Fārābī's Theory of Language and Its Relevance to Contemporary Issues in Universal Grammar and Cognitive Semantics

JAMIL ASGHAR*
KHURRAM SHAHZAD**

Abstract

Abū Naṣr Muḥammad b. Muḥammad al-Fārābī (d. 339/950), a renowned Muslim philosopher, logician, and a polymath, is relatively lesser known for his contribution to the study of language, and most of his introductions are based on his politico-philosophical writings. The present paper seeks to throw light on Fārābī's contribution to linguistics and critically compare it with the ideas of some of the most notable contemporary linguists, chiefly with those of Noam Chomsky. The study traces remarkable similarities as well as crucial differences. Fārābī's Kitāb al-Ḥurūf *(Book of Letters) contains many of his ideas, which harbingered some of the most far-reaching linguistic theories/disciplines of the twentieth century, including universal grammar, cognitive semantics, formal semantics, Saussurean structuralism, and discourse studies. Writers and researchers as diverse as Ian R. Netton, Peter Adamson, Muhammad Ali Khalidi, Richard Rudolph Walzer, Thérèse-Anne Druart, Charles Butterworth, and Nadja Germann have played a significant role over the recent years to highlight Fārābī's accomplishments in the field of linguistics. The present-day language-related issues allow us to appreciate more profitably the singularity of Fārābī as an exceedingly perceptive linguist and a semanticist. This paper too is a contribution to this tradition.*

Keywords

Fārābī, universal grammar, cognitive semantics, Arabic, logic, linguistics.

* Director, Department of Translation and Interpretation, National University of Modern Languages, Islamabad, Pakistan.

** Assistant Professor, Department of English, National University of Modern Languages, Islamabad, Pakistan.

Preliminaries

The rich philosophical tradition of Arabic logic stretches from the mid-eighth century down to the present day and, in this tradition, one finds a very robust strand of linguistic philosophy, which is not only ingenious in its own right, but also considerably relevant to the modern debates and ideas of the discipline. The paper seeks to re-contextualize Abū Naṣr Muḥammad b. Muḥammad al-Fārābī's (d. 339/950) linguistic philosophy by integrating it with the contemporary framework of universal grammar and cognitive semantics. Arguably, Fārābī is the most outstanding contributor to the Arabic philosophy of language and logic.

In fact, it is his bridging the gap between grammar and logic, which makes his philosophy very interesting for the modern linguists and logicians. Specifics and formulations of logic and grammar laid down by him were later served as main points of contention as well concord by such philosophers as Rāzī (d. 313/925), Ibn Sīnā (d. 427/1037), Ghazālī (d. 505/1111), and Ibn Rushd (d. 595/1198).[1] Therefore, Fārābī's ideas, in many ways, mark a true watershed in the history of Arabic philosophy of language and anticipate modernity in many disciplines of knowledge including linguistics and cognitive semantics. Whether it is his departing from the traditional grammarians who suspected the neutrality of logic or his differentiating between dialectical discourses of *mutakallimūn* (Muslim theologians) and demonstrative syllogisms of philosophers, Fārābī appears in a different light everywhere.[2]

There are different outstanding works on Fārābī, which warrant our scholarly attention and discussion. Cast in the classical tradition is Deborah Black's book *Logic and Aristotle's Rhetoric and Poetics in Medieval Arabic Philosophy*.[3] For any serious scholar or student, it remains an essential primer to the study of Fārābī. Shukri Abed's *Aristotelian Logic and the Arabic Language in Alfārābī*[4] is a work of great intellectual worth. Abed mainly deals with Fārābī's critical engagements with Aristotelianism. The writer offers a thematic survey of Fārābī's writings on logic and language. Besides, his book is consistently punctuated with critical analyses of such notions as national language, universal logical structure, and different philosophical meanings and terms used by Fārābī in his logic.

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[1] Ian Richard Netton, *Al-Farabi and His School* (London: Psychology Press, 1999), 25–35.

[2] Ibid., 97.

[3] Deborah L. Black, *Logic and Aristotle's Rhetoric and Poetics in Medieval Arabic Philosophy* (Leiden: E. J. Brill, 1990).

[4] Shukri Abed, *Aristotelian Logic and the Arabic Language in Alfārābī* (Albany: SUNY Press, 1991).

Another work of exceptional intellectual merit is Majid Fakhry's *Al-Fārābi, Founder of Islamic Neoplatonism: His Life, Works and Influence*.[5] This book, written in an accessible and engaging language, is arguably one of the most comprehensive and succinct introductions to the life and achievements of Fārābī. However, the breadth of this book does not come at the cost of its profundity. Fakhry charts the course of Fārābī's philosophical development, but the former's analytical and critical rigour is evident everywhere.

Along with these books, there are some really good research articles on this topic. Two of them deserve particular mention here. Mauro Zonta's "About Todros Todrosi's Medieval Hebrew Translation of al-Fārābī's Lost Long Commentary/Gloss Commentary on Aristotle's Topics, Book VIII"[6] deals with some neglected aspects of Fārābī's philosophical thoughts. Zonta in the main talks about two foremost Hebrew translations of Fārābī, and therefrom he develops some of the extraordinarily perceptive analyses.

Lastly and for researchers particularly, the monumental article "Al-Farabi's Philosophy of Logic and Language"[7] in *Stanford Encyclopedia of Philosophy* remains an indispensable source of knowledge and understanding. The article is coauthored by Wilfrid Hodges and Thérèse-Anne Druart, and it deals with the following aspects of Fārābī's thought: the origin of languages, the origin of syllogistic arts, tools of inference, categorical logic, hypothetical logic, foundations of Arabic, etc. Everything in this article is discussed with special reference to language and logic.

The Second Beginning of Muslim Philosophy—A Linguistic Turn

By the end of the ninth century, philosophy had a second beginning in the Muslim world, which was distinguished from the first beginning—set off by al-Kindī (d. 256/873)—on account of, among other things, an unprecedented emphasis on language. In the Arabic philosophical tradition, this distinction between these two beginnings also marked a

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[5] Majid Fakhry, *Al-Fārābi, Founder of Islamic Neoplatonism: His Life, Works and Influence* (London: Oneworld Publications, 2014).

[6] Mauro Zonta, "About Todros Todrosi's Medieval Hebrew Translation of al-Fārābī's Lost Long Commentary/Gloss-Commentary on Aristotle's Topics, Book VIII," *History and Philosophy of Logic* 32, no. 1 (2011): 37-45.

[7] Wilfrid Hodges and Therese-Anne Druart, "Al-Farabi's Philosophy of Logic and Language," in *The Stanford Encyclopedia of Philosophy* (Winter 2019 Edition), ed. Edward N. Zalta, https://plato.stanford.edu/archives/win2019/entries/al-farabi-logic/.

paradigm shift—a transition from Platonism to Aristotelianism.[8] The second beginning was spearheaded by the so-called Peripatetic school of Baghdad[9] led, in the main, by Abū Bishr Mattā b. Yūnus (d. 328/939), Fārābī, and Yaḥyā b. 'Adī (d. 363/974).[10] Given its unprecedented and sustained emphasis on language-related issues, this period can rightly be termed a linguistic turn in the early history of Arabic philosophy.

Therefore, it is with Fārābī that the interest in the development of the philosophy of language reaches its zenith. By far the largest part of his writings is dedicated to logic and the philosophy of language. Fārābī's interest in language is located in his larger interest in the acquisition of knowledge.[11] As knowledge is primarily not empirical in nature, therefore, language is the chief vehicle to transmit it.[12] Moreover, if knowledge is the saving grace of humans and if it is, of necessity, conveyed through language, then according to Fārābī, scholars, theologians, hermeneutists, exegetes, and the like are obligated to dedicate the best of their energies to the study of language.[13]

Furthermore, in the Arabic linguistic tradition, logic was also taken as a linguistic science and a somewhat associated idea was that logic constituted, with rhetoric and grammar, *the trivium* i.e., the three great arts of language (*al-ṣinā'āt al-thalāth*).[14] Disputes among the scholars dealing at that time with Greek and the grammarians theorizing about Arabic first raised the question of the relation between language (specifically the Arabic language) and logic.[15] This subsequently forced them to engage in the discussion as to what precisely the subject matter of logic is.

This disciplinary division (of categorizing logic as one of the linguistic sciences) is further evidenced when we take into consideration

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[8] Majid Fakhry, *Islamic Philosophy: A Beginner's Guide* (London: Oneworld Publications, 2009), 93.

[9] The Baghdadi Peripatetics included such figures as Abū Bishr Mattā, Fārābī, Yaḥyā b. 'Adī, Abū 'l-Ḥasan al-'Āmirī (d. 381–992), Abū Sulaymān al-Sijistānī (d. ca. 390/ca. 1000), Abū Ḥayyān al-Tawḥīdī (d. 414/1023), and Ibn al-Samḥ (d. 426/1035).

[10] Richard Frank, *Arabic Theology, Arabic Philosophy: From the Many to the One* (Pieterlen: Peeters Publishers, 2006), 169.

[11] For a survey of works about and by Fārābī, see Nicholas Rescher, *Al-Fārābī: An Annotated Bibliography* (Pittsburgh, PA: University of Pittsburgh Press, 1962).

[12] Abed, *Aristotelian Logic and the Arabic Language in Alfārābī*, 79.

[13] Netton, *Al-Farabi and His School*, 93.

[14] Dimitri Gutas, *Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early 'Abbāsid Society (2nd-4th/8th-10th Centuries)* (Abingdon: Routledge, 2012), 143.

[15] John McGinnis and David C. Reisman, *Classical Arabic Philosophy: An Anthology of Sources* (Indianapolis: Hackett Publishing, 2007), 139.

Fārābī's classification of sciences. In his book *Iḥṣā' al-ʿUlūm* (Enumeration of the Sciences), Fārābī describes various sciences and the very first division introduced by him is that of the linguistic sciences.[16] Here he relates in minute details such aspects as rhythmics, metrics, grammar, language, etc. To him, the linguistic sciences deal with words and their denotations in any given human speech as well as with the rules and usages, which govern the determination and communication of these denotations. Then Fārābī goes on categorizing these linguistic sciences into seven subdivisions: (1) the science of single terms; (2) the science of the laws of single terms; (3) the science of orthography; (4) the science of complex expressions; (5) the science of the laws of compound expressions; (6) the science of locution; and (7) the science of prosody or versification.[17] One can clearly notice the centrality accorded to language in this disciplinary classification.

How did Fārābī arrive at this classification of sciences? It, in fact, largely depends on the heated debates of his day in which he participated vehemently as well as insightfully. One such debate, which spurred his lifelong passion for language took place in 932 CE between Abū Bishr Mattā and Abū Saʿīd al-Ḥasan al-Sīrāfī (d. 368/978). The former happened to be Fārābī's teacher as well. In this debate, Mattā contended that logic was a tool, which enabled an individual to distinguish between correct and incorrect speech. He was, however, immediately countered by Sīrāfī who argued that it was grammar, not logic, which enabled one to make that distinction: "How else could logic, invented by a Greek (i.e., Aristotle), guard a Turk, an Indian, or an Arab against incorrect speech?"[18] To which Mattā responded that logic dealt with concepts and abstractions, which underlay linguistic usage and, therefore, it was not confined to any particular language (in this case to the Greek language). However, to cut it short, Mattā failed to make an impression and "lost" the debate. Later on, it was Fārābī, who took it upon himself to vindicate his teacher's stance and worked out more nuanced arguments and eventually turned the tide to Mattā's favour. Fārābī stated,

> This art [of logic] is similar to the art of grammar, in that the relation of the art of logic to the intellect and the intelligibles is like the relation of the art of grammar to language and expressions (*al-alfāẓ*). That is, to every

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[16] Majid Fakhry, *A History of Islamic Philosophy* (New York: Columbia University Press, 2004), 83.

[17] Muḥammad b. Muḥammad al-Fārābī, *Iḥṣā' al-ʿUlūm* (Enumeration of the sciences) (Cairo: Maktabat al-Khānjī, 1931), 5.

[18] Fakhry, *Al-Fārābi*, 156.

rule for expressions, which the science of grammar provides us, there is an analogous [rule] for intelligibles, which the science of logic provides us.[19]

This is how Fārābī addressed the issue and showed that logic operated at a deeper level (i.e., at the level of intelligibles), whereas grammar operated at the level of vocal/compositional form. In fact, countering the views of Sīrāfī and his school was foundational to the success of Fārābī's notion of universal grammar because if logic, as proposed by Sīrāfī, was just concerned with meaning and not with words, then it was incapable of underpinning grammar at any cross-linguistic—i.e., universal—level.[20] Therefore, subsequently, Fārābī further refined these theorizations and addressed the issue with even greater subtlety. He reflected perceptively on the etymological connections between the words for "logic" and "speech" and found a common connection between Greek (*logos*) and Arabic (*nuṭq, manṭiq*).[21] This subsequent position was elaborated by him in the form of the following full-blown argument:

> Logic is the only route to certainty of truth with regard to anything that we desire to know. And the name "logic" is derived from "discourse." According to the ancients, the expression "logic" indicates three things: [first,] the faculty with which man intellects the intelligibles, acquires disciplines of knowledge and arts, and distinguishes between admirable and repugnant actions; second, the intelligibles obtained in the soul of man through comprehension, which are called interior discourse (*al-nuṭq al-dākhil*); third, the expression by language of what is in the mind which is called exterior discourse (*al-nuṭq al-khārij*). This art of logic is called "logic" because it provides the rational faculty with rules for the interior discourse that is the intelligibles, because it provides all languages with shared rules for the exterior discourse that is the vocal forms, because it guides the rational faculty to what is correct in both discourses, and because it protects the rational faculty from error in both discourses. Grammar is similar in some respects and yet also different because it only provides rules for the vocal forms that are specific to whichever nation and the people who speak its language. Logic, on the other hand, provides rules for the vocal forms that are common to all languages.[22]

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[19] Al-Fārābī, *Iḥṣā' al-'Ulūm*, 12.

[20] Fakhry, *Al-Fārābi*, 183.

[21] The meanings of the Greek word "logos" and the Arabic "*nuṭq*" bear astonishing similarities. Both refer to "speech." Interestingly, in Aristotelian epistemology, "logos" refers to the use of logic in rhetoric. Similarly, the Arabic word "*nuṭq*" is the root of "*manṭiq*," which also refers to the use of logic.

[22] Peter Adamson and Alexander Key, "Philosophy of Language in the Medieval Arabic

This view of intelligibles as mental content taking the form of interior discourse is extremely perceptive. Fārābī uses the word "*nuṭq*" not *"lisān"* for discourse internal to mind. Therefore, it is important to note that, to him, the interior discourse is not language in the usual sense of the word.[23] Instead, language is the exteriorization of "*nuṭq*" (here translated as "discourse")—a word difficult to translate into English. By this interior discourse both Mattā and Fārābī meant a mental content[24] with some propositional character and assertoric force.[25] However, the (functioning of this) mental content is not confined to any particular language. In Fārābī's linguistic epistemology, logic does not just underpin the mental content (*al-nuṭq al-dākhil*), it also spans the divide between the mental content and the vocal form (*al-nuṭq al-khārij*). If there is a universal mental content (*al-nuṭq al-dākhil*) which a speaker has the potential to actualize any time regardless of the language he/she speaks or the nation he/she hails from, there should also be, at least in principle, a universal grammar or a set of abstractions, which could govern the use of language.[26] This is our concern in the next section.

Universal Grammar—Fārābī's Partaking in the Quest for the Grail

The idea of a universal grammar ever since its presentation has been a source of intrigue both for its supporters as well as for detractors. Beginning with such figures as Panini (fl. ca. 4th century BCE) and Plato (d. 348/347 BCE), and reaching Chomsky through people like Fārābī, Rene Descartes (d. 1650), and Wilhelm von Humboldt (d. 1835), universal grammar has a long and respectable history.[27] In its most characteristic form, it has been put as "a set of atomic grammatical categories and

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Tradition," in *Linguistic Content: New Essays on the History of Philosophy of Language*, ed. Margaret Cameron and Robert J. Stainton (Oxford: Oxford University Press, 2015), 83.

[23] Muhsin Mahdi, *Alfarabi: Philosophy of Plato and Aristotle* (Ithaca, NY: Cornell University Press, 2001), 129.

[24] Assertoric force refers to the propositional power by which a sentence seeks to declare that something is or is not the case. A positive assertoric statement follows the form: "X is Y," whereas a negative assertoric statement is patterned upon the form: "X is not Y." It also implies a modal form of a judgment, in opposition to two other categorical/modal judgments: problematic (i.e., possible) and apodeictic (i.e., necessary). Adverbially expressed, an assertoric judgment can be stated as follows: "X is actually Y" or "X is actually not Y." See Antony Flew, *A Dictionary of Philosophy*, rev. 2nd ed. (New York: St. Martin's Press, 1984).

[25] Fakhry, *Al-Fārābi*, 178.

[26] Christopher A. Colmo, *Breaking with Athens: Alfarabi as Founder* (Oxford: Lexington Books, 2005), 187.

[27] Lydia White, *Second Language Acquisition and Universal Grammar* (Cambridge: Cambridge University Press, 2003), 119.

relations that are the building blocks of the particular grammars of all human languages, over which syntactic structures and constraints on those structures are defined."[28]

At the same time, it denotes a hypothetical and theoretical system of principles, categories, structures, and operations shared by humans both at the mental as well the linguistic levels.[29] Fārābī also partook in this quest with his avowed goal to sketch out a grammar, which could be applied to any language. Fārābī's interest in grammar mainly springs from his passion for logic. More specifically, he maintains that logic itself is a kind of universal grammar that furnishes the human mind with "conventions" and "rules" which, in turn, govern it to accomplish correct reasoning in any language.

On the other hand, grammar can furnish only those conventions, which are formulated by the users of specific (natural) languages such as Latin, Greek or Arabic. In *Iḥṣā' al-ʿUlūm*, Fārābī contends that grammar and logic both have some legitimate interest in language, but whereas the rules supplied by grammar primarily govern the conventional use of language, the rules of logic primarily govern the use of intelligibles (i.e., cognitive contents of mind).[30] In his book *Kitāb al-Ḥurūf*, he worked out this relation more elaborately by presenting a broad classification of Arabic words and demonstrating as to how their everyday meanings get transformed into discursive and technical terminologies articulating views related to (Neo)-Aristotelian categories[31] or predicaments.[32]

Towards the end of the book, he contends that the universality of grammar is contingent upon the universality of logic, hence the

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[28] Stephen Crain and Rosalind Thornton, *Investigations in Universal Grammar: A Guide to Experiments on the Acquisition of Syntax and Semantics* (Cambridge, MA: MIT Press, 1998), 160.

[29] William Foley and Robert D. Van Valin, Jr., *Functional Syntax and Universal Grammar* (Cambridge: Cambridge University Press, 2009), 95.

[30] Salah Osman and Florentin Smarandache, *Neutrosophy in Arabic Philosophy* (Ann Arbor: Renaissance High Press, 2007), 59.

[31] It is largely due to his extensive commentaries on Aristotelian logic that some people have reduced him to the stature of a mere commentator. This is not true and the evidence does not support this view. Even though he was a first-hand Aristotelian commentator and logician, there is a considerable amount of ideas in his writings, which are not Aristotelian at the very least. For example, his discussion of the future contingents, his elaboration of the relationship and number of the categories, his discussion about the relation between grammar and logic as well as his introduction of the non-Aristotelian forms of inference are his original accomplishments. Moreover, it is also to his credit that in logic he drew a distinction between "ideas" and "proofs."

[32] Abū Naṣr al-Fārābī, *Kitāb al-Ḥurūf*, ed. Muḥsin Mahdī (Beirut: Dār al-Mashriq, 1970), 61-130.

superiority of logic over grammar. Because "the former is a necessary science dealing with the meaning and what is universal, whereas the latter is conventional and accidental."[33] Logic accounts for all the characteristics common to all languages, which reflect their underlying intelligible content. The rules provided by logic and the ones which underpin the universal grammar are called "intelligibles." The ability of logic to provide rules that govern a language is coextensive with its ability to signify the intelligibles.

Furthermore, Fārābī posits a parallelism between the laws of grammar and the laws of logic. From this, Fārābī proceeds to hypothesize a relation between language and thought—arguably, one of the most foregrounded themes in his linguistic epistemology. Human thought has a universality, which is the corollary of the universality of human mental structure, hence the striking similarities across world languages.[34] Thought is the realm of intelligibles, which are universal in their functioning, and language mirrors these intelligibles. This universality of intelligibles is yet another reason which makes Fārābī believe that logicians are obligated by virtue of their forte to study language, "Logicians investigate expressions per se insofar as they are related to thought (*maʿqūlāt*)."[35]

This logic-driven view of grammar, in turn, brings Fārābī close to generativists and just like them when he employs the term universal grammar, he does not imply any kind of meta-grammar, so to speak. More accurately, he does not even mean grammar as such. Rather, what he actually means by this is a *theory* of grammar. Moreover, just like generativists, Fārābī also presents an infinite set of structural descriptions, which contains semantic, phonetic, and syntactic representations. Therefore, the job of the science of logic is to identify the possibilities in which a sentence can be formed and interpreted.

Language and the Substructure of Logic

To understand Fārābī's notion of universal grammar and his views on language, we have to delve deeper into his extremely noetic idea of logic. He associates two meanings with logic: one epistemological and abstract and the other extended and structural. At the abstract and epistemological level, logic is reasoning conducted in line with the strict

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[33] Shukri B. Abed, "Language," in *Routledge History of World Philosophies: History of Islamic Philosophy*, ed. Seyyed Hossein Nasr and Oliver Leaman (London: Routledge, 1996), vol. 1, pt. 2, p. 899.

[34] Fakhry, *Al-Fārābi*, 217.

[35] Abed, *Aristotelian Logic and the Arabic Language in Alfārābī*, 127.

laws of validity in order to discover happiness (*sa‘ādah*), which constitutes the *telos* of human soul.[36] However, at an extended level, by logic Fārābī means thinking faculty and the ability of the human mind to conceptualize/acquire abstract matters. Language being one of the most abstract entities pertains to this level. From this, Fārābī sets about a very preliminary question: "How does logic relate to language, especially to Arabic?" This, subsequently, leads Fārābī to investigate an even broader concern—the content or the subject matter (*mawḍuā‘t*) of logic vis-à-vis grammar: "The subject matters of logic are the things for which [logic] provides the rules, namely, intelligibles in so far as they are signified by expressions, and expressions in so far as they signify intelligibles."[37] This relation can be shown diagrammatically:

LOGIC	GRAMMAR
Intellect	Language
Intelligibles	Expressions
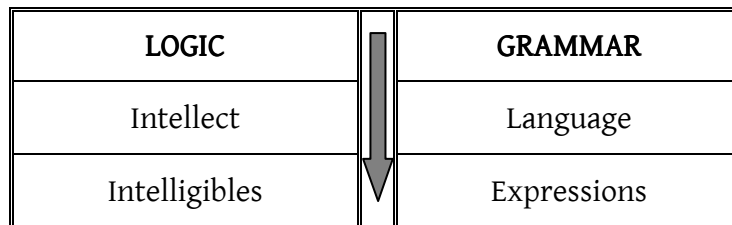
Figure 1: Subject matters of logic and grammar

To Fārābī, by elucidating the functioning of logic we cultivate the appreciation of an instrument so indispensable to thought that, in its operation, it remains independent of geographical, cultural, and social boundaries. This is what makes all sound meanings in language depend ultimately upon logic. It is also because of this that all intralingual and interlingual interactions are made possible with an astonishing amount of accuracy and success. This characterization of the communicativeness of language aligns closely with Gricean Cooperative Principle,[38] which also posits a cross-cultural universality.[39]

   We hear an echo of a certain "universal natural logic" in the work of Gordon and Lakoff and a subsequent affirmation of this in the name of

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[36] Wilfrid Hodges and Therese-Anne Druart, "al-Farabi's Philosophy of Logic and Language," *The Stanford Encyclopedia of Philosophy* (Fall 2020 Edition), ed. Edward N. Zalta, https://plato.stanford.edu/archives/fall2020/entries/al-farabi-logic/.

[37] Al-Fārābī, *Iḥṣā' al-‘Ulūm*, 17.

[38] It is interesting to note that the very first part of Grice's book *Studies in the Ways of Words* (1991) is titled as "Logic and Conversation," which shows the central place he accords to logic in the communicative scheme of his Cooperative Principle.

[39] Roger Nunn, "Intercultural Communication and Grice's Principle," *Asian EFL Journal* 5, no. 1 (2003): 65-85.

"universal logic of politeness strategy" in Brown and Levinson.[40] Most of the theorization proposed in these works transports the extra-grammatical and logical universality of language to the realm of semantics and pragmatics where meanings are not described but enacted, which personifies the illocutionary force of speaker's intent. This is how the logic, which underpins the superstructure of grammars of various languages, brings into existence an implicature-generating mechanism.[41]

What Fārābī and these proponents of cross-cultural communicative theories agree upon is that to arrive at a sound generalization on universal communicative features, one has to compare the entire system of the communicative features of one language with those of others. However, this does not mean that a rigorous exercise like this will bring about absolute similarities between languages. That is implied neither by Fārābī nor by the linguists like Levinson and Grice. Instead, all of them agree that the similarities exist at semantic, atomic, and general levels and not at episodic or molecular levels.[42]

However, notwithstanding positing a close correlation between grammar and logic, nowhere does Fārābī conflate the former with the latter. He consistently contends that logic and grammar are two rule-based and distinct sciences. Each has its own sphere and content. Logic "shares something with grammar in that it provides rules for expressions, yet it differs in that grammar only provides rules specific to the expressions of a given community, whereas the science of logic provides common rules that are general for the expressions of every community."[43]

However, although logic and grammar remain distinct sciences with their own subject matters and methodologies, Fārābī does posit a symbiotic relation between the two. Nevertheless, despite a functional reciprocity between the two, the precedence of logic over grammar remains indubitable. Logic is an art, which safeguards the human rational faculty against errors. Just as grammar rectifies expressions in a speech community, logic rectifies intellect. The former deals with the formal and syntactic properties of language while the latter is concerned

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[40] Penelope Brown and Stephen Levinson, *Politeness: Some Universals in Language Usage* (Cambridge: Cambridge University Press, 1978), 154-59.

[41] Ibid., 169.

[42] John Gumperz and Stephen Levinson, eds., *Rethinking Linguistic Relativity* (Cambridge: Cambridge University Press, 1996), 94.

[43] Tony Street, "Arabic and Islamic Philosophy of Language and Logic," *The Stanford Encyclopedia of Philosophy* (Spring 2015 Edition), ed. Edward N. Zalta, https://plato.stanford.edu/archives/spr2015/entries/arabic-islamic-language/.

with the propositional content of speech. Therefore, it is logic, not grammar, which legislates over meanings as such. Even a perfectly grammatical sentence can be meaningless.[44] This Farabian position unmistakably foreshadowed Chomsky's proposition premised upon the possibility of grammatically correct but semantically nonsensical sentences.[45] From this perspective, logic is the final arbiter of grammar.[46]

A Comparison of Chomskyan and Farabian Perspectives

A quick look at Chomsky's notion of universal grammar reveals astonishing similarities between the views of Chomsky and Fārābī on the subject. It does not, however, mean that Chomskyan version of universal grammar is altogether conflated with the Farabian one as some superficial studies have tended to suggest.[47] However, in spite of central crucial divergences, the similarities take over the differences. Let us first present a résumé of Chomskyan universal grammar which is more like a system of principles, conditions, and rules that are elements or properties of all human languages not merely by accident but by necessity.[48] Like the early Fārābī, the early Chomsky also had to go a long way to refine his theorizations and about five years later, he presented a somewhat more elaborate perspective on universal grammar.

> Universal grammar is taken to be the set of properties, conditions, or whatever that constitutes the "initial state" of the language learner; hence the basis on which knowledge of a language develops. It by no means follows from such an account that there must be specific elements or rules . . . or . . . "features" common to all languages, unless we take these features in a suitably abstract manner.[49]

As this definition shows, unlike Fārābī who related the notion of universal grammar to the logical functioning of mind, Chomsky relies heavily on the "initial state of the language learner." This marks an extremely subtle yet an important difference between the two—whereas

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[44] See Salim Kemal, *The Philosophical Poetics of Alfarabi, Avicenna and Averroes: The Aristotelian Reception* (London: Routledge, 2003), 13.

[45] Noam Chomsky, *Syntactic Structures*, 2nd ed. (Berlin: Mouton de Gruyter, 2002), 15.

[46] See Kemal, *Philosophical Poetics*, 13.

[47] One such study is Mahmood Reza Moradian "Farabi's Logico-Linguistic Ideas in Comparison with Theories and Principles in Contemporary Linguistics," *Cumhuriyet Science Journal* 36, no. 3 (2015): 1114-21.

[48] Maria Teresa Guasti, *Language Acquisition: The Growth of Grammar* (Cambridge, MA: MIT Press, 2017), 93.

[49] Noam Chomsky, *Aspects of the Theory of Syntax* (Cambridge, MA: MIT Press, 1965), 6.

Farabian view is more rational (with its emphasis on mind); the Chomskyan one is more cerebral (with its emphasis on brain).

However, there are similarities as far as language acquisition is concerned. To Chomsky, acquiring a language involves "cracking the code" of that particular language by the learners.[50] For this to happen, children's minds have to be designed/wired to select just the right types of abstractions and generalizations from the language they come across. This plausible assumption led Chomsky to hypothesize that paying close attention to the language acquisition process is foundational to appreciating the very nature of human speech. He also proposed that human mind had to be equipped with a certain kind of innateness.[51] Here Chomsky sits well with Fārābī as the latter also subscribes to the innateness hypothesis. Both agree that it is only through innateness of language to the human mind that the universal grammar can exist. From this perspective, universal grammar appears to be a set of plans for the mental grammar mechanism that empowers all the languages.

Moreover, what Fārābī posits as mental syntax (*al-nuṭq al-dākhil)* is intriguingly similar to what Chomsky proposes as Language Acquisition Device (LAD—a hypothetical brain mechanism which entails the notion of innateness). Fārābī also draws a nuanced distinction between syntax and grammar. To him, syntax is not merely an assortment of rules of grammar, as it is traditionally understood. It is more than that and in its true meaning it implies a set of essential constraints on language which all human beings share. These constraints are significant as we share the same human brain.[52] Our ability to produce/acquire language is the corollary of these constraints and in the absence of such constraints our mind will be too "free-floating" to work in any organized way as to produce/acquire language.

One can also detect astonishing parallels between Farabian logico-linguistic deductions and Chomskyan transformational generativist account of language. To Fārābī, logic operates like a substrate (like Chomskyan deep structure). Netton posits the epistemological substrate of Farabianism, which the former correlates with Chomsky's deep structure.[53] Moreover, not just Chomsky but also other modern linguists such as George Lakoff and Charles J. Fillmore come strikingly close to Fārābī when they bring syntax as a unified, self-sufficient system of

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[50] See John Nicholls, *Language and Learning: An Interactional Perspective* (London: Palmer Press, 1985), 23.

[51] Ibid., 54.

[52] White, *Second Language Acquisition and Universal Grammar*, 121.

[53] Netton, *Al-Farabi and His School*, 25-35.

high-level abstractions into focus.[54] This is how the parallels between the Farabian and Chomskyan transformational accounts of language /grammar can be presented:

Fārābī	Chomsky
Science of Syntax	Surface Structure
Externalization of intelligibles congealed into rule-governed syntax	The structure of a well-formed phrase or sentence in a language
↓↑ TRANSFORMATIONS	TRANSFORMATIONS ↑↓
Science of Logic	Deep Structure
Abstract realm of intelligibles bearing logical relations to each other	The underlying logical relationships of the elements of a phrase or sentence

Figure 2: Parallels between the Farabian and Chomskyan
transformational accounts of language/grammar

This diagram encapsulates the parallels. Both Chomsky and Fārābī hypothesize the centrality of transformations in their accounts of grammar. The Chomskyan deep structure connotes the underlying logical relationships of the elements of a phrase or sentence. It is a level of syntactic representation with properties that need not necessarily go together. Corresponding to this, Fārābī presents what he terms science of logic. It is an abstract realm wherein intelligibles bear logical relationships to each other. When these intelligibles are exteriorized in the form of rule-governed syntax, they become what Chomsky calls surface structure.

Deep structure is logical in its nature dependent on the cognitive content in the form of intelligibles and as it moves upwards it gets syntactic. It is also pertinent to reiterate the Farabian notion of two discourses here. Interior discourse (*al-nuṭq al-dākhil*) operates at Chomskyan deep structure level, whereas exterior discourse (*al-nuṭq al-khārij*) is actualized at the surface structure level. Therefore, to Fārābī, language, of necessity, has a certain logical structure that correlates to thought and *realness* (in Saussurean sense).[55] This logical structure is implicit in some languages, while explicit in some other. For example,

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[54] Herman Parret, *Discussing Language* (Paris: De Gruyter, 1974), 96.
[55] Ferdenand de Saussure, *Course in General Linguistics* (New York: Columbia University Press, 2011), 82.

the use of existential verb is implicit in Arabic, but it is explicit in languages such as English, French, Urdu, and so on.[56] Similarly, the present-tense copula is alien not only to the syntactic structure of most of the Semitic languages, but also to some of the European languages—Russian is just one case in point.[57]

Moreover, in Fārābī's view, it is not that the abstract realm of intelligibles has no rules; rather, this realm has its own rules, which claim greater, universal applicability. To exemplify this point, Fārābī in *Kitab al-Ḥurūf* has detailed a number of parsing strategies which helped him compute the syntactic structure of the Arabic language while keeping in mind the canonical sentence/phrase structures of Greek. He largely achieved this by adopting the problematics of Greek logic and calqued and translated its register of technical terms into Arabic.

Saussurean Signification and Fārābī's Semiology of *Ma'qūlāt*

When exterior discourse (*al-nuṭq al-khārij*) interacts with interior discourse (*al-nuṭq al-dākhil*), language signifies meaning as well as particular semiotic relationships. To Fārābī, this trilateral relation is between things, thoughts, and words. To establish the principles of language we must, therefore, take into account the ways in which we think (i.e., we have to search for these principles of language in the examination of thought). Nevertheless, the examination of thought is exceedingly complex and largely depends on the greater or lesser exactness of languages, and the greater or lesser perfections of human minds.

Thoughts and concepts (i.e., *ma'qūlāt*) are signified by words. These words form utterances, which possess signification. What we understand by these utterances is their meaning (*ma'nā*). This *ma'nā* is the intelligible content of the utterance—something which generativists term as the propositional content of a sentence: "Every inferred meaning that is signified by some utterance describes an ostensible thing."[58] The propositional content of a statement concerns itself with its truthfulness or falsity. Grammar by contrast deals with the formal properties of a statement (i.e., its structural correctness or incorrectness). Chomsky exemplified the same point by proposing a sentence: "Colorless green

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[56] Mahdi, *Alfarabi*, 141.
[57] Ibid., 143.
[58] Nadja Germann, "Natural Philosophy in Earlier Latin Thought," in *The Cambridge History of Medieval Philosophy*, ed. Robert Pasnau (Cambridge: Cambridge University Press, 2010), 1:225.

ideas sleep furiously,"[59] which is grammatically correct but semantically (and in the words of Fārābī, propositionally) absurd. This Farabian and Chomskyan position effectively demonstrates the inadequacy of Probabilistic Context-Free Grammars (PCFGs) which dominated the study of language around the mid-twentieth century.[60]

This means that the concrete object of this meaning is the ostensible thing. This thing itself is extra-mental and can be perceived with the help of external senses. Here Fārābī gravitates towards the realist accounts of language, which in our times are represented by Jon Barwise, Leonard Bloomfield, Jerold Katz, John Perry, and Paul Postal.[61] This is where Farabian linguistics parts ways with Saussurean signification. Whereas the latter postulates language to be a self-enclosed system with no reference to extra-mental reality, the former very much foregrounds the notion of extra-mental reality. Moreover, on this point, Fārābī also seems to differ from Chomsky who subscribes to conceptualist accounts of language.

However, there is a conceptualist strand in Farabian linguistic epistemology, too. What is applicable to words on the linguistic level is also applicable to thought on the mental level. If a word has its attachments in the form of declensions, thought too has its attachments in the form of mental events/functions. From this, a distinction can be posed between *object* language and metalanguage. It is this metalanguage, which is the language of grammar. Similarly, metathought is the thought by virtue of which humans evaluate the *object* thought.[62] Metalanguage is essential to establish the validity of reasoning which is premised upon the interplay of intelligibles that stand in varied relations to one another.

Arguably, by positing the notions of metalanguage and metathought, Fārābī can be said to have paved the way for conceptualizing the ideals of speech and language communities, which hypothesize a communicative continuum on which the different languages are located:

> Languages cannot be counted precisely. Each language forms an integral part of a continuum of human communication. This global continuum, which is as old as speech itself, underlies the often neglected unity of

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[59] Chomsky, *Syntactic Structures*, 15.

[60] Isaac Gould, *Choosing a Grammar: Learning Paths and Ambiguous Evidence in the Acquisition of Syntax* (Amsterdam: John Benjamins Publishing Company, 2017), 89.

[61] Hilary Putnam, *Naturalism, Realism, and Normativity* (Cambridge, MA: Harvard University Press, 2016), 128.

[62] Fakhry, *Al-Fārābi*, 209.

humankind. Communities seemingly separated by language are bound together by bilingual voices on one or both sides of their divide, and words, sounds, and even grammatical rules are exchanged regularly among languages that are in contact with one another.[63]

Conclusion

In this paper, the researchers have taken into consideration Fārābī's perceptive contributions to the field of linguistics, particularly grammar and semantics. Striking parallels have been drawn between Farabian linguistic accounts and the present-day debates and questions emerging from such disciplines as semiology, universal grammar, semantics, and syntax. The second beginning in the Arabic philosophical tradition in the ninth century CE can truly be considered a linguistic turn given its unprecedented emphasis on language-related issues.

In extraordinarily ingenious ways, Fārābī gave reasoned accounts of universal grammar and cognitive semantics. His notions of interior and exterior discourses (*al-nuṭq al-dākhil wa 'l-khārij*), intelligibles operating in the abstract realm of deep structure, trilateral relationships between words, objects, and thought (*ma'qūlāt*), extra-mental nature of meanings, mental syntax distinct from grammar, and his critical proximity with such figures as De Saussure and Chomsky—all pose a challenge to the contemporary researchers to further explore him.

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[63] David Dalby, "Languages and Speech Communities," in *Encyclopedia of Population*, https://www.encyclopedia.com/social-sciences/encyclopedias-almanacs-transcripts-and-maps /languages-and-speech-communities.