

The emergence of scientific literature in Hebrew for children and youth in the nineteenth century: preliminary directions for research

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ABSTRACT

One of the toughest challenges undertaken by German–Jewish *Maskilim* was to create a corpus of scientific texts in Hebrew. Most of the scientific texts written by them were aimed for both adult and juvenile audiences, signifying that no clear differentiation between corpuses for adults and for children had been made yet at the time. After a short blossoming of Hebrew scientific writing in the last third of the eighteenth century in German–Jewish culture, the first half of the nineteenth century saw a degeneration in Hebrew writing in Europe. Hebrew science literature flourished again from around the middle of the nineteenth century, especially in Eastern Europe, along with the growth in science literature for children and youth. This article is an initial exploration of this corpus, which has scarcely been examined. Three test cases are studied: a textbook, a didactic fictitious text, and a journalistic text. They present exclusive attributes of children's literature, thereby demonstrating the process of crystallization of scientific literature in Hebrew for children and youth at that time.

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Rabbi Hillel David HaKohen Triwosch, editor of the traditional Eastern European journal *Sefer HaPisga* (1895–1904),¹ voiced strong criticism concerning the young generation's reading habits at the time:

As everyone knows, the reading of newspapers, journals, and books in Hebrew has been on the rise in our times, so much so that the entire generation, young and naïve, all Hebrew speakers, including both youngsters who roam about and those attending *Tora* school, all crave literature, think of love, and eagerly consume all sorts of deviances [...] The youngster offspring of orthodox fathers in many cities have been raising funds for founding libraries with every Hebrew book and journal for all to read; even *Hassidic* homes, which for many years had declined to let Hebrew literature pass through their doorways, have now changed, and the youth in these homes now also read, contemplate, and err in their love for it, whether openly or clandestinely, either with their parents' permission or without it [...].²

Triwosch noted that youngsters from different social sectors, not only the sons of *Maskilim*, but also orthodox Jews and *Hassidim*, read secular Hebrew literature, and were even willing to spend their money on it, while their parents' neither knew nor consented. He claimed that

it was not merely reading, but a near addiction to reading, which he likened to unbounded desire. Similar criticisms were also voiced during this period with regard to the so-called secular literary writing-binge.³

Research does indeed bring to light the expansion of the secular Hebrew library and the diversification of its genres during this period, beginning in the final third of the eighteenth century, alongside German *Haskalah* activity.⁴

Among the new genres created by German–Jewish *Haskalah* in the end of the eighteenth and the beginning of the nineteenth century, the Hebrew scientific library stands out for its novelty,⁵ including the important part dedicated within it to scientific texts for Jewish children and youth.⁶ The present article will address the development patterns of scientific literature for children and youth in the *Ashkenazi* sphere during the nineteenth century, and especially during its second half.

As opposed to the research of German–Jewish children’s literature from the last decades of the eighteenth centuries to the middle of the nineteenth century, which provides a clear picture of the crystallization and evolution of children’s literature in German-speaking realm at the time, the study of this genre’s developments in the second half of the nineteenth century in Central and especially in Eastern Europe is very limited.⁷ This article is a preliminary attempt to sketch out the body of scientific literature for Jewish children in the course of the late nineteenth century. The examination of the link between several later texts within the corpus and the pioneering attempts made by the German *Haskalah* to establish this type of literature during the previous period will hint at the main courses of development of scientific literature for Jewish children in Europe in the nineteenth century.

Education for all – the dissemination of Hebrew science literature in the modern era

One of the toughest challenges undertaken by German–Jewish *Maskilim* was to create a corpus of scientific texts in Hebrew. Given that the sciences had been marginalized in *Ashkenazi* culture throughout the generations,⁸ the authors faced various constraints. Many of them emphasized the sciences’ contribution to the strengthening of Jewish faith and their connection to the Jewish framework as a justification for their involvement with *Hohmot Hitzoniyot* (‘External Wisdoms’, i.e. secular subjects).⁹ These Hebrew texts were almost always based upon source texts in other languages, the processing of which included the authors’ adaptations of knowledge to their Jewish readership’s needs.¹⁰ *Maskilim* tended to adopt the few branches of science deemed relatively legitimate in the Jewish sphere, such as astronomy, mathematics, and geometry,¹¹ while rarely writing about other branches of science, such as zoology, botany, mineralogy, geology, chemistry, geography, physics, and mechanics. Writing scientific texts for children raised another difficulty, since no strong tradition of writing for children had been established in the Jewish sphere for authors to build upon. Most of the scientific texts written by these *Maskilim* were aimed for both adult and juvenile audiences, signifying that no clear differentiation between corpuses for adults and for children had been made yet at the time.¹²

After a short blossoming of Hebrew scientific writing in the last third of the eighteenth century in German–Jewish culture, the first half of the nineteenth century saw a degeneration in Hebrew writing in Europe, and a degeneration in the field of Hebrew science books.¹³ Hebrew science literature flourished again from around the middle of the nineteenth century,

especially in Eastern Europe.¹⁴ This shift was accompanied by change in the characteristics of the corpus itself: Astronomy gradually lost its supremacy, giving way to a growing involvement with branches of science that had gained prominence in modern Europe, namely, geography, zoology, botany, chemistry, and technological advances based on scientific developments.¹⁵

Various books on botany and zoology were published in this period, such as *Sefer Toldot HaAretz* by Joseph Shinhack (Warsaw, 1841/1859); *Achen Yesh Hadonei* by Joseph Jehuda Löb Susnitz (Vilnius, 1875); *Torat HaChaim VeChezyonotehem* (St. Petersburg, 1880/1881); as well as the book series *Sefer Toldot HaTeva* by Sholem Yankev Abramovich (Mendele Mocher Sforim) (Leipzig, 1862; Zhytomyr, 1866; Vilnius, 1873). The number of geography and travel books also grew, and *Shvilei Olam* by Samson Bloch (Lemberg and Zholkva, 1822, 1828, in two volumes); *HaKadur* by Moshe Shmuel Neumann (Prague, 1831); and *Shvilei Eretz Russia* by Shuv from Bialystok (Warsaw, 1893). Especially salient was the new interest in nineteenth century technological inventions. Abraham Katzenellenbogen's book *Sefer Mechonot HaKitor* (Danzig), which describes the technology of steam use, was published as early as 1845, while a book series by the name of *Otzar HaChochma* by Zwi Hirsch Rabinowitz appeared in the sixties and seventies (Vilnius, 1867–1876), and was devoted to natural forces and their use via modern technologies, such as mechanics, chemistry, steam, and magnetism. The journals that appeared in Central and Eastern Europe during this period contributed greatly to this development. The *HaTzifira* journal, which focused much on sciences and technological advances, led this trend. A similar, if more moderate, trend characterized other contemporary Hebrew journals as well.¹⁶ Alongside the multitude and variety of texts, as well as their appearance in different formats, a new trend of modern discourse on sciences emerged: The justifications for scientific discourse gradually leaned less on their contribution to the Jewish framework, while giving way to an emphasis on universal scientific considerations and conceptions.¹⁷

A similar trend of change can be discerned in children and youth's literature, as it began adopting the modern discourse on sciences and to focus on branches of science alien to Jewish tradition. These texts appeared as independent publications, textbooks, and journals.¹⁸ Furthermore, it seems that this corpus acquired exclusive attributes of children's literature, as shall be illustrated below with three test cases.

Zoology for Jewish children in the *omer basadeh* textbook

The German *Maskilim* published few zoology texts in Hebrew for children. Apart from the avant-garde *Rešit Limmudim* textbook (Berlin, 1788), the vast majority of zoological texts presented scientific knowledge as directly linked to Jewish faith and knowledge or as contributing to moral teaching.¹⁹ *Omer BaSadeh* (Vilnius, 1853), by David Ben Aharon Luria (1811–1873), was written for Jewish youth²⁰ and built on this tradition, while incorporating novel elements.

Luria was a reformer of Jewish education. He gave his utmost to improving education in the Minsk area, and was even appointed regional supervisor of schools on behalf of the authorities.²¹ The aforementioned textbook represents part of this endeavor. It begins with a letter from the prominent *Maskil* Isaac Baer Levinsohn (1788–1860), who commended the author for his educational activity.²²

The textbook consists of interpretative texts for the Holy Scriptures, zoology, and civic education. In the chapter on zoology, Luria presented Hebrew versions of texts (without

giving references to the textual sources) on lions, tigers, elephants, beavers, camels, dogs, and monkeys.²³ Alongside short scientific descriptions of the animals and their habitats, Luria incorporated fascinating stories that emphasize the animals' extraordinary physical abilities and unique characters: Lions, who pity humans and create amiable relations with them; a vengeful elephant, as well as loyal elephants; the camel's exceptional capabilities; the dog's remarkable sense of smell and its special affinity to humans, etc.

What were the educational aims of discussing animals? The answer can be found in the preliminary text that the author wrote for this section. Evidently, Luria was influenced greatly by enlightened conceptions of the sciences. Like other Jewish and non-Jewish members of the Enlightenment, who were active in the end of the eighteenth century and during the nineteenth century, Luria viewed scientific knowledge as having a religious aim and pertaining to faith, since it teaches about the world created by God and of his power and magnitude.²⁴ Luria appealed to his young readers movingly and called upon them to pay heed to their parents and teachers, as they will help them learn and take the path of faith wisely.²⁵ He believed that the discourse on animals consisted of all of the essential elements needed to educate youth:

Here, my sons, I present to you a few articles from the natural history which I have written in a special book, watch and see some of the thousands of things that God created in his world, and you will discern that a person's pride will reduce him to believing that the shape of his face and the glory of his organs carry him on the wings of fame; as only his inner mind and free choice to choose the good, the appropriate, and the beneficial, only these will glorify him, these alone will grant him the right to claim superiority over all sons of lions and to rule over them.²⁶

The link between wisdom and ethics is firm ground for the author's educational doctrine. For the author, scientific religious and ethical educations are intertwined. Animals teach humans about the wondrous world formed by the Creator and of his supreme capabilities, but no less about what distinguishes between humans and animals, namely, the formers' mental capabilities and moral quality.

Luria chose to deal with the similarity vs. the difference between humans and apes. The description of humans as the foremost creation, owners of mind, comprehension, and speech, as well as free choice, hints to his awareness of this main scientific-anthropological discourse that prevailed in eighteenth and nineteenth century Europe.²⁷

Descriptions of the orangutan's near-human capabilities, like the one offered by Luria, had already appeared in texts for Jewish children and youth.²⁸ Yet the text that Luria paired his description with represents a shift in the form of scientific knowledge in Hebrew texts for this audience. Luria included a translation of a fable from *Fénelon's Fables* (François Fénelon, 1651–1715) about a monkey. This fable stresses the difference between humans and monkeys. In it, an old rogue monkey reaches the netherworld, where god of the netherworld reincarnates him as a parrot. After the parrot dies, the monkey's spirit reincarnates as a stupid, licentious person.²⁹ The moral alluded to is that if humans and monkeys resemble each other, the resemblance is in humans' negative attributes: Stupidity, licentiousness, and verbosity. Luria linked the zoological description of the monkey and the fable with a homily that appeared between the two sections. In it he advised youths to study and gain wisdom during their youth lest they resemble monkeys.³⁰

Luria thus attributed special significance to scientific discourse in the education of Jewish youth. But contrary to most zoological texts in Hebrew for children and youth published before him, he connected scientific discourse and questions raised by the European

Enlightenment, independent of traditional discourse. Moreover, as this book exclusively addressed youth, it molded its contents accordingly. The choice of fascinating, exotic materials points to a deep internalization of contemporary European educational conceptions, which emphasized the need to shape texts for young readers in an attractive and pleasing way. The incorporation of a fable also attests to the author's awareness of the need to mold scientific knowledge to specifically suit children and youth. It is neither the use of a fable,³¹ nor the Hebrew adaptation of a non-Jewish text (as described above), which distinguish this work. Rather, the novelty lies in linking between scientific and literary texts, each of which stands on its own, while both deal with the same object.

This trend of incorporating scientific knowledge into a story had already evolved in German-Christian educational literature in the end of the eighteenth century. Scientific information was integrated into a fascinating imaginary trip taken by a teacher and his pupils, or a father and his children, sometimes culminating in a religious experience. The use of this model emanated from the notion that curiosity and interest aroused by the text, as well as its illustrative presentation, facilitate the children's learning process.³² This model, as well as other literary fiction models, were less common in Hebrew texts for Jewish children published in Europe in the late eighteenth century and the beginning of the nineteenth century.³³

Luria apparently believed that the zoological text's appeal would be enhanced if it were accompanied by a literary-didactic text. By pairing the scientific text with a fable he must have hoped to make optimal use of the didactic potential inherent to these texts, thereby intensifying their effect on the young readership. In his textbook, Luria made use of modern educational methods, which demand of the educator not only to enrich his students with scientific knowledge, but also to ignite their interest, curiosity, and enjoyment during the learning process.

Biblical geography for Jewish children in Kalman Schulman's books

Beginning in the end of the eighteenth century, geography came to be considered as central to German-Christian education.³⁴ Like zoology, no stable tradition had evolved for this field in Jewish writing, and the German-Jewish *Maskilim* shaped texts on geography by relying directly on the German-Christian corpus, and often included geographical knowledge within contemporary Hebrew travel books.³⁵ Another type of books that served as an agent for distributing geography is Biblical geography literature. This phenomenon drew on the Bible's renewed prestige and on the blooming of publications describing *Eretz Israel*, which were penned by the many travelers and scientists who visited there during the nineteenth century. These texts often consisted of a mixture of geographic information and elements of travel stories.³⁶

The *Maskilim* did not themselves visit *Eretz Israel*, but rather relied on non-Jewish literature, which they adapted to Hebrew for their audience. In early texts, such as *Mehkarei Eretz* by Solomon Löwisohn (Vienna, 1817), or *Sefer Gllot Eretz Israel* by Menahem Mendel Breslau (Breslau, 1819), sites in *Eretz Israel* were described according to the Holy Scriptures, as well as according to information supplied by travelers and researchers who had visited there. These texts used the lexicon model, while adopting scientific geography models to describe *Eretz Israel*.³⁷ Breslau, who was a teacher and author of textbooks for children and youth, began the book with a long prologue in which he introduced professional terms from

scientific geography, such as poles, the earth's axes, and the equator, as well as explanations on how to read maps. He also inserted a map of *Eretz Israel* at its end.³⁸

The first Biblical geography books to make use of the narrative model were written by Kalman Schulman (1819–1899), a teacher who published many journal articles, essays, and popular translations. Most of his essays are dedicated to history and geography, which he viewed as of utmost importance.³⁹ The *Eretz Israel* geography books that he wrote were based on *Eretz Israel* research literature, as well as on visitors' impressions.⁴⁰ *Sefer Halichot Kedem* (Vilnius, 1854) and *Šulamit* (Vilnius, 1855) were explicitly intended for Jewish youth. Schulman opened the former book with a direct appeal to his young readers and explained the book's goals:

For you, attentive sons who study the Holy Scriptures! It is for you that I have written this book [...] I shall lead to this land of Carmel, attentive sons! In bonds of love I shall draw you after me to all the places where God appeared [...] I have devoted my pen to the Holy Tongue ever since my youth, as I saw the wise words of the peoples who roamed the Holy Land and encircled it, and who wrote countless books on it [...] I was zealous for our Holy Tongue, the tongue of truth and the mother of all that is holy, and said to myself: Is it right for the studies of this land to be concealed by other languages – tongues that have [never] roamed this lovely land [...] I went to work and copied from the various new travel books the entire epic of the greatness of the Holy Land and its manners [...] I put the words of all of these numerous travelers in the mouth of one traveler in these ancient places [...] and this narrator speaks in the first person for the stories to be more deeply engraved in the reader's heart.⁴¹

The reason for writing the book, as presented by the author, is the wish to offer geographic knowledge on *Eretz Israel* in the Holy Tongue. Schulman found it unfathomable that such knowledge is available in other languages, while the Israelites, whose heritage emanates from *Eretz Israel*, lack it in their language. Schulman chose to acquaint his young readers with *Eretz Israel* through travel literature. The story is built around a protagonist, the story's narrator, who describes what he sees in the first person. Schulman believed that this would greatly strengthen the impression made by the stories: 'the stories will be more deeply engraved in the reader's heart'. His book *Šulamit* was published soon after the first and complemented it.⁴² In the introduction to this book he emphasized the fact that both essays were intended for youngsters, and delineated their didactic purposes:

In this book, *Šulamit*, I have kept my vow to bring my book *Sefer Halichot Kedem* to completion [...] I have already asserted, and will now do so again: I have not written this book for the wise and the knowledgeable [...] I will tell you, attentive sons! [...] I bore and created this book for youngsters, youngsters whose ears have not yet heard teachings and who do not yet know the Holy Tongue, for whom the study of ancient lands and ancient times are supreme wonders. Only for them I have done this [...] I have placed the words of the many different writers and travelers in the mouth of one ancient traveler, who will tell us all that his eyes have seen, and this way the stories will be more strongly engraved in the reader's heart.⁴³

His books were thus intended for children who had not mastered the Hebrew tongue yet, and who had no knowledge pertaining to *Eretz Israel*. Schulman opens *Šulamit*, with letters of praise from *Maskilim* for these books of his. First among these are the letters of the aforementioned David Ben Aharon Luria, who commended Schulman for both *Sefer Halichot Kedem* and *Šulamit*, signing off with his title of 'Supervisor of all Hebrew Studies in the Vilnius Region'.⁴⁴ Luria claimed that youth only read books of wisdom at a young age, and this knowledge serves them and their surroundings for the rest of their lives, so that he considered books such as Schulman's, which disseminate popular scientific knowledge, to be blessed.⁴⁵

Geographic scientific knowledge and narrative style are mixed together in Schulman's books. In *Sefer Halichot Kedem* Schulman described at length the shape of the Dead Sea and the chemical composition of its water, and explained in detail the reasons for the rise of the Nile river during summer and for the change of its colors. In *Šulamit* he noted that the height of Mt. Carmel is estimated at 1500 feet, that Mt. Sinai is made of granite stone, and he even described in detail the climate in the Lebanon Mountains.⁴⁶ In *Sefer Halichot Kedem*, Schulman mainly emphasized the experiential aspect, while in *Šulamit* he complemented this with geographic-historical scientific knowledge.⁴⁷ At the same time, Schulman chose to apply an emotion-laden literary style to his book, which, according to scholars, indicates Schulman's religious-romantic conception of *Eretz Israel*.⁴⁸ Yet it seems that Schulman was also influenced by other sources.

Inspection of his books yields that Schulman shaped scientific knowledge while keeping in mind the young readers' needs. Scientific information on *Eretz Israel* was integrated into a fascinating imaginary trip, culminating in a religious experience. As was described above, this model was already common in late eighteenth century German–Christian literature for children. Elements of this model also appear in Schulman's books. When the book's protagonist lays his foot on the land, he describes the awe with which he sets upon the ground and the song of praise that he sings; and when he reaches Mt. Sinai, he speaks of the thunderstorm that is under way, during which he conjures up the Giving of the Torah on Mt. Sinai.⁴⁹ Over and above all else, the story's dramatic design is salient. The protagonist describes the way to Jerusalem as deserted and ruined, with gangs of robbers ambushing passersby. He details how he and his companions manage to evade these gangs.⁵⁰ The author described the protagonist as he approaches his destination, exhausted and worn out:

As I heard we were close to the city of God, my heart pounced from my chest, my spirit was excited, and I could inhale air strongly into my nose. I imagined every mountain and hill that I saw was Mt. Zion, Jerusalem Hill. Moments passed, and my heart fell ill and my spirit dwindled in lengthy anticipation, each and every moment seemed like a year – oh, when will I enter your gates, Jerusalem?! When will I water you with my tears, God's holy daughter of Zion!? ... Suddenly, I fell from the horse ... Oh, the city of God!! ... Greetings, the Holy City of Jerusalem!! ... I set upon the ground [...] I entered the gates of Jerusalem. I entered the city barefoot, in sackcloth and ashes. I tore my clothes [...] kissing the stones of God's city, and streams poured from my eyes [...] No tongue can convey, and no writer's pen has the power to express even a shred of it.⁵¹

The story of the arrival in Jerusalem is presented as a real adventure, climaxing with the entrance into the city itself. The narrator describes the ecstasy he experiences, stressed by the intense use of exclamation points, question marks, and ellipses. All of these were meant to demonstrate the emotional-religious experience that 'no tongue can convey' and to induce a similar effect in the readers. Schulman's aim is twofold: To transmit knowledge and to instill religious belief values. The German literary-didactic model of a travel story that culminates with religious-spiritual ecstasy serves his goal well.

HaTzir journal – science and technology for youth

Texts in Hebrew on technological advances became increasingly popular in the second half of the nineteenth century in the *Ashkenazi* realm. These texts catered to the needs of the Jewish audience, who saw and experienced the technological changes that had taken place in Europe at the time firsthand. The main target audience for these texts was probably the young generation, who met these changes with much enthusiasm and curiosity.⁵²

The biweekly *HaTzir* appeared in Lemberg over a few months (Kislev through Adar 5562, 1861–1862) and consisted of many items on science and technology. This journal was part of a trend of modern Jewish journals that appeared during the second half of the nineteenth century, described above, and which aimed to disseminate current affairs with relevance to the target audience, while transmitting universal modern values. A major part of this journal was dedicated to a historical, social, and political description of events that had affected Jews' lives across the *Ashkenazi* realm: The Khmelnytzky pogroms of the seventeenth century, the 1848 revolution and the expansion of civil rights, the war that had taken place between Austria on the one hand and France and Italy on the other hand, a few years earlier, in 1859, and up to the time of its publication. Descriptions of animals also appeared, including goats, birds, and monkeys, as did geographic travels to places such as Mt. Vesuvius and the city of Pest. Prominent among the journal's texts are those that address contemporary technology: The steam train, steam boat, hot-air balloon, submarine, mechanical millstone, telegraph, and so forth. Various illustrations appeared alongside the verbal descriptions.

The journal's first issue opened with an ambitious statement by the founder and editor, Isaac Weinert. He wrote that the journal's aim was to serve as a permanent vehicle for presenting up-to-date knowledge to the Jews of Galicia, as well as a platform for them to express their feelings and criticism towards society and the authorities. 'For my brothers and people, to speak of any major political affairs [...] of any wisdom, masterpiece and new inventions, which every person should understand.'⁵³ An interim summary of the journal's route was offered by the editor after two months of activity, on 1 January 1862. It mentions explicitly the different types of material in the journal – from politics to science – that cater to different kinds of readers. Weinert noted the adaptation of scientific texts especially for youth:

The *HaTzir* is the first for holy [tongue] readers, whose motto is eternal freedom [...] and it is also first and foremost for those fighting under the constitution, and who criticize both gentile and king [...] and it is also the first for those who exposed Israelite youth's ears to supreme and wondrous wisdoms, natural wisdoms that they are unaware of, because: *Things such as these have never before been seen in a Hebrew journal, including drawings made according to their image, speaking of trees and rocks and everything that lives, in clear, simple language, so that each man and youth who knows how to read Hebrew can understand everything that is written* precisely [...] So hurry, youths of Israel, and take this *HaTzir*, since its benefit is for more than merely a day or two; if the reader reads it in future days, he will draw the same pleasure from it as before.⁵⁴

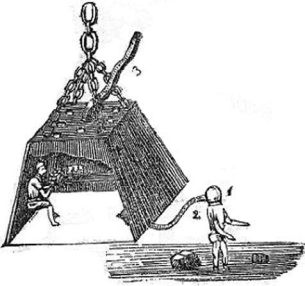
This indicates that the author intended to make the issues of news and current affairs vis-à-vis the Jews' relations with the authorities accessible to a general audience, namely, adults. Conversely, scientific texts and technological texts that were accompanied by illustrations were specially tailored for youth. They were written in simple, clear Hebrew, and were accompanied by bright illustrations. Presumably, the editor concluded during the time that the paper circulated that youths were the audience most keen on this information.⁵⁵

How did Weinert form the texts on technology? His assumption was that his audience wished to delve deep and grasp how things work. This is what he wrote in the introduction to the description of the steam train:

Have you seen, amicable reader! The iron vehicle (locomotive), as it exhales fire its mouth and nostrils emit smoke, and the way it glides in glorious splendor on the iron paths with much din and noise, did you see it? I am sure that at the time you thought: I wish I knew how this great vehicle moves, the new creation that human wisdom has breathed life into [...] I said the same to myself, and then I went to check in books of wisdom.⁵⁶

הזהב יועם טרוח נפרית אולם הפנינים ואבנים המובות המה
לעד : לא יחליפו מראיהם ואך באש יכלו ויאברו !

ציור 1



אולם לא לבד להביא פנינים מטצולה תועיל התיבה הזאת ,
כי גם לדברים אחרים הנה : אם תשקע ספינה בים , בתיבה
הזאת ירדו אנשים תדומות לבקש את הכלים אשר היו באניה
ולהביאם היבשה : (סנטר יכל)

תיבת המצולה (מנומטכרנולאקט)

הפנינים (פערלען) בעין הברלח לטהר אשר יעדו
הנשים על צואריהם - ופה כנאליציען גם בצעיף על ראשן
הם להיות להם לעמרת תפארת " ממעטקי ים , בתיבה אשר
לפנינו יביאו , וממצולה כרחב ביתו , ידלם האדם "

יוקר הפנינים לרב ערכם על שני דברים המה :
לאשר כי ימעט מאוד מספרם , וכל דבר הנמצא מעט
עלי תבל ארצה יגדל ערכו ויעלה מעלה מעלה בערך
מציאותו : ר"ל אם המצא ימצא הדבר הזה על דרך נקל ,
לנפוץ על כל הארץ , כי אז ימעט מחירם : אולם אם
יכבד להשיג החפץ הלזה ולא ימצא כי אם לפעמים ,
ויזל מחיר הכסף אשר יתנו בערו , ולאשר כי לא ישנו
את מראיהם לנצח , וכמראיהם טרם מיום ניהם מרחם
השרץ , כן גם מראיהם עתה ויהי גם עד עולם . הסגולה
האחרונה הזאת אך לגופות מעטים היא : האבנים יתפוצצו
סן האויר והמטר יפתת אותם והיו לעפר : העצים יבולו ,
וכל אשר נשמת חיים באפיו יוקב ברבות הימים , וגם

According to Weinert, technological innovation entailed enlightenment and progress, and held the potential to change the face of Jewish society. The description of the mechanical millstones communicates his hope that the Jews under the enlightened Austro-Hungarian rule will be able to become farmers, too.⁵⁷

HaTzir, volume 9, pearl harvesting in the deep sea with a submarine.

The language used in the texts on technological inventions is glorifying and praiseful. The force of steam provided the English empire its power. Conquest of the new world is presented in a positive light, as introducing civilization 'among savages and idolaters.'⁵⁸ The invention of the hot-air balloon is presented as proof of the technological control of mankind not only over the earth (by means of the train) or the sea (by means of the steam boat), but over the air. The conquerors of the air, the Montgolfier brothers ('French brothers'), are described as brave heroes.⁵⁹ Weinert's words are especially poetic, and his enthusiasm soared when referring to the telegraph:

How wondrous God's actions are! – The human spirit is too small to encompass them, as they exceed human wisdom. Yet his mind, which is part of God above, enquires about nature's secrets and brings them to light [...] the most supreme of the wondrous things, which humankind has achieved from the depth of its mind in our times, is the telegraph.⁶⁰

The great enthusiasm expressed by *HaTzir's* editor for the telegraph is similar to that which appeared in the journal *HaTzifra*. Apparently, this device came to symbolize innovative technology, and it influenced the Jewish populace immensely.⁶¹ Thus, the Galician *HaTzir* voiced enthusiasm for new technology, experienced especially by the young Jewish generation, and in this sense its role was similar to that of *HaTzifra*, which was founded at the same time in Warsaw. On 8 January 1862, *HaTzir's* editor gladly reported the upcoming appearance of the journal founded by the 'rabbi that is revered all across the land', Hayyim Selig Slonimski (1810–1904), stating that it shares common objectives with *HaTzir*. The editor went on to encourage his readers to purchase *HaTzifra*, and by doing so to assist Slonimski.⁶²

Hence, the editor of *HaTz'ir* considered the young Jewish generation to be the main audience for news on technological innovations, which spread across Europe during the second half of the nineteenth century. Like the aforementioned authors, Weinert also made use of literary elements in order to enhance this information's appeal to his young readership. He also made use of another element that had become characteristic of modern children's literature, namely, illustrations, which were rare in Hebrew literature for the young generation.⁶³

Summary

The nineteenth century saw a marked increase in scientific writing in Hebrew. Traditional topics, such as astronomy and mathematics, were marginalized, and discourse on new branches of science, which had been highlighted in modern European culture, such as zoology, geography, and modern technology, received precedence. This phenomenon seems to also characterize scientific texts in Hebrew written for children.

The choice of these branches of science marks a sense of casting off the burden of the past, which had not previously characterized authors of children's texts. It would seem that these authors' adherence to Jewish traditions had weakened, allowing them to expand the span of scientific discourse. Moreover, it points to the significance attributed by the authors to turning the young generation into central agents of change in a changing world, in which sciences and technology had become of central importance. As can be seen in the examples offered in this article, the *Maskilic* authors made use of different media – textbooks, fiction, and journals – to disseminate scientific concepts and knowledge among the young Jewish generation.

Examination of these test cases also shows that during the second half of the nineteenth century, scientific literature in Hebrew for children took on increasingly distinct patterns. Alongside the presentation of modern scientific conceptions, up-to-date scientific knowledge, and scientific descriptions of technological innovations, the authors of these texts also used demonstrative techniques, appealed directly to the young audience, attached illustrations to their essays, and even integrated scientific knowledge with literary fiction. The novelty of these works lies mainly in the ways their authors combined between various models and used them in new contexts. These authors clearly adopted modern concepts of childhood and education, and made exceeding efforts to adapt scientific texts to the needs of their young audience, as they imagined them to be. A full description of the crystallization of this new genre of Hebrew scientific literature for Jewish children requires future research. This research should explore further the interaction between Hebrew scientific writing for Jewish children and youth and modern literary genres adopted by Hebrew texts' writers at that time, such as the sea voyage narrative and travel stories.⁶⁴ Future research should also relate to the question of the extent and manner in which those texts for the young generation contributed to the development of modern scientific discourse in the Jewish realm.

Notes

1. Menuha Gilboa, *לקסיקון העיתונות העברית במאות השמונה-עשרה והתשע-עשרה* [Hebrew Journals in the 18th and 19th Centuries] (Jerusalem: Bialik Institute, 1992), 404–5.

2. Hillel David HaKohen Triwosch, "על דבר עמנו וספרות תקופתנו" ["About Our People and Our Literature"], *ספר הפסגה* [*The Summit Book*], vol. II (1896), 6.
3. For an example of this, see the humoristic column by Mordecai Manos Monosovich (1857–1928), a headmaster in Lithuania, who described the symptoms of the 'writing disease' that afflicted authors of medicine and geography books: "ספר הרפואות" ["The Book of Medicines"], in *הכרם* [*The Vineyard*], ed. E. Atlas (Warsaw, 1887), 84–7.
4. See Moshe Pelli, *In Search of Genre: Hebrew Enlightenment and Modernity, An Analytical Study of Literary Genres in 18th- and 19th-Century Hebrew Enlightenment* (Lanham: University Press of America, 2005); מכתבי העתים - עיתונות ההשכלה מ-1820 עד 1845: מפתחות מוּעָרִים; (לכתבי העת העבריים של ההשכלה בהולנד, גליציה גרמניה וליטא (תק"פ-תר"י) [*The Journals of the Haskalah 1820 to 1845: Monographs and Annotated Indices to Eight Hebrew Journals in Holland, Galicia, Germany and Lithuania*] (Jerusalem: Magnes Press of the Hebrew University in Jerusalem, 2013); Shmuel Feiner, Zohar Shavit, Natalie Naimark-Goldberg, and Tal Kogman, eds., יצירתה של רפובליקת הספרים: יצירתה של תנועת ההשכלה: יצירתה של תנועת הספרייה של תנועת ההשכלה: יצירתה של רפובליקת הספרים, [The Library of the Haskalah: The Creation of a Modern Republic of Letters in Jewish Society in the German-Speaking Sphere] (Tel Aviv: Am Oved, 2014); Hagit Cohen, חנותו של מוכר הספרים: חנויות ספרים יהודיות במזרח, [At the Bookseller's Shop: The Jewish Book Trade in Eastern Europe at the End of the Nineteenth Century] (Jerusalem: Magnes, 2006), 126–9.
5. For the rise in interest in science and the creation of Hebrew scientific literature in the modern era, see Shmuel Feiner, *The Jewish Enlightenment*, trans. Chaya Naor (Philadelphia, 2004), 139–162; Mordechai Zalkin, "Scientific Literature and Cultural Transformation in Nineteenth Century East European Jewish Society," *Aleph* no. 5 (2005): 249–71; Ya'acov Shavit and Jeudah Reinharz, האל המדעי: מודע פופולרי בעברית במזרח אירופה במחצית השנייה של המאה ה-19; בין ידע ותמונת יקום חדשה [The Scientific God: Popular Science in Hebrew in Eastern Europe in the Second Half of the 19th Century: Between Knowledge and a New Image of the Universe] (Tel Aviv: Hakibbutz Hameuchad, 2011).
6. For a comprehensive description of the evolution of scientific *Maskilic* literature for children and youth in German-speaking sphere between the last third of the eighteenth century and the last third of the nineteenth century, see Tal Kogman, המשכילים במדעים: חינוך יהודי, למדעים במרחב דובר הגרמנית בעת החדשה [The Maskilim in Sciences: Jewish Scientific Education in the German-Speaking Sphere in Modern Times] (Jerusalem: Magnes Press, 2013).
7. In his pioneering works, Uriel Ofek describes the foundations of the Hebrew children's literary library in Central and Eastern Europe during the eighteenth and nineteenth centuries. See Uriel Ofek, ספרות הילדים העברית: ההתחלה, (Tel Aviv: Porter Institute for Poetics and Semiotics, 1979). A thorough research of German-Jewish children's literature was carried out by Zohar Shavit and Hans Heino (in Zusammenarbeit mit Ran Hacoen und Annegret Völpel), *Deutsch-jüdische Kinderund Jugendliteratur: Von der Haskalah bis 1945. Die deutsch-und hebräischsprachigen Schriften des deutschsprachigen Raums. Ein Bibliographisches Handbuch.* (Stuttgart, Germany: Metzler, 1996). Similarly comprehensive research on Eastern European texts for Jewish children has not been carried out yet. I will refer below to several researches that reveal some aspects of this literary genre.
8. For the various attitudes towards sciences in Jewish medieval and early modern Ashkenazi culture, see David Ruderman, *Jewish Thought and Scientific Discovery in Early Modern Europe* (New Haven and London: Yale University Press, 1995); Gad Freudenthal, מקום המדע בקהילות, "ההידוריות בימי הביניים" ["The Place of Sciences in Jewish Communities in the Middle Ages"], *Zemanim* 42 (1992): 40–51.
9. Shavit and Reinharz, *The Scientific God*, 84–6.
10. For the intense translational activity of the *Haskalah*, see Gideon Toury, "An Enlightened Use of Fable: Christian Fürchtegott Gellert in Hebrew Literature," in *Under Construction: Links for the Site of Literary Theory*, eds. Dirk de Geest et al. (Leuven: Leuven University Press, 2000), 197–209; Zohar Shavit, "Cultural Translation: Ideological and Model Adjustment in Translation of Children's Literature," in *Kinder-und Jugendliteraturforschung International: Ansichten und*

- Aussichten*, eds. Gabriele von Glasenapp, Ute Dettmar, and Bernd Dolle-Weinkauff (Frankfurt am Main: Peter Lang, 2014), 31–52; Tal Kogman, “Baruch Lindau’s Rešit Limmudim (1788) and Its German Source,” *Aleph* 9, no. 2 (2009): 277–305.
11. For the different attitudes toward various branches of science in the medieval and early modern period in Jewish society, see Freudenthal, *The Place of Sciences*, 44–5.
 12. See Kogman, *The Maskilim in Sciences*, 5, 104–5, 129, 203.
 13. In a recent research, I have pointed out that there was no actual decline in the number of Hebrew scientific works that were published in the first half of the nineteenth century as compared to the previous period, but that there was rather a change in the way they were perceived, due to a sense that Hebrew scientific writing has no future. See Tal Kogman, “שידח מדעני עברי במגמת שינוי במחצית הראשונה של המאה ה-19 באשכנז – שבילי עולם מבוחר” [“Changes in Hebrew scientific Discourse in the First Half to the 19th Century in Ashkenaz – Shviley Olam by Samson Bloch and Sefer Toledot ha-Are by Joseph Schönhak as Test Cases”], in *The Enlightened at that Time*. University of Central Florida’s Jubilee in honor of Prof. eds. Moshe Pelli, Lev Hakak, Zev Garber and Stephen Katz (Jerusalem: Hakibbutz Hameuchad Publishing House, forthcoming).
 14. Shavit and Reinharz, *The Scientific God*, 43–61; Kogman, *The Maskilim in Sciences*, 55–6, 178.
 15. For the shift of interest in different branches of science in modern Europe, see Fania Oz-Salzberger, “הופעת האוניברסיטה המודרנית בגרמניה במאה הייחוד” [“The Emergence of the Modern University in Eighteenth Century Germany”], in *Education and History: Cultural and Political Contexts*, eds. Rivka Feldhay and Immanuel Etkes (Jerusalem: The Zalman Shazar Center for Jewish History, 1999); Michael Chayut, “היסטוריה של הכימיה” [History of Chemistry] (Tel Aviv: Ministry of Defense Publishing House, 1996); For nineteenth century Jews’ growing interest in technological inventions, see Shavit and Reinharz, *The Scientific God*, 62–9.
 16. Discourses on geography, technology, medicine, among other fields, appeared in various journals, such as *HaMagid*, *HaLevanon*, and *HaAsif*. See Shavit and Reinharz, *The Scientific God*, 63–7. For the centrality of scientific discourse in *HaTzfira*, see Oren Soffer, “אין לפלפל! עיתון” [There is no Place for Pilpull: *HaTzfira* Journal and the Modernization of Sociopolitical Discourse] (Jerusalem: Bialik Institute and the Center for Research on the History and Culture of Polish Jews, Hebrew University, 2007), 64.
 17. Shavit and Reinharz, *The Scientific God*, 84–7; Soffer, *There is No Place for Pilpull*, 30–5; 78–84.
 18. See Ofek, *Hebrew Children’s Literature*, 177–84; 397–421.
 19. These scientific texts were accompanied by religious justifications that stressed the significance of the scientific study of the Holy Scripture and its contribution to Jewish religious belief and to children and youth’s morality (see Kogman, *The Maskilim in Sciences*, 87–137).
 20. The three books that I focused on here were written for Jewish male children and youth. Hebrew texts were traditionally addressed to Jewish boys, as girls almost never studied Hebrew. In my research on Jewish girls literature in the 19th German–Jewish sphere I have found that it was written almost exclusively in German (see Tal Kogman, “הפייתו עז וליבה של האישה כה” [“The Temptation is Great and the Woman’s Heart is so Weak’: Tradition, Education, and Modernization in the Reading Culture of German–Jewish Girls in the Nineteenth Century”], *Innovations in the Study of the History of German Jewry* 6, Leo Baeck Institute Jerusalem (2004): 1–44, Hebrew.). Further research is needed in order to explore the languages used by the authors of Jewish girls’ literature in the nineteenth century in other European territories.
 21. Gezel Kressel, “לקסיקון הספרות העברית בדורות האחרונים” [Lexicon of Hebrew Literature in Recent Generations, Vol. II] (Merhavia: Sifriyat Hapoalim, 1967), 238; Mordechai Zalkin, “בעלות” [A New Dawn: The Jewish Enlightenment in the Russian Empire – Social Aspects] (Jerusalem: Magnes Press of the Hebrew University in Jerusalem, 2000), 69–70.
 22. David Luria, “נמר בשדה” [Omer BaSadeh, Bundle in the Field] (Vilnius: Joseph Reuven Romm Print), 15–6.

23. *Ibid.*, 97–118.
24. Peter Harrison, "Physico-Theology and the Mixed Sciences: The Role of Theology in Early Modern Natural Philosophy," in *The Science of Nature in the Seventeenth Century: Patterns of Change in Early Modern Natural Philosophy*, eds. Peter R. Anstey and John A. Achuster (Dordrecht: Springer, 2005), 165–83. For the use of this model in *Maskilic* texts see Rebecca Wolpe, "The True Way to Loving God: Nature in the Haskala," *The University of Toronto Journal of Jewish Thought* (2013): 1–28; Tal Kogman, "Jewish *Maskilim* Observing Nature – Between Personal Stories and a Literary Model of the Enlightenment," *Zion* 78 (2013): 379–93.
25. Luria, *Bundle in the Field*, 100–2.
26. *Ibid.*, 102.
27. *Ibid.*, 97–98; for the lively discussion on the boundary between humans and animals in the modern era, and especially the question of the relation between humans and apes, see Robert Wolker, "Tyson and Buffon on the Orangutan," *Studies on Voltaire and the Eighteenth Century* CLV (1976): 2307–8; Amnon Yuval, "כזה שונים וכזה דומים: ביפון, רוסו והוויכוח על קופי-העל," "בתוך 'בני אדם וחיות אחרות באספקלריה היסטורית' ["So Different and So Similar: Buffon, Rousseau, and the Controversy over the Super-Apes"], in *Human Beings and Other Animals in Historical Perspective*, eds. Benjamin Arbel, Joseph Terkel, and Sophia Menashe (Jerusalem: Carmel, 2007), 305–31; for more on this subject, see Iris Idelson-Shein, *Difference of a Different Kind: Jewish Constructions of Race During the Long Eighteenth Century* (Philadelphia: University of Pennsylvania, 2014).
28. Luria, *Bundle in the Field*, 113–5. Descriptions of human-like apes and the blurring of the distinction between them and humans appeared in some *Haskalah* texts. Cf., Iris Idelson-Shein, "'ברוך משנה הבריות: דמותו ושימושו של 'האקזוטי' בנאורות היהודית" ["Blessed is the Changer of Beings': Uses and Representations of 'the Exotic' in the Jewish Enlightenment"] (PhD diss., Tel Aviv University, 2010), 83–5; 312–4.
29. Luria, *Bundle in the Field*, 116–8.
30. Luria, *Bundle in the Field*, 115–6.
31. The use of fables in Jewish children's texts commenced already in the late eighteenth century, as did the adaptation of fables while relying on non-Jewish sources. Cf., Moshe Pelli, "The Genre of the Fable in *Haskalah* Literature in Germany," in *Preussens Himmel Breitet Seine Sterne: Beiträge zur Kultur- Politik- Und Geistesgeschichte der Neuzeit: Festschrift zum 60. Geburtstag von Julius H. Schoeps*, eds. Willi Jasper and Joachim H. Knoll (Hildesheim: Georg Olms Verlag, 2002), 229–57; Tourny, "An Enlightened Use of Fable".
32. Theodor Brüggemann und Hans-Heino Ewers, *Handbuch zur Kinder- und Jugendliteratur: Von 1750 bis 1800* (Stuttgart: Metzler, 1982), 34; Kogman, *The Maskilim in Sciences*, 118–27, 155–6.
33. For more on the lack of literary fiction in *Haskalah* Hebrew literature, see Zohar Shavit, "Literary Interference between German and Jewish-Hebrew Children's Literature during the Enlightenment: The Case of Campe," in *Jewish Studies in a New Europe. Proceedings of the 5th Congress of Jewish Studies in Copenhagen 1994 under the auspices of the European Association for Jewish Studies*, eds. Ulf Haxen, Hanne Trautner-Kromann, and Karen Lisa Goldschmidt Salamon (Copenhagen: C.A. Reitzel, 1998), 791–2; Kogman, *The Maskilim in Sciences*, 72–6; Kogman, "Baruch Lindau's Rešit Limmudim," 299–301. A few examples of the blend of fiction elements and scientific components in 19th Hebrew translations for children books are described in Iris Idelson-Shein, *Difference of a Different Kind*, 151–78. The weaving of scientific knowledge into the literary fiction model became common in German language readers for Jewish children that were published from the first decades of the nineteenth century and on. See Kogman, *The Maskilim in Sciences*, 178–99.
34. Brüggemann und Ewers, *Handbuch zur Kinder- und Jugendliteratur*, 32–4; Kogman, *The Maskilim in Sciences*, 18.
35. For more on geography in *Maskilic* books, see Nancy B. Sinkoff, "Tradition and Transition: Mendel Lefin of Satanow and the Beginnings of the Jewish Enlightenment in Eastern Europe, 1749–826" (PhD diss., Columbia University, 2006), 164–5; 195–6, no. 106; Wolpe, *The True Way to Loving God*, (2013), 11. On contemporary travel literature for the Jewish audience, see Moshe Pelli, "The Literary Genre of the Travelogue in Hebrew *Haskalah* Literature: Shmuel Romanelli's Masa

BaRav," *Modern Judaism* 11, no. 2 (1991), 241–60; Ken Frieden, "Neglected Origins of Modern Hebrew Prose: Hasidic and Maskilic Travel Narratives," *AJS Review* 33, no. 1 (2009): 3–43.

For an analysis of the Hebrew translations of geographical books written by the German-Christian children's author Joachim Heinrich Campe, see Zohar Shavit, "Literary Interference between German and Jewish-Hebrew Children's Literature during the Enlightenment: The Case of Campe," *Poetics Today (Children's Literature)* 13, no. 1 (1992): 41–61; for the didactic values ascribed by *Maskilim* to travel books, see also Idelson-Shein, *Difference of a Different Kind*, 151–154.

36. For more on the development in Europe of the literary genre of travels to *Eretz Israel*, see Yehoshua Ben-Arieh, "Nineteenth-century Historical Geographies of the Holy Land," *Journal of Historical Geography* 15, no. 1 (1989): 70. For the development of this genre within the *Haskalah*, see Tova Cohen, *מחלום למציאות: ארץ-ישראל בספרות ההשכלה* [From Dream to Reality: Descriptions of Eretz Israel in Haskalah Literature] (Ramat Gan, Israel: Bar Ilan Publishing Company, 1982).
37. Cohen, *From Dream to Reality*, 61–2; Kogman, *The Maskilim in Sciences*, 165–6.
38. Menahem M. Breslau, *ספר גלילות ארץ ישראל* [Sefer Glilot Eretz Israel] (Breslau: Leib Sulzbach, 1819), 2–22, last page (unnumbered).
39. Kressel, *Lexicon of Hebrew Literature* II, 890–2; Shmuel Feiner, *השכלה והיסטוריה: תולדותיה של הכרת-עבר יהודית מודרנית* [Haskalah and History: The Emergence of a Modern Jewish Awareness of the Past] (Jerusalem: The Zalman Shazar Center for Jewish History, 1995), 339–42.
40. For comprehensive descriptions, see Avraham Sasson, *סופרים וחוקרים עבריים במאה התשע-עשרה ותרומתם למחקר הגיאוגרפי-היסטורי של ארץ-ישראל במאה התשע-עשרה* [Hebrew Authors and Scholars in the Nineteenth Century and their Contribution to the Historical-Geographical Study of the Land of Israel in the Nineteenth Century] (PhD diss., Bar-Ilan University, 1998), 173–212; Cohen, *From Dream to Reality*, 230–55.
41. Schulman, *פתח דבר* ["Introduction,"] in *Sefer Halichot Kedem* (Vilnius: Re'em, 1854), III–VIII.
42. Cohen, *From Dream to Reality*, 241–9.
43. Schulman, *פתח דבר* ["Introduction,"] in *Šulamit* (Vilnius: Re'em, 1855), XV–XVI.
44. David Luria. "דברי דוד" ["The Words of David,"] in *Šulamit* (Vilnius: Re'em, 1855), III–VI.
45. *Ibid.*, III.
46. See, respectively, K. Schulman, *Sefer Hilchot Kedem*. vol. I, 28–29, vol. II, 71–6; K. Schulman, *Shulamit*, 2, 5, 9.
47. Cohen, *From Dream to Reality*, 242.
48. For more on this, see Sasson, *Hebrew Authors and Scholars in the Nineteenth Century*, 181–2; Feiner, *Haskalah and History*, 342–3; Cohen, *From Dream to Reality*, 233–4.
49. Schulman, *Sefer Halichot Kedem*, 9–10.
50. *Ibid.*, 10–1.
51. Schulman, *Sefer Halichot Kedem*, VII–XI.
52. Cf., the scene in which the young Buki Ben Yagli teaches the rest of the Torah study-hall members what a telegraph is, in a text from *HaTz'ira*, cited in Soffer, *There is no Place for Pilpul!*, 61.
53. Isaac Weinert, *ריצ'ה* [*HaTz'ir*] 1 (1861), no.1, 2. The journal's closure a mere few months after its inauguration may have been due to financial difficulties. While Weinert mentioned the demand for his paper, he also asked for assistance from preliminary subscribers. See *Ibid.*, no. 2 (1861): 8 (should be 10).
54. *Ibid.*, no. 17 (1861): 65. (Emphases in original text).
55. Indeed, the editor addressed children and youth directly on occasion. Cf., *ibid.*, no. 16 (1861): 63 (should be 65). Also, the *HaTz'ir* expressed the youth's voice, see for example in an article written by a boy: *בקורת-מליצי הזמן* "Critics of the *Melitzim* of the time" signed by "a boy from Brodi," *ibid.*, no. 7 (1861): 27.
56. *Ibid.*, no. 1 (1861): 3 (should be 5).
57. *Ibid.*, no. 13 (1861): 54.
58. *Ibid.*, no. 2 (1861): 7 (should be 9).
59. *Ibid.*, no. 3 (1861): 10.
60. *Ibid.*, no. 17 (1861): 67.

61. Soffer, *There is no Place for Pilpull*, 56.
62. *Ibid.*, no. 19 (1862): 76.
63. On the lack of illustrations in Jewish literature for children at the time, see Kogman, "Baruch Lindau's *Rešit Limmudim*," 297–9.
64. Rebecca Wolpe, "The Sea and Sea Voyage in *Maskilic* Literature" (PhD diss., Hebrew University, 2011); Ken Frieden, *Travels in Translation: Sea Tales at the Source of Jewish Fiction* (Syracuse, New York: Syracuse University Press, 2016).

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