Scientific Literature in Yiddish: Ideology and Terminology

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Abstract

This doctoral thesis is devoted to a field which has not yet been sufficiently studied. It is designed to provide a pioneering comprehensive analysis of an often underestimated genre of the Yiddish writing: scientific literature, i.e. publications on exact and natural sciences as well as technological issues.

Such literature has been appearing throughout the past six centuries at least. It includes about 600 items: from *Treatise on the whole benefit of bloodletting* (1396/7) to multiple books published nowadays in secular and ultra-orthodox circles, as well as popular science articles in both special (e.g. *HaMaspik* medical magazine which is published in Monsey, NY) and general press (first and foremost in the *Forverts* newspaper, New York City).

As shown in the dissertation, the history of Yiddish scientific literature may be divided into 6 phases: (i) from the 14th century till 1790 (before the Jewish Enlightenment, when such literature was minor in numbers of publications and their circulations); (ii) from 1790 till the middle of the 19th century (the Enlightenment caused dramatic changes in the public role of Yiddish); (iii) from the middle of the 19th century until WWI (when Yiddish speakers were exposed to new living conditions and occupations, their involvement in science and technology increased, the language acquired modern tools including full-fledged vocabulary and efficient syntactic structures for conveying information); (iv) between the two world wars (the Yiddish peak period both qualitatively and quantitatively); (v) from WWII till the end of the 20th century (the decline because of Holocaust, Stalinism and other historical events); (vi) the 21st century (with Internet facilities which in certain ways and aspects help maintain and improve the condition of Yiddish).

This paper reviews Yiddish publications which deal with mathematics, general natural science, physics, astronomy (including space exploration), chemistry, medicine (including issues of anatomy and physiology), and technology (including cinematographic and high-tech industries). It is aimed to provide a summary of Yiddish scientific literature in terms of content and lexicology, to map its chronological, geographical and genre diversity, to identify the trends of its development, and to track the language-planning attempts which were carried out parallelly and independently in different countries and institutions.

The history of scientific activity in Yiddish is reviewed in detail, too. The early appeals by the historian Shimon Dubnov (the pioneer of science research in Yiddish) have borne fruit decades later in the activities of the YIVO institute un Vilnius and New York as well as Jewish academic institutions in the mid-war USSR. The study shows how a multi-faceted scientific terminology (even for such complicated domains as relativity theory, computer science and cellular communication) was developing within the institutions' activity and thanks to literary creation.

It seemed important to emphasize that some political institutions exploited this language for their own ideological purposes. For example, the mid-war USSR converted Yiddish and its literature

(even mathematic textbooks for elementary school) into propaganda tools, without granting a self-contained value to the Yiddish culture, and as soon as the Soviet authorities saw fit, they mercilessly demolished it.
Meanwhile, the Bund party in Poland, with its autonomist ideology, took pains to establish a Yiddish cultural array as an alternative to an independent Jewish state.

The paper traces how Yiddish borrowed terms from dozens of languages (19 of which are discussed in detail, including such "exotic" ones in this context as Portuguese, Ladino, Swedish, and Arabic) and adapted foreign lexic to its phonological and grammatical nature.

11 Yiddish word creation mechanisms, revealed and illustrated in this research, functioned at times as part of natural language development, at times within planned scientific activity.

The main body of research—the literary corpus—includes dictionaries, encyclopedias, dictionaries, phrase-books, letter writing guides, instructional books for general and vocational schools, popular science issues, calendars, special periodicals and scientific publications in general press. They are examined by empirical and theoretical, qualitative and quantitative, synchronic and diachronic methods, in light of the effects of geopolitical, ideological, social and technical factors. For this purpose, representative samples of texts created in such historical and geographical centers of cultural activity as Russian Empire, USSR, Poland, Lithuania, Romania, Western Europe, North America, Argentina, and Israel were used.

In addition to publications that have an entirely scientific character, some other types of literature which contain considerable amounts of scientific terminology are discussed here. These are Bible translations to Yiddish and selected fiction dealing with science and technology.

The body of the work consists of four parts: (i) historical reviews (current state of research, concise history of scientific activity and scientific literature in Yiddish); (ii) analysis of the scientific terminology (borrowing terms from different languages, phonological and grammatical assimilation /*yiddishization* as some researchers call it/ of borrowed words, ways of renewing terms in Yiddish, reflection of the terminology in lexicography); (iii) treatment of the literary corpus (contribution of the classics of new Yiddish literature, popular science literature, scientific publications in special periodicals and general press, instructional books, the Bible translations as a source and a cause for terminology formation, general linguistical characteristics of the corpus and its statistical summary); (iv) linguistic planning and ideological issues involved (review of linguistic planning in Yiddish, ideological influences on the scientific literature, analogies between processes in Yiddish and some other languages which are functioning in similar sociolinguistic situations).

Comparative analysis of 19 sub-corpora of the researched literature containing 3,263 term occurrences (which constitute a representative sample according to various criteria) revealed that the etymological profile of scientific Yiddish depends on the period, science branch, and country

of publication. As a whole, this profile differs significantly from general Yiddish literature. Terms of German origin make up 41.3 per cent of scientific vocabulary—considerably lower than general estimates of 60–75% for Yiddish overall; native ("home-made") Yiddish words account for 16.8%; Latin borrowings reach 14.5%, exceeding their proportion in general Yiddish usage; Russian terms (including loan translations): 6.3%; Greek: 6.1% (also well above average); French: 4.4%; English: 3.7%; Hebrew and Aramaic combined: 3.7% as well, markedly below general Yiddish usage; Polish: 1.5%. The remaining 1.7% derive from over a dozen other languages.

After World War II, substantial changes in the etymological composition of the scientific nomenclature in Yiddish have been occurring: the proportion of words of German origin having dropped from 49.7% to 27.3%, whereas the share of English origin has soared from 1.1% to 8%. The development of Yiddish scientific and technological nomenclatures saw evolution from mechanical borrowing via yiddishizing words until creating a rather independent bank of terms. Recently, this literature is getting more diverse in terms of vocabulary and uniform in grammar.

Abstract and compound nouns statistically prevail in the scientific vocabulary, whereas the amounts of adjectives and verbs are below average. Verbs appear mainly in the third person; they frequently appear in passive constructions, in contrast to their rarity in other genres.

Before the 16th century, merely 2 scientific publications were issued in Yiddish. They were followed by 3 in the 16th century, 10 in the 17th, 10 more in the 18th, 71 in the 19th (35 thereof in the 1890's), the maximum 475 ones in the 20th, and 24 in the 21st century so far. As for decades, Yiddish scientific literature reached its absolute peak in the 1920's: 146 publications, followed by 135 in the 1930's.

The most popular subjects of Yiddish scientific literature are: medicine including anatomy and physiology (189 publications), mathematics (98), industry and technology (92), combined and interdisciplinary issues (72), natural and elementary science (70), physics (29), astronomy and space research (17), chemistry (17), computer science (11).

Popular scientific books (234 publications) and instructional literature (177) dominate among the sub-genres, leaving behind specialized journals and thematic articles in general press (77), calendars with popular scientific data (28), and encyclopedias (26 volumes).

Distributing by the place of publication, the following countries (within their present recognized borders) are at the top: Ukraine—143 editions; Poland—102; USA—82; Lithuania—65; Belarus—51; Russia—47; UK—23; Germany—18; France—15; Israel and Argentina—12 each.

Appendix A contains graphic illustrations. Appendix B presents a sample Yiddish lesson based on a Soviet-era chemistry textbook, demonstrating the use of the scientific literature for teaching Yiddish.

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