait des traités spécifiques contre les *falāsifa.*

Carmela BAFFIONI (Università degli studi di Napoli - L'Orientale)

« The New Arabic Edition of the Ikhwān al-Safā's Logical Treatises: Some Remarks »

My paper would aim at supplying some further data to one of the several problems that still wait to be solved, related to the examination of the manuscripts used for my new edition of the logical treatises of the Ikhwan al-Safa', promoted by the Institute of Ismaili Studies. I refer to the addition that is found in MS Esad Effendi 3638, only cursory approached in my edition, at the end of its recension of Epistle 12 on Aristotle's *De interpretatione* (ff. 67a16-b1). The main goal of the addition is the proposition count, considered by F.W. Zimmermann as 'a stock topic of the ancient tradition of commentaries on the *De Interpretatione*'. The unusual terminology of this corrupt text is more closely examined through comparisons with the two Arabic versions available of the *De interpretatione* (the complete one belongs to Isḥāq ibn Ḥunayn), with Proba's and Paul of Persia's commentaries, and with a passage of al-Farabi's commentary on the *De interpretatione*. Though this is a work in progress, the texts considered might reveal complex and complicated relations in the Syro-Arabic tradition of Aristotle's work.

Hélène BELLOSTA (CNRS UMR 7219 SPHERE- CHSPAM, Paris)

« How to read Apollonius' On the cutting-off of a ratio (*De Sectione rationis*) »

Among Apollonius's works, is a treatise extant in Arabic only, entitled *On the Cutting-off of a Ratio* (*de Sectione Rationis*); this treatise has been recently edited for the first time by Pr. Rashed and myself. As is the case with many rich and difficult texts, Apollonius' text gave birth, as a result of its own complexity, to various historical readings. It is all the more the case since Apollonius does not make explicit the mathematical as well as historical reasons that induced him to write it. We shall try to go through these various interpretations: from the reading of the tenth century geometer Ibn Sinān, whose solution to the problem solved in this treatise exemplifies

his new method of geometrical analysis, to Halley's who turns it into a research of envelops, to modern algebraic or analytic interpretations. All these different readings are of course not mutually exclusive; they are tied to the development of mathematics, depend on the intrinsic evolution of mathematics and correspond to different organisations of ontology; hence new readings remain always possible.

Fouad BEN AHMED (Dar al-Hadith al-Hassania Institute, Rabat)

« Averroes on Metaphor »

We can say with respect to the approach of Averroes that he did not agree with the efficacy and suitability of metaphor to discuss scientific and metaphysical subjects. Nevertheless, his texts contain uses of metaphor. So we can say too that it is not possible to ignore this transformation between a strong critique of and hostility toward metaphor in definitions, in dialectical syllogisms, and in theological and scientific reasoning, and other contexts where he seemingly embraces its use in the Koran.

Averroes's views on metaphor are therefore complex. He distinguishes between metaphor in poetics, rhetoric, dialectic, science, theology, and the Koran. The characteristics of each kind of discourse shape Averroes's assessment of metaphor. Someone working in the sciences, or dialectic, or theology must not use metaphors. This puts Averroes at odds with some modern scholars, who praise the use of metaphor not just in philosophy, for example, but even in science. Averroes's hostility toward metaphor does not, however, extend to every discipline. In some areas, such as poetry and rhetoric, he praises metaphor. Koranic metaphors, like those in rhetoric, sits between science and poetics.

Marouane BEN MILED (Université de Tunis)

« Recherches en cours sur les coniques et les compas parfaits »

Dans cette communication, je présenterai les travaux sur le compas parfait effectués par l'équipe HiMa (Histoire des Mathématiques) du Lamsin (Laboratoire de Mathématiques appliquées, hébergé par à l'École nationale d'Ingénieurs de Tunis), en collaboration avec Philippe Abgrall du Cnrs, dans le cadre d'un projet Pics. Ces travaux comportent :

1- Une étude historique et mathématique des différentes définitions des coniques, d'Apollonius à De La Hire, en passant par Descartes, al-Quhi, al-Khayyam et al-Tusi; ainsi qu'une étude historique de l'enseignement des coniques dans le second degré en Tunisie, entre 1959 et 2008, effectuée par Hager Belghith dans le cadre d'un master dirigé par Marouane ben Miled et Faïza Chellougui. L'histoire des définitions éclaire l'histoire de l'enseignement, en permet la critique et offre des propositions pour une réforme mathématiquement cohérente de cet enseignement.

2- Un travail collectif en vue de la fabrication de compas parfaits, auquel collaborent Hager Belghith, Mourad Zerai, sous la direction de Marouane ben Miled, et le Département de Génie mécanique de l'École nationale d'Ingénieurs de Tunis. Mourad Zerai a proposé plusieurs prototypes de compas parfaits, utilisant des moyens optiques et deux élèves ingénieurs, Ilyes Ferchiou et Dorra Zaiem sous la direction de Mohamed Jemmali, ont présenté un mémoire sur la conception mécanique du compas parfait d'al-Quhi. Dans la suite nous nous proposons de fabriquer un compas parfait comme il aurait été conçu au X^{ème} siècle, à partir des textes qui nous sont parvenus; puis, éventuellement, de proposer l'utilisation du compas parfait comme outil didactique pertinent pour introduire les coniques géométriquement dans l'enseignement.

Charles BUTTERWORTH (Emeritus Professor, University of Maryland, USA University of Maryland)

« The Political and Philosophical Significance of Alfarabi's *Political Regime* »

The *Political Regime* begins abruptly with a detailed account of the universe from something like a neo-Platonist perspective. There is no introduction, nor any attempt to explain what the book is about. The detailed account of the universe reveals it to be thoroughly ordered, with everything occurring in it forming part of the larger order. There follows an explanation of how human beings fit into that order, of the way political life allows them to fulfill their purpose, and a taxonomy of imperfect cities. Cities are imperfect because their inhabitants turn away from conduct that would allow them to achieve human perfection and thus be in accord with the order so thoroughly detailed in the earlier parts of the treatise.

Yet simple reflection reveals that no regime adheres to that order. If all existing political regimes are thus flawed, what can be done to transform them into something admirable? Or, as the sub-title (*Principles of the Beings*) suggests, is the work better understood as a treatise on metaphysics rather than on politics?

Asma BEN GHACHEM (Université Paris 7- CNRS)**/Mehrnaz KATOUZIAN-SAFADI** (CNRS UMR 7219 SPHERE-CHSPAM, Paris)

« Se nourrir, entre la santé et la maladie : examen d'un traité de Râzî (865 – 925) sur les aliments »

L'alimentation est un chapitre important de la thérapeutique. Le chapitre III d'*Al-Mansuri* de Razi (865 – 925) concerne les aliments, leurs qualités, leurs avantages et leurs inconvénients pour les corps sains ou malades. Il forme le quart de la totalité de l'œuvre. Razi consacre un traité spécifiquement à l'alimentation : « *Manafa al Aghdhiya wa daf'al-madariha* » ou *Les bienfaits des aliments et la protection contre leurs méfaits*.

Dans les œuvres de Razi et de Yuhanna Ibn Massawayh (777 – 857), nous examinons le passage concernant les viandes, aliments nécessaires pour la « force » qu'elles apportent au corps. Ibn Massawayh a inspiré Razi mais il est souvent critiqué pour son imperfection. Nous nous intéressons particulièrement à la « correction » ou « *islah* » des aliments. Cet acte commun d'intervention et d'ajustement est réalisé par le pharmacien lors de la préparation des médicaments composés et par le cuisinier lors de la préparation des repas. Ce sont souvent les mêmes considérations théoriques et pratiques qui permettent d'adapter aux corps, le mélange qui sera un médicament composé ou un aliment-repas.

David BENNETT (Near Eastern Languages and Cultures, UCLA)

« Ultimate Constituents among the Early Mutakallimūn »

In my dissertation, I present the case for reading the diverse reports about positions in natural philosophy attributed to 8th and 9th Century CE Mutakallimūn as indicative of a complex of materialist doctrines which had achieved a level of sophistication and refinement even before the direct translation into Arabic of Aristotelian physical and metaphysical texts. I propose that this complex, based on the principle that the world consists of discrete, localized and created bodies and accidents, provides the framework for the development of Asharite metaphysics and influenced to a great extent the manner of later philosophers' appropriation of Peripatetic and other Greek theories. While most scholars of Islamic philosophy admit the influence of Mutazilite *kalām* upon their subjects, I argue that this *kalām* itself offers a distinct and productive natural philosophy worthy of special consideration.

The model of "materialism" here investigated accounts for several disparate

systems of natural philosophy. In this paper, I outline the basic physical principles of four major figures with the aim of elucidating their productivity beyond the scope of natural philosophy. Instead of allowing the fragmentary nature of the testimony of the early doctrines to suggest fruitless quibbling over the number of sides of a particle (for example), I present ways in which propositions regarding the ultimate constituents of nature inform a systematic cosmology and epistemology. I will introduce reconstructions of Dirar b. 'Amr's theory of "parts" (*abʿaḍ*), Naẓẓam's theory of interpenetrating property-bodies, Mu'ammar's concept of the *maʿnā,* and Abū al-Hudhayl's proto-atomism-these reconstructed doctrines will demonstrate a legitimate concern with a serious theory of knowledge in the context of a rigid theocentric cosmology. Having established that these physical doctrines should be correlated with claims about perception, the nature of man, and the operation of the (divine) creative impulse, I conclude that we have enough evidence to suggest a degree of systematization among the Mutakallimūn which deserves the attention of scholars of Islamic philosophy.

Jean-Baptiste BRENET (Université de Paris Ouest-Nanterre-La Défense)

« De la disposition pure à l'intellect agent : Alexandre d'Aphrodise lu par Averroès »

Sur la base du *Grand Commentaire* au *De anima*, je m'intéresse aux relations critiques qu'Averroès entretient avec Alexandre sur cette triple question : l'engendrement de l'intellect matériel, son statut ontologique, et le rapport formel de l'intellect agent avec lui. C'est le premier point, surtout, qui sera développé : Averroès est à la fois celui qui pointe et formule ce qu'on appelle le « matérialisme » d'Alexandre et, au nom du péripatétisme, celui qui l'en dédouane. Sa critique, de fait, se meut en un sens dans l'espace d'une épistémé alexandrinienne.

Julie BRUMBERG-CHAUMONT (LEM/CNRS)

« Syllogisms that fail according to the Matter: Corpses or Monkey Money ? Logical Hylomorphism and long *Organon* in Arabic and Latin contexts »

As argued by D. Black, an epistemological approach to the Alexandrian logical hylomorphism in Avicenna's logic was instrumental to an effective integration of rhetorical and poetical syllogisms in the Arabic *Organon*. This model was transmitted to the Latin by Alghazali's *Logic,* where the five syllogistical matters are compared to the five different degrees of purity of the material out of which a coin is made — from pure gold to absolute fake. But when a Latin logician, Albert the Great, clearly adopts for the first time the "long *Organon*" under the influence of Arabic logic, he doesn't use the hylomorphic model to do so, but only the reference to the different degrees of assent corresponding to different types of premises, a model also transmitted by Alghazali. The couple of matter and form is used only to discuss the three traditional syllogistic arts exposed in the *Posterior analytics*, the *Topics* and the *Sophistic refutations*, with an ontological interpretation of the three logical matters as liked to the modal status of things. This feature is reinforced with Thomas Aquinas, whose adoption of the "Long *Organon*" has been very influential in Latin logic, since matter and form are only used in order to explain the relationship between the two *Analytics*. I think that the absence of the notions of matter and form in the Latin version of the long *Organon* is to be explained by the existence of different hylomorphic models in Arabic and Latin contexts. Probably under the direct influence of Alexandrian commentaries known through the marginalia of the Latin translation of the *Prior analytics*, and certainly in the framework of the rediscovery of the Aristotelian hylomorphism in natural philosophy, the general syllogism is itself thought of as a

aggregate of form and matter, where matter is not just the stuff out of which syllogisms are formed, but a constitutive element of an hylomorphic logical being. The notion of syllogism is at the same time strictly identified with the categorical syllogism whose figures and modes are described in the *Prior analytics*. Questions are consequently raised about the ability of the syllogistic compound to "survive" a failure in matter, as can be seen in the grammatical and logical condemnations pronounced in Oxford in 1277. Because of his quasi "biological" understanding of the syllogism as an hylomorphic compound, for which only one matter is appropriate to a given form, Albert the Great is ready to say, with some qualifications, that the syllogism that fails according to the matter is a syllogism in the same manner as a corpse is a man.

Cristina CERAMI (CNRS UMR 7219 SPHERE-CHSPAM, Paris)

« Corps et continuité. Les *minima naturalia* dans l'explication de la croissance animale par Averroès »

Dans sa *Physique*, Aristote explique que l'un des principaux arguments avancés par les partisans du vide se fonde sur l'hypothèse que la croissance animale implique nécessairement l'existence d'interstices creux à l'intérieur des corps qui viendraient se remplir de la nourriture assimilée. D'après cette théorie, la croissance ne s'expliquerait qu'en postulant des cavités vides dans lesquelles des corpuscules de matière s'enchâsseraient. Les corps vivants ne seraient ainsi que des agrégats d'atomes entourés d'un nombre de pores vides plus ou moins grands; ils ne seraient pas des unités fortes au sens aristotélicien du terme. Dans la réfutation d'un tel argument, pour Averroès, comme pour Aristote, l'enjeu est double : il ne s'agit pas simplement d'opposer à une vision discontinuiste une physique de l'infiniment divisible, mais d'être capable à partir de là de sauver les phénomènes biologiques.

Le but de cette communication est de montrer que c'est par le recours à la doctrine qui veut que le réel sensible soit constitué par des unités d'un point de vue formel non ultérieurement divisibles, connues par la suite comme *minima naturalia*, qu'Averroès répond à l'argument qui établit l'existence du vide sur la base de l'accroissement. La croissance animale, explique Averroès dans son *Commentaire Moyen* au *De Generatione et Corruptione*, implique que de nouvelles parties minimales s'engendrent dans les corps qui s'accroissent. Les *minima naturalia* constituent donc le socle physique à partir duquel la croissance animale se réalise, mais ce phénomène est entièrement gouverné par une forme qui, dominant complètement les formes des éléments constituants le corps, les réduit au statut de qualité et les utilise comme des instruments. Par l'action de cette forme des formes, la croissance ne se réalise qu'à la suite de l'assimilation par mélange des nouvelles parties minimales avec les autres parties du vivant. Dans ce cadre, je voudrais suggérer, contre l'interprétation qui fait des *minimina naturalia* des parties actuelles dans les corps, que l'un des plus grands efforts d'Averroès est de sauvegarder la continuité du corps vivant, tout en admettant que la réalité sensible implique un principe de division finie. Les *minima naturalia* sont le noyau physique à partir duquel se produit le mélange des parties homéomères et se constituent les corps naturels, mais ces *minima* perdent leur autonomie physique à l'issue de l'accroissement du corps.

Leonardo CLERICI (Istituto di skriptura, Brussels)

« Classics and Continuity: The Islamic surface of the narration (*skriptura*) »

Beyond the hermeneutical step that is based on the phenomenological european methodology, (Husserl Descartes Ramus Bayle) we can find very easy the contemporary *field of maani*, that is a model to open to the cultual thinking (liber arbiter?) as we can *understand* for exemple in the composition of Sharastani (Kitab al milal) or Ibn Nadim (al Fihrist). The harranyan and chaldean fonction in the *catalogue* of the islamic literature is connected deeply with the cult of hermes (aramis) that is also a sabaen prophetic technology (theory or contemplation /time) and oracular behaviour (metric). Our text introduce this surface and try, on the basis of the so called platonic and aristotelian corpus, to give an *order to read* and to manifest connexions (maani, inspired by coranic model).

This methodology is based on our technique (1983) of archives and give us the possibility to join (coniuctio) philogy & new meanings, beyond the criterium of history that is still inside the genius loci (daimon). *Harran*.

Pascal CROZET (CNRS UMR 7219 SPHERE- CHSPAM, Paris)

« Le renouveau de la géométrie au X^{e} siècle : *L'introduction à la géométrie* d'al-Sijzi »

Silvia DI DONATO (CNRS UMR 7219 SPHERE-CHSPAM, Paris

« Thèmes, argumentations et style de l'oeuvre d'Ibn Bajja. La *Risâlat al-wadâ* »

La *Lettre de l'adieu* est une ouvre de la maturité d'Ibn Bâjja (ca 1082-1139). Selon la classification généralement acceptée des ses ouvrages, elle appartient à la troisième période de la riche production du philosophe, qui représente le noyau le plus original de sa pensée, avec le *Régime du solitaire*, *L'épître sur la conjonction* et d'autres écrits brefs tels que *Le discours sur l'intellect agent*.

Le point de départ de notre réflexion est le constat du caractère cryptique, ardu, apparemment non-organique des écrits d'Ibn Bâjja, souvent définis comme presque incompréhensibles. Le travail philologique sur l'ensemble de la tradition textuelle (arabe, hébraïque et latine) de la *Lettre de l'adieu* nous a conduit à approfondir l'examen des facteurs qui sont à l'origine des difficultés de compréhension et des obscurités, en les distinguant selon leur origine (philologique ou textuelle). En conséquence, nous voudrions avancer quelques remarques générales au sujet de la structure et de l'intention de l'ouvrage, de ses points critiques et des caractéristiques du style argumentatif d'Ibn Bâjja.

Thérèse-Anne DRUART (Catholic University of America)

« Al-Fārābī on How to Translate Philosophical Terms »

In the second part of his *Kitâb al-Hurûf* al-Fârâbî presents a naturalistic history of the origin and development of language. The first phase of development of language establishes a single word or expression (lafz) for each concept and, therefore, for each thing. In the second phase poetry and rhetoric arise and so do equivocity as well as metaphors and eventually the development of a native philosophical and technical vocabulary. The third phase gives rise to demonstrations and al-Fârâbî, then, examines what happens when philosophy not homegrown but rather transmitted from a nation from to another one that did not have it and so necessity of translation of technical terms arise. Whenever possible, he favors transfer "*naqla*"

from an ordinary meaning in the target language to a new technical meaning over coinage of new terms or transliteration. He gives examples of what happened in the passage from Greek into Arabic. An illustration of his preferred mode of translation can be found in the first par of the *Kitâb al-Hurûf* in his discussion of the concept of substance or "djawhar." Al-Fârâbî insists on using transfer to ensure that philosophical language sounds truly Arabic rather than foreign.

Nader EL-BIZRI (University of Lincoln)

« Mathematics and the Question of Being: Ontological Interrogations around Ibn al-Haytham's Geometrical Determination of Place »

This paper focuses on the ontological bearings of the mathematization of the notions of physics in the context of the 9th-11th century CE Arabic prolongations of the Apollonian-Archimedean mathematical tradition within classical Islamic civilization. To give a situational and concrete setting for the epistemic and textual investigation of the emergence of new perspectives on 'the question of being', within these cross-generational and interconnected domains of mathematical research, I will examine the ontological underpinnings of the geometrization of place by the polymath Ibn al-Haytham (Alhazen; d. ca. after 1041 CE), which he undertook in view of grounding his broader scientific explorations, and in terms of the expansion of the apodictic legacies of his predecessors, particularly of 10th century CE mathematicians like al-Quhi, al-Sijzi, and Ibn Sahl. This inquiry will also take into account the metaphysical doubts that were levelled at Ibn al-Haytham's geometrical definition of place by the 13th century CE Aristotelian philosopher al-Baghdadi, by way of furthermore illustrating the nature of the ontological problem of determining the kind of being of place and space, in the context of investigating natural phenomena through the analytic and synthetic constructs of the geometric representation and modelling of reality.

Bennacer EL BOUAZZATI (Mohamed V University, Rabat)

« Ibn al-Haytham and Peripatetism »

Ibn Abi Usaybi'a attributes to Ibn al-Haytham a biographical note in which the mathematician declares that he found the right way of reasoning only in what has been taught by Aristotle on matters of the sciences of logic, physics, and metaphysics.

Actually, did Ibn al-Haytham adhere to the Peripatetic paradigm of science? Did he endorse the canons of the Aristotelian syllogistic modes of reasoning in logic? Was I. H. committed to the postulates and presuppositions of the Aristotelian theory of science? Was I. H.'s theory of vision on line with Aristotle's? Was I. H.'s critique to the Ptolemaic astronomy in accordance with the cosmology of Aristotle?

Ibn al-Haytham's scientific achievements in maths, optics, and astronomy, are not simple extensions of the works of preceding scientists; his vocabulary has many specific characteristics related to his original practice in experimentation and questioning of the details of the scientific legacy in many domains. His way of thinking is more akin to that of Ibn Qurra, al-Quhi, Ibn Sahl, al-Biruni, rather than that of al-Farabi and Ibn Sina. And among his contemporaries, his epistemological view stands somehow in between that of al-Biruni and that of Ibn Sina.

Ibn al-Haytham's originality in tackling difficult scientific themes and methodological questions is easily recognizable through particular expressions of describing situations and analyzing problems. Two main concepts, central in his innovative endeavour, deserve a particular attention: the concepts of experiment (*I'tibār*) and discernment (*tamyīz*); they are not in a linear continuity and conformity with the Peripatetic framework. His conception of science stands as a continuation of

the Eudoxian-Euclidean-Archimedean tradition of scientific research but he took research far ahead of what that tradition could offer.

Said EL BOUSKLAOUI (Mohamed I University, Oujda/Morocco)

« Yah·yā al-Nah·wī and al-Kindī on the Proofs of Creation »

Many of the proofs of creation formulated by Yah·yā al-Nah·wī (Philoponus), a sixth century Alexandrian Christian philosopher, were largely reproduced by al-Kindī, the first Arab Muslim Philosopher of the ninth century. Starting with Philoponus' arguments and the results of previous works on the question by R. Walzer, H. Davidson, P. Adamson and others, I will try to demonstrate in my paper how at least three of these arguments were reformulated in al-Kindī's preserved treatises: (a) the argument from the finitude of the power of 'the body of the universe' partially reproduced by al-Kindī and thus providing many proofs, based on the first premise of this argument, for the finitude of the body of the universe; (b) the argument from composition in its two forms: the first argument from "composition of matter and form" appeared in the text of al-Kindī under the statement of composition of substance and three-dimensionality while the second argument from "composition of finite parts" was repeated many times in different statements, I will argue that al-Kindī's reformulation of Philoponus' argument from composition reproduces the Kalām argument from accidents; (c) and finally, the argument(s) from the impossibility of an infinite succession (i. e. the infinite cannot be traversed, increased nor multiplied) was also reformulated, but in a slightly different way. Some of these arguments, especially the last one, were much known to the Mutakallimūn in the time of al-Kindī and those who came after; I will demonstrate that al-Kindī's thought is deeply rooted in the kalām Mu'tazilite tradition.

Silvia FAZZO (King's College London, UK – CNR (ILIESI) I)/ Mauro ZONTA (Università "la Sapienza", Roma)

« Alexander of Aphrodisias's *On the Principles of Being*: toward a new Reconstruction of the Lost Original Greek Text and Structure from the Greek tradition and from the Medieval Syriac and Arabic Versions »

This talk introduces the general problems concerning a comprehensive edition of Alexander's De principiis based on any extant evidence in Arabic, Syriac and Greek, and its textual history.

So far only one of the two extant Arabic versions has been taken into account for this sake, namely "Arabic A" as published by Charles Genequand. As for the Syriac, it has been regarded rather as a witness of Sergius of Reshayna's own reworking and adaptation of the Greek treatise than as a source for reconstruction of the original text.

Nonetheless, it is not at all ascertained that the Arabic version "A" reflects the Greek original text by Alexander without any alteration. This alteration might be due either to the Arabic translator himself or to the Syriac intermediary, since it is very likely that a Syriac version, possibly by Hunayn Ibn Ishaq, existed.

Therefore, one has to wonder about the relation between the Syriac source for the Arabic translation and Sergius's text. Did they have a common ancestor in late antiquity or not? The premise of the treatise, having the shape of a private letter between two correspondents (ficticious or not), is quite unlike anything in Alexander authentic texts and has common features with letters as a philosophical genre in Syriac and Arabic literature. Moreover, as some recent research has shown, there is a close relation between the treatise and some relevant Greek texts by Alexander and Aristotle which need to be taken in much fuller account that it has been done so far.

Gad FREUDENTHAL (CNRS UMR 7219 SPHERE-CHSPAM, Paris)

« Medieval Jewish Philosophy in Hebrew: Looking up to Arabic, Turning the Back to Latin »

In my paper I will present quantitative data comparing the medieval Arabic-into-Hebrew and the Latin-into-Hebrew translations. I will comment on important differences and identify changes over time. I will argue that Jewish philosophical culture, especially in the Midi, consistently turned the back to the neighbouring Latin culture, while it continued to look up to Arabic, especially Andalusian, culture. I will try to account for this longue-durée cultural attitude. The four tables below summarize the data.

Table 1
Hebrew Translations before 1200, by Subject and Source Language

Translated from Arabic		Translated from Latin	
Philosophy and Science	Medicine	Philosophy and Science	Medicine
N = 28 % of total: 97	N = 1 % of total: 3	N = 0 % of total: 0	N = 18 Provence 17 Unknown: 1 % of total: 100
N = 29 % of total: 62		N = 18 % of total: 38	
Total: N = 47			

Philosophy and science: 28 (= 60% of all translations), all translated from Arabic.

Medicine: 19 (= 40% of all translations): translated from Arabic: 1 (= 5% of translations in this area); translated from Latin 18 (= 95% of translations in this area).

Table 2
Hebrew Translations 1201–1300, by Subject and Source Language

Translated from Arabic		Translated from Latin	
Philosophy and Science	Medicine	Philosophy and Science	Medicine
N = 116 % of total: 72	N = 45 % of total: 28	N = 12 Spain: 4 Provence: 2 Italy: 5 Northern France: 1 % of total: 41	N = 17 Spain: 1 Provence: 8 Italy: 7 Unknown: 1 % of total: 59
N = 161 % of total: 85		N = 29 % of total: 15	

Total: N = 190
Philosophy and science: 128 (= 67% of all translations): translated from Arabic: 116 (= 91% of all translations in this area); translated from Latin: 12 (= 9% of translations in this area). Medicine: 62 (= 33% of all translations): translated from Arabic: 45 (= 73% of translations in this area); translated from Latin 17 (= 27% of translations in this area).

Table 3
Hebrew Translations, 1301–1400, by Subject and Source Language

Translated from Arabic		Translated from Latin	
Philosophy and Science	Medicine	Philosophy and Science	Medicine
N = 100 % of total: 73	N = 37 % of total: 27	N = 34 Spain: 2 Provence: 6 Italy: 23 Germany: 1 Unknown: 2 % of total: 35	N = 62 Spain: 4 Provence: 20 Italy: 8 Unknown: 30 % of total: 65
N = 137 % of total: 59		N = 96 % of total: 41	
Total: N = 233			

Table 4
Hebrew Translations, 1401–1500, by Subject and Source Language

Translated from Arabic		Translated from Latin	
Philosophy and Science	Medicine	Philosophy and Science	Medicine
N = 9 % of total: 75	N = 3 % of total: 25	N = 53 Spain: 27 Provence: 2 Italy: 16 Unknown: 8 % of total: 69	N = 24 Spain: 1 Provence: 2 Italy: 16 Unknown: 5 % of total: 31
N = 12 % of total: 13		N = 77 % of total: 87	
Total: N = 89			
Philosophy and science: 62 (= 70% of all translations): translated from Arabic: 9 (= 15% of all translations in this area); translated from Latin: 53 (= 85% of translations in this area). Medicine: 27 (= 30% of all translations): translated from Arabic: 3 (=11% of translations in this area); translated from Latin 24 (= 89% of translations in this area.			

Nadja GERMANN (Loyola University Maryland, Baltimore)

« How Do We Think? Some Remarks on Avicenna's Theory of Knowledge »

In order to attain knowledge, says Avicenna, one must learn; in order to learn one must think. What, however, does it mean 'to think'? What kind of activity is thinking: which processes, acts and faculties are involved, and which 'organ' performs the activity of thinking? — Recently, Avicenna's notion of thinking has been the focus of increased scholarly attention by researchers in the field of Arabic-Islamic philosophy (cf. Dimitri Gutas; Peter Adamson). This interest was initially aroused by inconsistencies, if not contradictions, between different passages in Avicenna's writings: for example, he argues that a human being's cogitative power is one of the interior senses and therefore located in the brain, i.e., a bodily organ. However, he also maintains that universal concepts—the building blocks of any kind of knowledge—can only be acquired by the intellect, *i.e.*, an entirely immaterial power. This obviously raises the problem of which role thinking, as well as related activities such as learning and studying, actually plays in the process of cognition. — My paper will be based on the thesis that Avicenna subscribes to the unity of the soul. Accordingly, it is the *one* human soul which performs various activities such as thinking and intuiting, albeit by virtue of different organs or powers. With this background, I will re-examine Avicenna's notions of thinking and intuiting and argue that conceptual modifications observable in his later writings must be attributed to the fact that his earlier theory did not adequately explain complex thinking (*e.g.*, the construction of syllogisms) or clearly distinguish between discursive and non-discursive thought.

Frank GRIFFEL (Yale University)

« The "Dialectical Turn" and the Formation of Post-Classical Arabic and Islamic Philosophy during the 12th century »

While we have a clear idea about the main protagonists, the schools, and the periods in the history of Arabic and Islamic philosophy during the classical period, we still lack an equally detailed understanding of what shaped the history of that discipline in the period between al-Ghazālī's attack against the *falasifa* and the modern period that begins in the early 19th century. This paper makes an attempt to explain the parameters that developed right after al-Ghazālī's criticism in the 12th centuries. The result of that criticism is, of course, not a demise of even a disappearance of philosophy in Islam but rather a profound change of the discourse.

This paper will analyze the work of Abū al-Barakāt al-Baghdādi (d. *c.* 1165), who was the most influential philosopher in the decades right after al-Ghazālī (d. 1111). In his *Kitāb al-Muʿtabar*, Abū al-Barakāt rejected the Farabian and Avicennan notion of philosophy as a scientific discipline that achieves its results through a system of demonstrative arguments (*barāhin*). Philosophy is seen instead as a dialectical discipline, where different arguments from different groups of scholars are compared with one another. The paper shall explain the "dialectical turn" during the 12th century and provide a broad outlook to the further formation of the philosophical discourse in the decades after Abū al-Barakāt and into the Ilkhanid period (13th and 14th centuries). Authors in this period understand *falsafa* not as a discipline (similar to the way we use the word "philosophy") but use this word as a label for a certain philosophical movement, *i.e.* a set of teachings developed by al-Fārābī and further refined by Ibn Sīnā. The paper suggests to understand the "dialectical turn" of the 12th century as a watershed between what might be called "classical" and "post-classical" Arabic and Islamic philosophy.

Steven HARVEY (Bar-Ilan University)

« Averroes' *Middle Commentary* on Book I of the *Nicomachean Ethics* »

In this study I return to Averroes' *Middle Commentary on Aristotle's Nicomachean Ethics* (*Talkhîs kitâb al-akhlâq*), the only commentary he wrote on Aristotle's *Ethics*. As is well known, this commentary is no longer extant in Arabic (apart from some fragments), but only in independent medieval Hebrew and Latin translations. The Hebrew translation [1320/1] by Samuel ben Judah of Marseilles was critically edited by Lawrence Berman, and was published a little over a decade ago; the Latin translation by Hermannus Alemannus [1240] has not been edited since the sixteenth century Venetian printings. It remains one of the least studied and least cited of Averroes' commentaries, even though few works made their mark on medieval Islamic philosophy as much as Aristotle's *Ethics*. In two previous studies I have examined books 8 and 10 of this commentary to determine to what extent it is like other middle commentaries (*talâkhîs*) by Averroes; to gauge its importance; and to discern in what ways Averroes helps us to understand Aristotle's text? My conclusions – although somewhat different for the two books – suggested that this commentary is among the least helpful of his middle commentaries for understanding an Aristotelian text. I realized I needed to examine closely yet another book of the commentary before reaching any broad conclusions on the nature of the text. This further examination, a study of book 1, is the subject of the present paper.

Ahmad HASNAOUI (CNRS/UMR 7219 SPHERE-CHSPAM, Paris)

« L'objet du *De Interpretatione* selon al-Farabi »

Se séparant de la tradition qui considérait que le *skopo*s du *D. I.*, c'était les propositions (ou le *logos apophantikos* : la proposition considérée sous son seul aspect assertif), propositions destinées à constituer les éléments du syllogisme, lui-même objet des *Premiers Analytiques*, al-Farabi regardait l'objet du *D. I.* comme étant d'abord les problèmes (*matlûbât),* autrement dit les paires de propositions opposées dont l'une sera, au terme du processus de découverte des prémisses, la conclusion d'un syllogisme.

On tâchera de faire ressortir les points suivants : 1) un problème ayant la forme *S*P v (Op.) S*P ?* la théorie de l'opposition des propositions (le « carré logique ») acquiert pour fonction essentielle de permettre la formulation des types de problèmes selon les disciplines logiques épistémiquement distinguées et hiérarchisées : l'opposition contradictoire permet de formuler les problèmes dialectiques, l'opposition contraire de formuler les problèmes démonstratifs… 2) Grâce à l'introduction dans la théorie de l'opposition de la notion de *matière* des propositions (statut modal de l'état de choses qui se reflète dans le lien prédicatif), al-Farabi s'assure que les propositions *contraires*, qui rendent possible la formulation d'un problème scientifique, « divisent toujours le vrai et le faux » dans la matière du nécessaire, matière des propositions scientifiques. 3) La solution apportée par les commentateurs d'Aristote au problème de la valeur de vérité des propositions futures en matière contingente, à savoir que les paires de propositions opposées de ce type « divisent le vrai et le faux », mais *indéterminément*, est généralisée par al-Farabi pour caractériser la situation cognitive du chercheur engagé dans la résolution d'un problème. 4) L'accent mis sur la notion de problème trouve son ancrage dans ce qu'on pourrait appeler une veine « problématologique », présente chez Aristote et ses commentateurs. 5) On avancera qu'il y a une harmonie entre la mise en avant de la notion de problème et la notion d'analyse entendue comme une remontée régressive, à partir d'un problème donné, vers les prémisses, qui permettront d'établir l'une des propositions qui constituent ce

problème et de réfuter l'autre, cette remontée vers les prémisses s'effectuant par la médiation des « lieux ».

Wilfrid HODGES (British Academy)

« The place of analysis (taḥlīl) in the logic of Ibn Sīnā »

Ibn Sīnā believed that Aristotle chose the name 'Analytics' for his main logical work because the work included an aspect of logic called analysis. Ibn Sīnā's explanations of the nature of analysis are not entirely consistent, either with each other or with Aristotle's account. But one clear thread, which Ibn Sīnā discusses most explicitly in Qiyās book 9, is the justification of contentful arguments by relating them to formal argument schemas. There is evidence that Ibn Sīnā himself (correctly, it can be argued) regarded his own most significant contributions to logic as belonging to this area rather than to the construction of formal systems of logic.

Mehrnaz KATOUZIAN-SAFADI (CNRS UMR 7219 SPHERE-CHSPAM, Paris)

« Râzî (865-925) : Le *traitement du lépreux* et la place du petit-lait »

One of the worst and frightening diseases during the medieval period was leprosy. The source of the diseases was bad black bile. The physician al-Razi, rejected the use of one important medicine proposed by Galen, "*snake flesh*", and suggested a treatment by "*whey*". In this presentation: we will examine the reason for this rejection and the argument for new proposition; we compare also all different "*whey*" preparation and their properties. These both medicines will be studied considering the medieval concept of drugs and new biochemical research.

La lèpre était considérée comme une maladie fort difficile ou impossible à traiter par les médecins médiévaux ; la source de la maladie était selon eux un dérèglement de la bile noire, difficile à rectifier. Le médecin Razi, a refusé un des traitements proposés par Galien, la « *chair de serpent* » et il la remplace par le « *petit lait* ». Nous analysons les bases de ce refus et de cette nouvelle proposition. Nous examinerons les propriétés des diverses préparations du « *petit-lait* ». Ces comparaisons seront effectuées selon les concepts de la médecine médiévale et selon les connaissances biochimiques et médicales actuelles à notre disposition.

Jari KAUKUA (University of Jyväskylä, Finland)

« Self-Awareness in Ibn Sīnā, Suhrawardī, and Mulla Sadrā: A Tradition of Innovations »

This paper will discuss the variations in the theoretical applications of self-awareness in Avicenna, Suhrawardi and Mulla Sadra. (1) In his mature psychology, Avicenna delineated a very narrow notion of self-awareness (shu'ur bi al-dhat) as first-personality inherent in all human experience. In arguing for this notion, Avicenna brought forth an array of empirical data, which became part and parcel of the subsequent tradition of Islamic psychology. More debatable, however, was Avicenna's attempt to found his theory of the substantiality of the human soul on the evidential basis of these date. (2) Suhrawardi adopted Avicenna's description of self-awareness. However, he rejected his predecessor's central psychological conclusion. Instead, he cast the phenomenon in an even more foundational theoretical role when he identified self-awareness with light, the very foundation of his metaphysical system. (3) Mulla Sadra took the relevant phenomenal data as simple givens of the tradition. But certain tenets of his philosophical system (most importantly, the identity of subject and object of all cognition, and the identification of awareness with mental existence) lead him to tacitly modify the inherited description of self-awareness. As a result, what earlier was a property of the soul as the subject of experience becomes

in Mulla Sadra a feature of an experience that is no longer really divisible into its subjective and objective constituents. Moreover, the self involved in self-awareness is no longer detachable from the objects it is first-personally aware of.

Terence J. KLEVEN (Fulbright Fellow at the Centre Louis Pouzet, Bibliothèque Orientale, Université Saint-Joseph, Beirut/Central College, Pella, Iowa, USA)

« Alfarabi's Account of the Rational Arts and the Common Aim of Human Perfection in Plato's Political Philosophy and Aristotle's Organon »

In a series of Alfarabi's writings found in the same sequence in two manuscripts, Hamidiye 812 and Bratislava 231 TE 41, Alfarabi introduces and provides a concise definition of each of the rational or syllogistic arts. Although most of Alfarabi's writings in these collections comment on Aristotle's books from the Organon, the first two writings are Alfarabi's independent introductions to all of the syllogistic arts and the third in the series is an exposition of Porphyry's Eisagoge. It is only in the fourth book in this sequence that Alfarabi comments on the first book of Aristotle's Organon, the Categories. In other words, Alfarabi's starting point in the study of philosophy is not identical to Aristotle's starting point. Furthermore, although these writings of Alfarabi reflect on the content of Aristotle's books, they are not commentaries on the whole text; rather, Alfarabi emphasizes certain topics, omits others, and extensively rewrites others. At times we can see a lucid and concise statement of Aristotle's account; at other times, he departs from Aristotle; at still other times, it is a challenge, due to Alfarabi's gentle, unpolemical and ambiguous style, to know the measure of his agreement or disagreement with Aristotle. Finally, Alfarabi, like many of his predecessors, includes in this sequence of writings his commentaries on Aristotle's Rhetoric and Poetics in order to conclude his account of all the syllogistic arts. As M. Mahdi has argued elsewhere in regard to Alfarabi's judgment of Aristotle, "Aristotle's writings need an introduction and a conclusion." The purpose of this essay is to explain the significance of Alfarabi's presentation of the rational arts and to give examples of the various ways in which he incorporates Aristotle's teachings into his own account. Alfarabi's aim is not only to present the order and definition of the rational arts, but to show how Aristotle's art of demonstration emerges from and is a refinement of the political arts of the city. Aristotle's Organon, rightly introduced and understood, is in harmony with the arts of a political order whose aim is the perfection of man, and in this aim, Plato and Aristotle are in agreement.

Olga LIZZINI (Vrije Universiteit Amsterdam)

« One, Unity, Uniqueness: Some Observations on the Concept of One and Unity in al-Fārābī and Yahyā ibn ʿAdī »

Toby MAYER (IIS London)

« Time in Shahrastāníī's Counter-Avicennan Philosophical System »

Muᶜammad b. ʿAbd al-Karīm al-Shahrastānī (d.548/1153) is known for his great heresiography, the *Milal*, and for his *Nihāya*, an important statement of Ashᶜarite theology. Another dimension of his views is emerging from research into his barely known, later works. In his *Muṣārᶜa*, he describes his intellectual milieu as being one in which Ibn Sīnā (d. 428/1037) was viewed as an unsurpassable philosophical authority by many colleagues. Shahrastānī confronts aspects of Avicennism with a radical theology with roots in Fatimid Isma'ili thought. Central to his system is a set of dyadic concepts, understood to inform the deep structure of created reality and human ideation – but which God is held to transcend entirely. Shahrastānī traces this system

of ideas to the authority of the prophets and their representatives, it being crucial to him that philosophical and religious truth form a unity; and it is indeed demonstrable that the system used in his philosophical polemic is essentially identical with the hermeneutical framework used in his unfinished scripture commentary, *Mafātīḥ al-Asrār*. In my discussion I focus on how the mentioned system informs even Shahrastānī's refutation of the eternity of the world in the 5th *Mas'ala* of the *Muṣāraʿa*, and I also outline the response to it by Naṣīr al-Dīn al-Ṭūsī (d. 672/1274).

Régis MORELON (CNRS UMR 7219 SPHERE-CHSPAM, Paris)

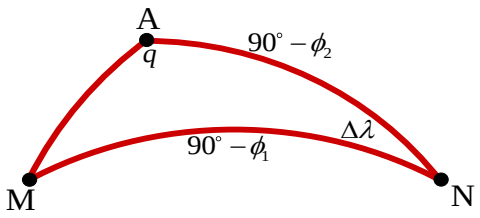
« La traduction arabe de l'*Almageste* de Ptolémée par al-Hajjaj »

L'Almageste de Ptolémée (milieu du II^{ème} siècle de notre ère) représente le sommet de la recherche en astronomie de langue grecque autour de la Méditerranée, seul domaine géographique de référence envisagé ici. Il n'y a aucune recherche sérieuse dans cette discipline, dans ce domaine géographique précis, qui ait été faite après lui avant le passage de l'astronomie en la langue arabe au IX^{ème} siècle de notre ère à Bagdad. Sous le calife al-Ma'mûn il y a eu probablement deux traductions de cet ouvrage fondamental, il nous reste celle d'al-Hajjâj faite en 826-827 de notre ère. Cette traduction a permis aux savants de l'époque d'avoir un accès en langue arabe à l'Almageste. Les questions soulevées ici sont, d'une part, celles de l'approche du texte de cet ouvrage en arabe, et des différences par rapport au texte grec édité, et, d'autre part, celles de la création d'une langue scientifique arabe dans le domaine de l'astronomie.

Ali MOUSSA (King Fahd University)

« Abū al-Wafāʾ's Mathematical Methods for the *Qibla* »

Given a northern location A with geographical coordinates (ϕ_2, λ_2), and Mecca M with coordinates (ϕ_1, λ_1). Mathematically, the problem of the *Qibla q* can always be reduced to the figure below,



where the sides AN and MN and the angle N are known, and point N is the north pole. The *Qibla q* can be determined by using this explicit formula

$$q = \tan^{-1} \frac{\sin \Delta\lambda}{\cos \phi_2 \tan \phi_1 - \sin \phi_2 \cos \Delta\lambda}$$

We will see that this easy formula is one of Abū al-Wafāʾ's three methods (which he discussed in his *Almagest*) for the *Qibla*. We will, from a historical point of view, discuss why, it is difficult to derive this explicit formula from the works before the time of Abū al-Wafā', as the works of Ḥabash and al-Battānī.

Lukas MUEHLETHALER (Freie Universität Berlin / ERC)

« Umar ibn Sahlān al-Sāwī's *Nahj al-taqdīs* and the early reception of Abū al-Barakāt al-Baghdādī's philosophical work »

As research on post-Avicennan philosophical thought advances, so increases the awareness for the lasting impact on this tradition by Abū al-Barakāt al-Baghdādī (d. c. 560/1165). His impact has been documented in some works by Fakhr al-Dīn al-Rāzī both with regard to specific views and with regard to the methods of philosophical argumentation. But is Rāzī the lone student of Abū al-Barakāt, as Shlomo Pines' pioneering studies claim, or is Rāzī continuing an already existing reception of Abū al-Barakāt's works, as some early references seem to indicate? The paper provides new evidence for the latter view. It introduces the hitherto unknown treatise *Nahj al-taqdīs* by Abū al-Barakāt's contemporary ʿUmar ibn Sahlān al-Sāwī. Ibn Sahlān is best known as a logician, but he was also a champion of Avicennan philosophy, as is shown by his rebuttal of Shahrastānī's *K. al-Muṣāraʿa*. To this second category of Ibn Sahlān's works belongs the *Nahj al-taqdīs*. Ibn Sahlān wrote the treatise at the behest of a fellow scholar who had been confused by Abū al-Barakāt's views on God's knowledge of particulars. The paper analyzes Ibn Sahlān's reply in the context of works by Avicenna and Abū al-Barakāt, discusses the entire treatise as part of Ibn Sahlān's defense of Avicennan philosophy, and considers its importance as a document for the early reception of Abū al-Barakāt's philosophical work.

Barbara OBRIST (CNRS UMR 7219 SPHERE- CHSPAM, Paris)

« Māshāʾallāh (?), *Liber de orbe* : physique, astronomie, théologie »

The paper compares the short, 27-chapter version of the "*Liber de orbe*", which is attributed to Māshāʾallāh in the list of Gerard of Cremona's translations, with the expanded, 40-chapter version. It suggests that parts of the long version originated in Andalusia, while several chapters and passages point to their having been written in the Latin cultural era. Remaining manuscript, the long version was known in the fifth decade of the twelfth century by at least two authors and may have originated in the context of the Sicilian court of Roger II.

Sajjad RIZVI (University of Exeter)

« Whence intentionality? Mullā Sadrā on Mental Existence »

In recent years, one notices two trends in the study of the history of Islamic thought: first, an increasingly attention paid to the philosophy and hermeneutics of the Safavid thinker Mullā Ṣadrā Šīrāzī (d. 1635), and second, a concern to map current trends in phenomenology and the philosophy of the mind and rise of subjectivity onto earlier periods culminating in such interesting histories such as Alain de Libera's *Archéologie du sujet* and Robert Pasnau's *Theories of Cognition in the Later Middle Ages*. The contribution of Mullā Ṣadrā to theories of intentionality and cognition needs to be located within this context and supplemented to our understanding of Avicenna on intentionality, whence the very concept of medieval philosophy of the mind as Dag Hasse has, I believe, successfully demonstrated in his *Avicenna's De Anima in the Latin West*.

My paper will set out three areas of inquiry: first, how does Mullā Ṣadrā conceive of the relationship between words, things and concepts and how do they map upon his notion of three modalities of existence, namely conceptual existence (*mafhūm al-wuǧūd*), mental existence (*al-wuǧūd al-ḏihnī*) and extra-mental existence (*al-wuǧūd al-ḫāriǧī*)? Second, to what extent is mental existence a prerequisite for the possibility of intentional and conscious states? How does he set about to affirm a mode of

existence that is mental in his magnum opus *al-Ḥikma al-mutaʿāliya fī-l-asfār al-ʿaqlīya al-arbaʿa*? Third, once coupled with his richer notion of the productive power of the self to make its world and possess causation beyond the psychic, how does Mullā Ṣadrā's conception of intentionality provide a basis for his panpsychism?

Annunziata Russo (Università di Macerata)

« The theory of the fifth body (*al-ǧism al-khāmis*) in the 'Alawite treatise *Kitāb al-Usūs* (The book of the Fundaments) »

Mohammad Sadr (EPHE)

« Razi and his article about homosexuality »

Muḥhammad Ibn Zakariyā al-Rāzī (864-930A.D) is one of the biggest scientists in the Islamic era. He wrote more than 200 manuscripts in different subjects as philosophy, chemistry, medicine, and mathematics. Nearly half of his works are in medical subjects. Some of the Rāzī's medical contributions are brief while others like Al-Hāwī in 20 volumes and Al-Mansūrī in 10 sections are detailed.

Rāzī wrote a brief article about male homosexuality (Dao-Al-khafa, Al-Obne) that is not published until now. He mentioned at the beginning of this article that last writers didn't wrote separated and sufficient works about this disease and he want to describe this subject in his article.

Razi describe the etiology and the root of this disease and the patients that he has seen at the end he tried to present many treatments for this disease.

In this paper we analyze and describe this article and then will discuss about male homosexuality from chronological view in history of Islamic medicine and among Islamic physicians era.

Richard C. Taylor (Marquette University)

« Aquinas and the Arabs: Ninth Century Baghdadi Metaphysics in Thirteenth Century Paris »

The absolute dominance of divine power and causality in the Qur'ân gave rise to the theological view that all power is held by God. While this view eventually evolved into a sophisticated theological voluntarism in the occasionalism of al-Ashcari, this presentation argues that the short treatise by al-Kindi on "The True Agent" constitutes a philosophical response to the issue of divine power with its analysis of primary and secondary causality drawn from his reading of Proclus. The Kalâm fî mahd al-khair or Liber de causis (a product of the 'Circle of al-Kindî) as well draws on Proclus in its opening proposition to set out the same doctrine albeit in very different terms. The account of primary and secondary causality in the Liber de causis was studied and cited repeatedly by Thomas Aquinas throughout his lifetime and played an important role in his thinking about divine primary causality. However, Aquinas himself developed a significantly different and unique account of this issue and its resolution due to his understanding of God and being. This presentation explicates aspects of the historical and philosophical development of the issue up to the time of Aquinas and explains how he used sources from the Arabic philosophical tradition in the formation of his own distinctive account.

Paul THOM (The University of Sydney)

« Al-Fārābī's Conceptualization of the *Categories* »

In his *Book of Letters* Al-Fārābī defends the Aristotelian list of ten categories against a number of proposals to reduce the number by subsuming some categories under others, or by subsuming several of them under a category not included in Aristotle's list. This paper examines and evaluates his reasoning on these questions, comparing it with his treatment of related issues in his paraphrase of Aristotle's *Categories* and with the conceptualization of the categories put forward by some of his Arabic and Greek predecessors

Bijan VAHABZABEH

« Al-Jawharī's comment on Euclid's Definitions V. 5 and V. 7 »

The mathematician and astronomer al-Jawharī (fl. c. 830 AD) is the author of a commentary on the basic definitions that underlie Euclid's general theory of proportion, as expounded in Book V of the *Elements*. This commentary, the very first attempt to justify these definitions that has come down to us, is a very short treatise containing but three propositions. We will try to analyze this treatise in order to understand al-Jawharī's presuppositions and put forward the contradictions found in the proofs of the propositions.

Hossein ZIAI (UCLA /NELC)

« The Philosophical Significance of Ṣadr al-Muta'allihīn's *Addenda on the Commentary on the Philosophy of Illumination* »

This paper discusses Ṣadr al-Muta'allihīn's *Addenda on the Commentary on the Philosophy of Illumination.* The text, *Taʿlīqāt ʿala Sharḥ ḥikmat al-Ishrāq,* is perhaps the most sophisticated work of Mullā Ṣadrā in its emphasis on philosophy away from the period's views on ʿirfān and Kalām. The work was also perhaps not meant as a public work as with Mullā Ṣadrā's more famous compositions such as *al-Asfār al-Arbaʿa* and *al-Shawāhid al-Rubūbiyya.* The author is less constrained by offending the religious scholars and often takes philosophical positions on creation, God's knowledge, and immortality that indicate his intention to establish sound and well reasoned principles rather than accept transmitted authority. His reverence for the masters of philosophy, both the Greek and the earlier Muslim figures such as Avicenna, Alfarabi, and Sohravardī, is genuine and not dogmatic. The paper will show that the misrepresentation of this period in Arabic and Persian philosophy as some kind of ill defined "transcendent theosophy" has to be revised in contemporary research on this tradition, and its genuine philosophical worth be examined.

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