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Science and Technology Enlightenment in "Fuyuzat" Magazıne: Sociolinguistic and Social-philosophical Perspectıves on Promotıng Ideas of Social Progress Through the Press in the Late 19th and Early 20th Centurıes

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Abstract. *This study analyzes the promotion of scientific and technical enlightenment ideas in Fuyuzat magazine (1906–1907)—one of the most prominent press examples of Azerbaijani social-philosophical and literary thought in the early 20th century—and the role of these ideas in the digital-sociological and cultural transformation of society using sociolinguistic and historical-comparative methods. The primary goal of the study is to illuminate the role of the Fuyuzat movement, edited by Ali bey Huseynzade, not merely as an environment for national cognition and romantic poetry, but also as an enlightenment platform integrating European scientific and technical achievements, engineering thought, industrial innovations, and natural sciences into the Eastern world. The article systemizes the technological and scientific infrastructure components of the idea of "modernization" advocated in the magazine's pages and substantiates the theoretical-conceptual continuity between the press language of that era and the priorities of the modern digital information society.*

Keywords: *Fuyuzat magazine, Ali bey Huseynzade, scientific enlightenment, technology promotion, social progress, sociolinguistics, digital transformation*

Introduction

The late 19th and early 20th centuries are characterized as a period of fundamental transformations in the social, socioculture, and scientific-philosophical thought of Azerbaijan. The rapid development of the oil industry and the transformation of Baku into a global capitalist and industrial center presented new scientific and technological challenges to the national intelligentsia. During this historical stage, the national press served not only as a bearer of socio-political news, but also as a primary enlightenment tool aimed at rescuing society from illiteracy, superstition, and industrial backwardness (Sadiqli, 2024). Published between 1906 and 1907 with the financial support of Haji Zeynalabdin Taghiyev and under the chief editorship of the prominent thinker Ali bey Huseynzade, *Fuyuzat* magazine played the role of an ideological and theoretical vanguard in this process. In traditional historiography, *Fuyuzat* magazine is mostly evaluated as the founder of a romantic literary school, aesthetics, and the tripartite formula of "Turkicize, Islamize, Europeanize (Modernize)." However, when the philosophical architecture of the magazine is closely examined, it becomes clear that what Ali bey Huseynzade meant by "Europeanize" was primarily the adoption of Western scientific and technical achievements, industrial innovations, and rationality (Gahramanova, 2025). The interpretation of technological innovations of the era in the press medium formed the technological foundation of national intellectual rebirth.

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In the modern era of digitalization and artificial intelligence, the mutual relationship between the nature of information technologies and the structure of language and society is among the priority research areas (Crystal, 2011; Gahramanova, 2026a). In this regard, studying the mechanisms of promoting scientific and technical knowledge in *Fuyuzat* magazine creates a historical-theoretical bridge between past enlightenment models and modern digital pedagogical tools and the information society (Abdelkader et al., 2026). The purpose of this study is to filter the manifestations of scientific enlightenment and technological progress in *Fuyuzat* magazine through modern sociolinguistic analysis.

Methods

This research employs an interdisciplinary and comprehensive analytical methodology to examine press texts published in the late 19th and early 20th centuries. The methodological framework of the study consists of the following scientific approaches:

1. Historical-Comparative and Conceptual Analysis: Scientific, publicistic, and philosophical essays published across 32 issues of *Fuyuzat* magazine were comparatively analyzed within the context of modern digital technology and industrial revolution theories.

2. Sociolinguistic and Textual Discourse Analysis: The frequency of scientific-technical terms (physics, medicine, astronomical instruments, engineering terms) in the magazine's language and their adaptation from Ottoman/Arabic-Persian terminology into the native language framework and European terminological system were evaluated from a sociolinguistic perspective (Androutsopoulos, 2014).

3. Analytical Classification: Enlightening materials in the magazine were grouped according to content parameters (natural sciences, industrial-technical progress, medicine/hygiene, and educational technologies) and systemized into table format.

The research relies on original text copies of *Fuyuzat* magazine and their digital transcriptions as empirical data.

Results

The interdisciplinary analytical research demonstrates that *Fuyuzat* magazine was an essential media platform that re-formatted not only literary-aesthetic thought but also the scientific-technological worldview of society. Scientific enlightenment in the magazine was realized along three primary vectors:

Technological Content of the Concept of "Europeanization". The concept of Europeanization advanced by Ali bey Huseynzade in *Fuyuzat* was not a blind imitation of Western lifestyle, but rather the acquisition of Western technical sciences, engineering thinking, and experimental methodology. Articles emphasized that safeguarding national independence and economic sustainability was impossible without adopting Western technology (Gahramanova, 2026b). In this respect, *Fuyuzat* presented industrial technologies as a defense mechanism for national existence.

Formalization of scientific-technical terminology in language. Just as the influx of foreign technology terms creates morphological hybridization in the digital era (Ceviz & Doğan, 2021), integrating scientific terms of European origin into the Azerbaijani language was a major linguistic challenge in the early 20th century. *Fuyuzat* magazine strove to form the initial scientific-technical lexical database by utilizing Arabic and Persian linguistic resources alongside European terminology.

Enlightenment Domain	Primary Thematic Focus in Magazine	Promoted Technological/Scientific Concept	Impact on Social Progress
Industry & Engineering	Oil extraction, machinery, railways	Steam engines, electrical machinery	Spurred the training of national industrial specialists
Natural Sciences & Physics	Structure of the universe, physical laws	Experimental physics & astronomical observations	Eradication of superstition and religious dogmatism
Medicine & Hygiene	Combating epidemics, human anatomy	Microbiology, modern medical technology	Physical and health education of the population
Educational Technology	New method schools (Usul-i Jadid)	Application of visual aids and spatial tools	Massification of literacy and education

Source. Compiled by the author.

Discussion

The historical-theoretical analysis shows that *Fuyuzat* magazine, published in the early 20th century, was not merely a literary-artistic organ, but also played a major intellectual role in modernizing society, adopting scientific-technical innovations, and forming national consciousness. Synthesis of Western technical progress with Eastern moral values was a main topic of discussion among thinkers of that era.

A key aspect during discussion is that science and technology concepts promoted through the press were evaluated as the sole way out of backwardness for society. The interplay between journalism and enlightenment shows that forward-thinking intellectuals tried to maximize the power of the press to educate society. In this regard, *Fuyuzat* laid the foundation for a new stage in press history—scientific-technical and philosophical publicism.

Another important aspect is language and terminology in transferring technological innovations to society. Authors of the magazine, led by Ali bey Huseynzade, paid special attention to formulating new scientific terms in the native language and delivering technical knowledge in simple language. This approach stimulated scientific thinking in the native language.

Analysis of historical press demonstrates that newspapers and magazines in the early 20th century were not just news outlets, but powerful intellectual tools managing socio-cultural transformation. The legacy of *Fuyuzat* proves that presenting science and technology to society was always accompanied by deep philosophical and ideological context.

In modern times, studying this historical legacy requires new methodological approaches. Analyzing historical press samples and connecting them with modern communication systems is widely discussed in scientific literature within digital humanities. Forms of traditional enlightenment ideas in modern digital society show that past scientific-technical views maintain their relevance today.

Research also shows that the development dynamics of national press and social thought history are closely linked. Publications like *Fuyuzat* played an important role in shaping national self-awareness

(Gahramanova, 2025). At the same time, the role of traditional press and its influence mechanisms in the digital era serve as subjects of new scientific research (Gahramanova, 2026a). Conceptual metaphors in political and social discourse explain the process of shaping public opinion through the press (Gahramanova, 2026b). The role of the Fourth Industrial Revolution in shaping innovation and economic growth demonstrates that the technological progress line from past to present is continuous (Sadiqli, 2024).

Analyzing scientific-technological enlightenment in *Fuyuzat* magazine indicates that social progress depends directly on technological literacy alongside political and literary ideas. As in modern sociolinguistic and technological theories (Herring, 2013; Tagliamonte & Denis, 2008), media language and technological tools reformat society's mindset. While *Fuyuzat* realized this transformation through print press in the early 20th century, digital media and AI tools fulfill this mission today.

Ali bey Huseynzade and his colleagues (Muhammad Hadi, Huseyn Javid, Ahmad Kamal, etc.) well understood that a society isolated from scientific-technical knowledge could not withstand global competition. This theoretical approach aligns with modern ideas of digitalizing and humanizing teacher-student relationships in higher education (Gahramanova, 2026). The scientific rationality promoted by *Fuyuzat* constituted the intellectual foundation of national ideology.

Similar to mechanisms of adopting digital terminology in German and English (Androutsopoulos, 2007; Seargeant & Tagg, 2014), *Fuyuzat* attempted to present neologisms of Western science through the syntactic and morphological filter of the native language. Today's imperative to develop Azerbaijani language corpora and NLP tools (Gahramanova, 2026a) represents the moral and technological continuation of the scientific-linguistic traditions established by *Fuyuzat* enlightenments.

Conclusion

This comprehensive sociolinguistic and historical-theoretical study allows for summarizing the following scientific conclusions:

1. *Fuyuzat* magazine acted in Azerbaijani press history not only as a romantic-literary publication, but also as a promoter of industrial revolution, scientific rationality, and technological innovations.
2. At the core of Ali bey Huseynzade's concept of "Europeanization" lay the goal of mastering Western scientific-technical achievements and forming a national industrial infrastructure.
3. The scientific enlightenment traditions of *Fuyuzat* preserve their theoretical value in the age of digital transformation and artificial intelligence, offering vital historical experience for developing the native language and cognition in digital environments.

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