The sheikh of logicians ,Mahmoud El Yaqoubi's The new discoveries in the logical works of Arabs.

Nouria Khalef

Teacher Training School of Bouzareah Algeria

Khalef.nouria@ensb.dz

Abstract ;

This study is sought is to introduce the new discoveries of the great logicians. We will discuss this in six basic intellectual axes ,which are Ibn Taymiyyah's criticism of Aristotelian logic, the rules of induction that belong to Scholars of the principles of jurisprudence, logic in One of the Ikhwân al-Safâ,the existence of a third type of logical syllogism, represented by the conditional syllogism in its two parts, the continuous and the separate, the linear representation of propositions and the logical syllogisms between Abu'l-Barakāt al-Baghdādī and Leibniz, considered the inclusion of the idea of justice (ʿadul) in logic studies in the Arabic language.

1. *Introduction*

*The name of our professor, may God have mercy on him, Mahmoud al-Yaqoubi, was associated with the specialty of philosophy in general and logic in particular. This Algerian thinker who devoted his life to philosophical thinking since he was a professor , then an inspector of philosophy ,and became more specialized in logic in writing and translating, and supervising various theses, PhD, MA and Bachelor's degree during his life. We will mention among them his most important works on logic and philosophy and his most important translations from French into Arabic. What concerns us are the new discoveries reached by Mahmoud Yaqubi in the logical works of the Arabs. Mahmoud Al-Yaqoubi, may God have mercy on him, in the logical works of Muslims in general and among Arabs in particular, and he was not known by the great logicians of the West, and the mistakes that the Arabs made when they came into contact with the Greek logic among the Arabs. **What are these discoveries known to the Arabs before the West?** But before delving into the heart of the matter, we must stop at his biography and get to know him through his scientific stature, his philosophical writings, and translated books. What are the factors that contributed to its formation and formation to reach this level of giving?*

2. *Biography of Mahmoud El Yaqoubi and his Scientific production*

2.1 *Mahmoud El Yaqoubi's life*

Mahmoud El-Yaqoubi was born on the 20th of November 1931 in Laghouat (Algeria). He grew up in fertile natural oases with a distinctive character, which is pure mind, simple living, green nature, wide horizon, and authentic belonging. Laghouat handed her son over to Constantine, the city of righteousness and reform, to the Abd al-Hamid Ibn Baddis(1889-1940) Institute , where he opened his mind to a world characterized by regional diversity within the crucible of deep-rooted Islamic culture based on national constants.(A group of authors 2012,p.12)

The Sheikh of logicians memorized Alfiya Ibn Malik(?-1274) from his youth, through which he was able to establish the rules of the Arabic language to this day. Then he learned the French language in the French elementary school and acquired the foreign culture that he transferred to him, but he did not transfer to it ,he used it and still uses it in translations and opening up to other cultures.

Head to Tunisia, where he obtained a high school diploma at Al-Zaytouna University.Then he get a bachelor's degree in philosophy at the University of Damascus, which represents one of the cultural landmarks with different

philosophical dimensions in our Arab world, far from intellectual closure and religious or sectarian fanaticism .(A group of authors 2012,p.13)

He began his career in the late sixties of the last century as an inspector of philosophy in secondary education from 1969 to 1987, where he devoted his life to personally training professors of philosophy across all the states of Algeria (east-west).

He moved to the university and held the position of assistant professor ,and then a lecturer at the Institute of Philosophy at the University of Algiers from 1987 to 1997, which allowed him at this stage to pursue his research and obtain a master's degree in philosophy through a dissertation entitled: IbnTaymiyyah's criticism of Aristotelian logic in 1992, then a Ph.D. through the topic paths of vowels and rules of induction among the fundamentalists and John Stuart Mill(1802-1858) 1994 at University of Algiers. He finally settled in Teacher Training School of Bouzareah Algeria with the rank of Professor of until he died in 2020.

As for his achievements, we can distinguish from them books he wrote for professors and students of philosophy; when he practiced the profession of inspection and when he contributed to the Arabization of this subject in Algeria.

As an alternative to books in the French language, represented by Al-Wajeez in Philosophy for the final sections of secondary education in 1971, he attached it to semi-detailed books of Al-Wajeez Al-Mukhtar in Philosophical Texts and Philosophical Essays, so that the student and the teacher can find whatever he needs from this subject, just as all these books pour into one container, which is CompositionThe philosophical mental queen, awakening the young mind from its slumber and resurrecting it on a journey with the poles of philosophical thought. .(A group of authors 2012,p.11) .

After moving to the university, he began to write books for students of the Department of Philosophy, the first of which is a book of lessons in formal logic, which is about lectures he delivered during his programmed sessions in the unit of formal logic.Then the origins of philosophical discourse and innate logic in the Holy Quran, a summary of metaphysics in four parts, IbnTaymiyyah's criticism of Aristotelian logic, the paths of reasoning and the rules of induction among fundamentalists, and John Stuart Mill 1994, and recently he published the book Old Logic Between Praise and Blame.

As for the translated books, they are numerous and most of them are by the great French logiciansJules Tricot(1893-1963), Robert Blanché(1889-1975), Joseph Dopp(1901-1978),Edmond Goblot(1858-1939), Denis Vernant(1948-?), and Jacques Maritain.

And will based on his books and articles published in various magazines issued by

the Higher School of Teachers, starting with Al-Mubarraz magazine, which took the name of the Researcher magazine in our day, and the Education and Epistemology Laboratory magazine in both Arabic and French.

2.2 **Mahmoud al-Yaqoubi's scientific production**

A distinction can be made in the scientific production of Professor Al-Yaqoubi between the books he wrote in the majors of philosophy and logic, and between the books he translated from the two majors from French into Arabic.

The books he wrote

1-Al-Wajeez in Philosophy 1971 (for secondary education)

2 _ chosen in philosophical texts

3 _ Philosopher's Lexicon

4 _ Introduction to the Philosophical Article 1981. ( )

5 _ Ibn Taymiyyah and Aristotelian logic

6 _ Experimental Fundamentals of Criticism of Peripatetic Logic 1992

7_ Lessons in Formal Logic 1993.

8 _ Innate logic in the Holy Quran.

9 _ The issue of reason and the rules of induction between fundamentalists and John Stuart Mill .

10 _ A summary of metaphysics in four parts 2002 .

11 _ The Origins of Philosophical Discourse 2009.

The books he translated

(We have previously published an article entitled: Professor Mahmoud Al-Yaqoubi's Translations of Logical Studies, issued by the Education and Epistemology Laboratory Journal, first issue 2011)

1-Al-Mukhtar in Philosophical Texts 1970
2 _ "Formal Logic" by Jules Tricot.

3 _ "Introduction to the Philosophy of Logic" by Denis Fernand in 2005.

4 _ "The Basis of Induction and Logical Studies" by Jules Lachaule .

5 _ "Logic and Explanatory Logic" by Marie-Louise Rohr in 2009

6-"Logic and its history from Aristotle to Russell"

7-"Induction and Natural Laws" 2003

1 _ "inference" 2 _ " 4 _

"Epistemology _ the theory of science

_" 5 _ "Massouriyat" 2005

6 _ "Introduction to Contemporary Logic" 2006

7 _ "Mind and Discourse"

8_ "A Defense of Intellectual Logic" 2010 ( ) 10 _ "Mental Structures" " "The Science of Logic" by Globlo

The Philosophy of Logic by Donny Fernan

Principles of Sorian Philosophy (Old and Modern) by Joseph Doub

(We have previously published an article entitled: Professor Mahmoud Al-Yaqoubi's Translations of Logical Studies, issued by the Education and Epistemology Laboratory Journal, first issue 2011)

After this brief presentation of the above, we will now show what Mahmoud al-Yaqoubi discovered in logical research among Muslims in general and among Arabs in particular, which was not known to the great Western logicians, and the mistakes that the Arabs made when they came into contact with Greek logic.

We will address this in six main points which are Ibn Taymiyyah's criticism of Aristotelian logic, the rules of induction that belong to the scholars of fundamentals, the existence of a third type of logical syllogism, which is the conditional syllogism in its two parts, the continuous and the separate, the linear representation of propositions and the logical syllogisms between Abu Barakat al-Baghdadi(1087-1165) and Gottfried Wilhelm Leibniz(1646-1716), logic in One of the Brethren of Purity considered the inclusion of the idea of `adul in logic studies in the Arabic language.

3. The new discoveries of Mahmoud Al-Yaqoubi.

We will discuss this new discoveries of Mahmoud Al-Yaqoubi in six impotants main points which are : Ibn Taymiyyah's criticism of Aristotelian logic, the rules of induction that belong to the scholars of fundamentals, the existence of a third type of logical syllogism, which is the conditional syllogism in its two parts, the continuous and the separate, the linear representation of propositions and the logical syllogisms between Abu Barakat al-Baghdadi and Leibniz, logic in One of the Brethren of Purity considered the inclusion of the idea of `adul in logic studies in the Arabic language.

3.1 Ibn Taymiyyah's criticism of Aristotelian logic:

Mahmoud al-Yaqoubi says in the introduction to his book Ibn Taymiyyah's Critique of Aristotelian Logic: "We want to prove with this research three issues: The first is that Imam Ibn Taymiyyah criticized the Peripatetic logic in a comprehensive doctrinal way, as none of the Islamic thinkers criticized it, neither before nor after it.

An Islamic theory of knowledge similar to the theory of knowledge adopted by the empiricists in their criticism of Peripatetic logic

The third is that all forms of criticism directed at Aristotelian logic stem from metaphysical positions, including Ibn

Taymiyyah's own criticism of this logic.(Mahmoud Al-Yaqoubi.1992.p5)

After research and analysis, he actually came to prove the first and second case in the first chapters of his book Ibn Taymiyyah and Aristotelian Logic. As for the third case, he proves it in the fourth chapter.

Things became clear to him clearly, and he tried to correct his belief that Peripatetic logic is not the logic of all people at all levels and in all situations, but rather the natural logic that all people participate in as one mental activity that breaks the human fast, along with industrial logic, which is a set of rules drawn from this natural logic. In this he says: "Before starting this research, I believed, like many students of philosophy, that Peripatetic logic is the logic of all people at all levels and in all cases, and that its criticism is only by using its principles and rules, so the measure of embarrassment is a barrier to all criticism of logic as it was a barrier." Without every rejection of philosophy as determined by Aristotle. But it became clear to me during the research and it was proven to me after completing it that the reason for this belief is the unification of two views on logic in terms of it being one mental activity for all people, they are innate on it as they are rational beings that they do and it comes out of them spontaneously, and therefore it is natural logic because it is logic.

All people, and the other is the view of logic in terms of a set of rules extracted from the origins of this natural logic, which are formed according to the intended purposes. Thus, it is the logic of human will in which there is an income. He suffices him according to his purposes."(MahmoudAl-Yaqoubi.1992.p6).

Al-Yaqoubi showed that Ibn Taymiyyah was unique in the nature of his work, because he was the only one who combined Islamic law and its logic with Peripatetic philosophy and its logic and critical spirit.

There are those who forbid industrial logic, and some obligated it without noticing that it cannot be prohibited because it is a natural logic within it.

From his criticism of this, Ibn Taymiyyah wanted to protect the Islamic methods of thinking and explain their importance and place among other methods of thinking.

3.2. <u>The rules of induction go back to the scholars of the fundamentals</u>

Mahmoud Yaqubi wants to show that Islamic thought is related to the empirical approach and the rules of induction to discover the natural cause and the innovation of Muslims (theology of origins) and to define the rules for extrapolating the legal cause that are valid rules for extrapolating the natural cause as well.

Thus, he wants to refute the opinion of European historians of philosophy, who considered that the civilizations that

preceded the Renaissance did not know the rules of extrapolation of the natural cause, which is the pillar of inductive thinking and the basis of the empirical approach, but that it suddenly emerges from the sixteenth century in Western Europe.

And they were not satisfied with this much, but they confined everything that emerged from the philosophical and scientific activity of this Islamic civilization to influences from Greek philosophy, especially Aristotle(), who made logic the tool of rational sciences.

On the other hand, he supports the opinion of the modern Muslim thinkers who ruled the origins of habit and measured the absent with the witness, and concluded from their observation of the existence of (pathways of the cause) among the scholars of origins, and from the similarity of these (pathways) to the methods of induction by Francis Bacon(15671-1626) and John Stuart Mill, and that it must be (The methods are derived from the tracts in some form, although the physical documentation proving this is missing. (Mahmoud Al-Yaqoubi ,1994 ,p.3)

The methods are derived from the tracts in some form, although the physical documentation proving this is missing. And before reaching what he wanted, he stopped at stations in which he saw a necessity for that, which is a statement that the science of fundamentals is the birth of Islamic law, which arose far from Greek thought, and Imam Al-Shafi'(767-

820)i is the innovator of this science without contest. Thus, his proof that the origins of the science of principles has no connection with the philosophy of Aristotle and the search for the cause in this Science does not have the slightest effect from the cause that Aristotle had previously searched for, because the path that Aristotle took to find out the cause is the path of logical analysis that reveals the overlap between two characteristics and the containment of one of them to the other, while the science of origins that searched for the cause that was the reason for its emergence in order to confront The reasons for renewable and diverse legislation with the renewal and diversity of people's actions. The request for this reason was legitimate even from a logical point of view. (Mahmoud Al-Yaqoubi ,1994 ,p.3)

Since the fourth century AH, scholars of fundamentals have been able to identify certain pathways for the cause, which are appropriateness, rotation, sounding and division, and refining the context. As for Francis Bacon'scontrol of induction methods.

It was not sudden, but it was related to Roger Bacon(1220-1292), and the latter was not without connection to Islamic culture. As for the methods of induction as presented by John Stuart Mill, compared to the paths of the cause of the scholars of origins, there is no similarity between them.

3.3. <u>Logic in the view of one of the Brotherhood of Purity</u>

What Mahmoud Yaqoubi wants to present through this article Logic in the view of one of the Brotherhood of Purity) are some clarifications related to one of the Safa Brothers and not the rest of them, and he means the author or owners of the following five letters from the mathematical section 10, 11, 12, 13, 14 and related to the written (regardless of the writer) about logic.

In the last half of the fourth century AH, after the publication of Al-Farabi's(870-950) commentaries and what Ibn Sina simplified for him, considering these logical books as the most complete and accurate explanations of Aristotelian logic

These clarifications have nothing to do with the beliefs of those secret groups that were formed in the fall of the Abbasid caliphate for purposes that historians of Islamic sects have mentioned or will mention. .(Mahmoud Yaqoubi,2007,p35)

All the observations he reached are related to the art of logic as regulated by the first teacher and defined by the second teacher, and as it was circulated among people in the east and west of the Islamic world.

It is clear that the writer of these letters did not intend to present a special point of view in logic with which he meets the Aristotelian point of view and replaces his views with those of Aristotle and his commentators up to his time, but rather intended to inform his disciples of the

principles of logic by which he becomes acquainted with the methods and proof of the validity or corruption of claims, and from him he wants to present Issues between those familiar with it on the basis that Aristotle or his commentators are the ones who presented it in their books. Issues between those familiar with it on the basis that Aristotle or his commentators are the ones who presented it in their books

3.4 <u>The presence of a third type of logical syllogism, which is the conditional associative syllogism, with its two parts, the continuous and the discrete</u>

Through his study, practice, and teaching of ancient and contemporary logic in the West, and his knowledge of the logical books left by Arab logicians such as Ibn Sina(980-1037), he found a third kind of analogy among the ancient Arab logicians, which is the conditional conjunction analogy(MahmoudAlYaqoubi,1994,p.230)

However, it is noted that the books of logic that are in circulation in European culture and in the areas of its influence, do not offer only two types of analogy, namely (conjunctive analogy) inherited from the works of Aristotle and (exceptional analogy) inherited from the works of the Stoicism.

It is also noticeable that it does not present another type of analogy that I presented and expanded on in the old Arabic logic books that were developed by Ibn Sina and those who followed him until Imam

Al-Senussi in the ninth century AH and the fifteenth century AD.

Thus, he wants to wipe out the prevailing belief that Islamic and Arab culture does not have any new or creative critical study in logic. In this regard, he says: "The common mistakes are many in various sciences, including in philosophy, and especially in the history of logic. In this matter, he published an article entitled The Contribution of Ancient Arab Logicians in Expanding Forms of Inference (The Theory of Conditional Conjugative Measurements) in which he explains this new division and what distinguishes it from the first division and the second division. And the first thing he started with was a reminder about the predicate or assertive analogy as set by Aristotle. It consists of three simple predicate propositions, so that the first proposition and the second proposition represent the two precursors of the analogy and the third proposition its result.

Productive and non-productive varieties, according to eight rules that must be adhered to, to reach nineteen productive varieties. The exceptional or hypothetical analogy consists of three cases: the first case, which is a composite case of two sentences, the first of which is the presenter and the next one (the major premise) and the second case, which is a simple case (the minor premise) in which the presenter is placed or raised, while the second case is a simple case It has a setting or raising for the next, and this is according to the two forms of

measurement, and each form in turn has four productive varieties.

As for the conditional conjunctional analogy in its two parts, it appeared on the lips of the Arab logicians when they noticed that the concomitant relationship between the subject and the predicate in the predicate conjunctional analogy is equivalent to the imperative relationship between the presenter and the next in the conditional analogy, in all legitimate forms of deduction in the predicative conjunctional analogy. And after that, they applied the inference laws used in the predicate conjunctional analogy, whose material consists of predicate propositions, on a (new analogy) whose material is conditional and whose image is predicate.(Mahmoud Yakoubi,2011,p8) The only difference between the two measurements is that the conditional conjunction is only a hypothetical measurement, while the nominative conjunction is a particle measurement.

3.5. <u>Linear representation of propositions and logical syllogisms between Abu Barakat al-Baghdadi and Leibniz</u>

In this article Linear representation of propositions and logical syllogisms between Abu Barakat al-Baghdadi, he wants to show that the Arab logician Abu Barakat al-Baghdadi was the first to represent logical issues and syllogisms by linear representation before the German logical mathematician Leibniz, and thus he preceded the latter.

Just as the French mathematician Louis Coturat(1868-1914) came to highlight Leibniz as the first to try to represent inferences, especially syllogisms, with linear schematics before the logician Euler, to whom circle schematics were attributed for all types of analogy when he delved into the study of logic at Leibniz, Mahmoud Yaqoubi followed the same path, as after his research in what he left behind Abi Barakat al-Baghdadi, one of the books of logic, found that the latter had previously put linear representation in his book Al-Mutabar and in the section on logic. An edition of a manuscript cannot be in the handwriting of (Abu Al-Barakat) because it contains logical clerical errors and errors in drawing the lines according to what achieves the purpose of its owner. Therefore, we took the risk of correcting the calligraphic errors in particular, so that they express the purpose of Abi Al-Barakat in drawing these lines in a depiction Cases or analogies. From this it is necessary to note that the printing of the manuscript should be supervised by a specialist in the material of the manuscript.(Mahmoud Yaqoubi,2013,p)

Mahmoud Yaqoubi, according to his saying, made some corrections in order to reach what he reached, and compared it to the works of Leibnis through the book of Kotera. He presented in his article the linear representations of each of them, and then asked his question: "Is there in the work of (Leibniz) in relation to the work of Abi al-Barakat, a mere fall of a hoof? On a hoof, as al-Jahiz said And from all this he wants to highlight the value of the

work created by Abu Al-Barakat and to be proud of it in the Arab-Islamic civilization..

3.6- Introducing the idea of reversal in logic investigations in the Arabic language

Mahmoud Yaqoubi wants to show in this aritcle (Introducing the idea of reversal in logic investigations in the Arabic language) that Al-Farabi, being the first to develop most of the logical terms in the Arabic language, worked to weave the systems of Arabic speech into logic on the systems of speech in the language of Aristotle, whose systems he shares with his language, which is Persian. He wants to show that Al-Farabi, being the first to develop most of the logical terms in the Arabic language, worked to weave the systems of Arabic speech into logic on the systems of speech in the language of Aristotle, whose systems he shares with his language, which is Persian. Adulation and collection in the Arabic language. And this matter that Mahmoud Yaqoubi noticed is that if the alteration takes place in the Greek language and its likes, which merges the negation into the word, whether it is a noun or a verb, and this results in the entry of the negation into the negation, and the modified word transforms the pronunciation into a word of the sum of the meaning, and this will affect the control of the connotation of propositions, and from it In the results of inference, this matter does not exist in the Arabic language. From him, the likes of Al-Farabi and those who came after him

and Ibn Sina, Abu Barakat Al-Baghdadi (540 AH), Omar bin Sahlan Al-Sawy (450 AH) and among the Arab logicians and even the later ones, Imam Al-Senussi (895 AH)) weighed down the problems of logic expressed in Arabic. Imam Abu Hamid al-Ghazali (450 AH - 505 AH) was excluded from them, who considered that this issue is a linguistic issue, especially in the Persian language and its sisters from Greek and others, and it does not exist in Arabic, because the negation is given to the word in which the negation tool is welded to its structure, so there is negation to deny in one case. Yaqubi says in this: "It is necessary from all of the above that the discussion of the modified proposition in all its forms is a topic that is alien to the logic expressed in the Arabic language, because the modified word does not exist in the Arabic language, neither in the Holy Qur'an nor in ancient literature or hadith except for some numbered words."

Which is carved on the image of modified words in European languages, such as agnosticism in the old and inhumane in the modern, then it is not a common expression to say that this work is not inhumane to respond to those who say that it is inhumane, but rather we respond to it directly by saying that it is a humane act. What prompted him to give an alternative and to formulate Aristotle's expressions in accordance with the Arabic manner. Mahmoud Yaqoubi,2016,p11)

in the Islamic philosophical cultural heritage, so that we respond to those who are proud of the achievements that the West has reached without knowing that there are Arabs who preceded them to it.

4. CONCLUSION

Finally, we can say that all the works that Mahmoud al-Yaqoubi, may God have mercy on him, did is nothing but a denunciation of all researchers who specialize in philosophy, especially logic, by caring about the Islamic philosophical heritage in general and logic in particular, and this is in order to respond to those who are proud of the achievements that the West has reached without Knowing that there are Arabs who reached that before. To sum up ,and through all these works that Yacoubi did, he denounces the interest in the Islamic philosophical cultural heritage, so that we respond to those who are proud of the achievements that the West has reached without knowing that there are Arabs who preceded them to it.

5**. *BibliographyList***

1. ***Books*** **1.**Agroupofauthors,(2012) Mahmoud Yaqoubi, testimonies and studies,Treasures of Wisdom Foundation for Publishing and Distribution, Algeria

2. Mahmoud Yaqoubi(1992), Ibn Taymiyyah's Critique of Aristotelian Logic, Experimental Fundamentals of Criticism of Peripatetic Logic University Publications Office: Algeria.

3. Mahmoud Yaqoubi(1994), Paths of Illness and Rules of Induction among Fundamentalists and John Stuart Mill, University Publications Office: Algeria

2-Journal article :

1-Mahmoud Yaqubi,(2007) Logic in the View of One of the Brotherhood of Purity, The Researcher Magazine.

2- Mahmoud Yaqoubi,(2011) The Contribution of Ancient Arab Logicians in Expanding Forms of Deduction (Theory of Conditional Conjugative Measurements) Journal of Education and Epistemolog N°. 2

3-Mahmoud Yaqoubi,(2013) Linear Representation of Propositions and Logical Measurements between Abu Barakat Al-Baghdadi and Lebnis, Journal of Education and Epistemology, Fifth Issue.

4- Mahmoud Yaqoubi,(2016) Involving the Idea of Adolescence in Logic Studies in the Arabic Language, Journal of Education and Epistemology, No. 11, 2016