

A pair of pericopes in the *View Parallel Pericope* (ordered by Greek or by Arabic) can be edited by selecting the *Pericope Manager* menu item in the upper part of the web page.

As shown in Fig. 9 (on the left), the pericopes at stake are highlighted in orange. They are composed of the previous and the following pericopes (if any) highlighted in different colors. A brief note about the ordering of the pericopes: in this view, the pericopes are ordered following the flow of words in their respective text; hence, no direct linking between pericopes is shown (except for the two pericopes highlighted in orange).

In fact, the editing of a boundary means changing the color (orange vs. another color) of the boundary word of the pericope: the color of the word added to the pericope is set to light blue. Just below the Greek text and the Arabic one, there is a button labeled with *Add*: by clicking this button, the light blue highlighted tokens will be added to the orange highlighted pericope. No additional actions are required to save these modifications. The new pericopes are stored in the database and the modifications are immediately shown.

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TOWARDS A TRANSLATION PLATFORM AS A BRIDGE BETWEEN ANCIENT AND MODERN LANGUAGES

PART I. THE BABYLONIAN TALMUD:
A WEB OF KNOWLEDGE BETWEEN PAST AND PRESENT

1. RESEARCH INFRASTRUCTURES AND THE PROBLEM OF TRANSLATION

In the past decades, scholars have finally started to grasp the remarkable benefits brought by the application of computational tools to the research in the field of Humanities. National and international academic entities as well as individual scholars have been orienting more and more their research towards a digital and infrastructural perspective.¹ In this context, support systems for the translation and analysis of ancient texts have shown to have a considerable potential for the research infrastructures for the Humanities. The millenary Western and Near-Eastern cultural heritage that concurs to define our modern identity has been transmitted, in fact, in a wide range of languages, most of which nowadays are intelligible only to a restrict number of highly specialized scholars. Updated translations in modern languages represent, thus, the precondition for enabling different research entities, individual scholars from different backgrounds and even a larger non-academic public to approach the ancient textual corpora, with which our History was written, and to fully understand the literary, philosophical, religious, socio-political and scientific concepts embedded in them. Although the importance of a computational translation platform for treating ancient languages has been largely acknowledged, only few scientific research projects have been devoted

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¹ By the expressions "research infrastructure" and "infrastructural perspective," here and throughout our contribution, we refer to the definition given by Bozzi-Marchi in the precedent article in this study, p. 27 sgg. Our article on the support systems for the translation of the *Babylonian Talmud* is an attempt to offer a practical application to some of the fundamental methodological considerations offered by A. Bozzi and S. Marchi and to add some insight on specific aspects of research infrastructures related to the translation of ancient texts.

ed to this specific topic and, particularly, to the development of advanced programs capable of supporting the analysis and translation into modern languages of complex or isolated ancient textual corpora.² This unfortunate gap in a research field that has showed an overall growth in the last years can be explained for the most part by the methodological hurdles pertaining to the field of translation itself.

The translation of a given text, i.e. the operation of transferring a written message from one language to another, involves always two main problems. (a.) First, each translation, even the most literal one, represents a distortion of the original text.³ (b.) Second, in most of the cases, a literal translation, i.e. word by word, will not suffice to convey the full meaning embedded in the original text, especially if the translator and the reader are not acquainted to the specific context and culture within which the text was composed. Whether it is culture that shapes language or the other way around, language and culture cannot be separated and, thus, a text in a certain language cannot be simply transposed in another language without a mediation between the two cultures. Particularly, the translation of concepts (e.g. λόγος), metaphors, and idioms (e.g. *Sitz im Leben*) from one language to another might result in loss of meaning;⁴ similar difficulties can be found in the translation of particular morphological and syntactical structures, e.g. when the verbal system does not correspond in the two languages. A good translation, then, is proportional to the translator's capacities of (1.) understanding the meaning of the text in the original language and (2.) reproducing that specific meaning in the target language. In this way, the reader is enabled to enjoy a text that adheres to the original one in every detail and, at the same time, is provided with all the necessary tools to understand a text that is distant from him/her for different reasons (language, epoch, culture, etc.).

² For updated references to research projects of this kind, see the precedent contribution by A. Bozzi, see above, pp. 29-30, n. 5.

³ In his study, Eugene Nida writes: "Since no two languages are identical, there can be no absolute correspondence between languages. Hence, there can be no fully exact translations. The total impact of a translation may be reasonably close to the original, but there can be no identity in detail. [...] One must not imagine that the process of translation can avoid a certain degree of interpretation by the translator", see, EUGENE A. NIDA, *Towards a Science of Translating*, Leiden, Brill 1964, p. 156.

⁴ The German expression *Sitz im Leben* would have little meaning if translated in English literally; it can be fully comprehended only when resolved in a periphrasis referring to its sociological meaning or related to the historical context in which it was created. Similarly, there is no equivalent word to the Greek λόγος in modern languages; when translating this term, thus, we would expect each time different translations according to the general and specific context in which λόγος occurs in the original text (author, genre, epoch, geographical area). Idiomatic expressions of this kind bear such a pregnant meaning that, in most of the cases, they are not translated and left in the original language.

The problems concerning translation, discussed above, grow exponentially with the antiquity and complexity of the text translated. It can be quite a difficult task, in fact, to make available ancient textual corpora written in dead languages to a modern public, especially when the idioms, in which they are composed, are scarcely, or not at all, attested outside the given corpus. The translation of ancient texts requires translators deaining a wide linguistic and historical competence. Yet even highly trained scholars can fail to grasp the real meaning lying underneath a text, since they have a millennial cultural gap with its author/s. Besides the important issues of preserving the original meaning of the text and making it understandable to the target language readers, translators of ancient texts generally face three other main hurdles. (c.) The first is a philological problem and concerns the manuscript transmission of a given text or textual corpus. Before translating an ancient text, which had been transmitted in copies during the millennia or the centuries, it is mandatory to establish its *recensio* and to adopt a specific methodological strategy for its edition (diplomatic, eclectic or critical edition) and for the subsequent translation.⁵ This part of the research can be very painful especially when we discover a new text preserved on a damaged surface. In fact, the *lacunae* in a fragmented text inevitably create difficulties also for the translation, interrupting the textual flow and compelling the editor/translator to 'reconstruct' the missing part and, thus, interpret the text.⁶ (d.) The second problem concerns the content complexity often exhibited by ancient textual corpora. When dealing with very different genres and topics within the same textual unit, translators are required to span from very different fields of knowledge and adapt their linguistic register to the various subjects discussed in the text. In other words, they are requested to go much further than a translation conceived in its strict meaning. If we consider the variety of literary styles and genres characterizing the Sacred Scripture, or the exceptional range of different topics found in Ibn Khaldun's *Muqaddimah*, just to give two of the many possible examples, we easily understand that a good

⁵ The process of copying and recopying a text clearly brings to the progressive introduction into the text of variant readings, caused by different factors. As copies are made of copies of manuscripts, the amount of textual errors keeps increasing.

⁶ Almost every philologist or historian has once experimented the frustration of finding a hole or a damaged part right in the middle of a key sentence. Working on the magical fragments of the Cairo Genizah, i.e. medieval Jewish texts that had been thrown in the Ben Ezra Synagogue in Cairo from the ninth century C.E. onwards, I find myself constantly facing this problem, as most of the researchers working in this field. On the discovery of the Cairo Genizah and the treasure of Genizah fragments, see STEFAN C. REIF, *A Jewish Archive from Old Cairo: The History of Cambridge University's Genizah Collection*, Richmond Surrey, Curzon 2000; STEFAN C. REIF – SHUAMIT REIF, (eds.), *The Cambridge Genizah Collections: Their Contents and Significance*, Cambridge University Library Genizah Series 1, Cambridge, Cambridge University Press 2002.

edition and translation can be achieved only when scholars from different fields collaborate together in a collegial environment.⁷ (e.) The third problem is, to some extent, related to the previous one and concerns the variegated audience that might be interested in the translation of ancient textual corpora. Several ancient texts bear a great cultural value and, as noted, can offer interesting insight for different academic disciplines (history of religion, social history, medical history, jurisprudence, and so on). In addition, even a larger less specialized public might enjoy the translation of the texts that belonged to their heritage, or feel the need to discover ancient and foreign cultures by approaching their writings. Therefore, when translating ancient documents, translators shall have in mind the audience they are translating for and calibrate the target language accordingly to it. If the translation is not only meant for an academic public, translators will have to enhance the translation with further notes and comments to enable readers to grasp a cultural meaning that would be lost, if conveyed only with a literal translation.

In our view, the edition and translation of ancient textual corpora of high cultural value represent one of the most outstanding cases where the Humanities would benefit the most from a research infrastructure. A research platform endowed with advanced computational tools and with an efficient support system for translation would be a great aid for scholars dealing with texts written in ancient and scarcely attested languages. A research infrastructure that is (a.) user-friendly; (b.) compliant to European standards and (c.) capable of offering a highly specialized annotation and marking of the original and target text represents, in our view, the most incisive choice for accomplishing a scientifically valuable translation of ancient textual corpora. A platform for the edition and translation of ancient texts might be of great value in order to stimulate further academic research in different fields and to spread important knowledge in the non-academic world through the Web and software applications. In a not too distant future we may also imagine to integrate a platform for translation with system developed for lost language decipherment (e.g., for Etruscan or for the Rohonc codex).⁸

⁷ For an English translation of Ibn Khaldun's *Muqaddimah*, see, FRANZ ROSENTHAL (ed. and tr.), *The Muqaddimah*, I-III, Princeton, Princeton University Press 1958 and 1967.

⁸ A group of scholars from MIT has recently presented a promising model for the automatic decipherment of lost languages. They tested the efficiency of their model on Ugaritic, a Semitic language particularly close to Biblical Hebrew and manually deciphered in 1932, see BENJAMIN SANDER-REICHA BARZILAY – KEVIN KNIGHT, *A Statistical Model for Lost Language Decipherment*, «Proceedings of the Association for Computational Linguistics 2010, 48th Annual Meeting of the Association for Computational Linguistics», Uppsala, July 11-16 2010, pp. 1048-1057. A variation of this model might increase the versatility of statistical translation systems for languages that do not have a large corpus of translated literature, by helping to build lexicons for these languages, see SUJITH RAVI –

In the present contribution, we would like to present the research infrastructure of the Talmud Translation Project, which is endowed with a support system for translation and well exemplifies the methodological problems and research strategies briefly outlined above and discussed in length in the precedent article by Bozzi-Marchi. Before discussing the novelty of the Talmud Translation Project and its future possible application to the translation of other ancient textual corpora, we shall introduce the Babylonian Talmud itself from a historical, philological and linguistic point of view.

2. RICHNESS AND COMPLEXITY OF THE BABYLONIAN TALMUD

Alongside the Bible, the *Babylonian Talmud* is the Jewish text that has mostly influenced Jewish life and thought over the last two millennia. The *Babylonian Talmud*, known also as *Bavli*,⁹ is the most important corpus of Jewish religious and civil law. Believed to gather the Oral Law (*Torah she-be-al-peh*) revealed on Sinai by God, the *Bavli* is a comprehensive literary creation, which went through an intricate process of oral and written transmission, was expanded in every generations before its final redaction, and has been the object of explanatory commentaries and reflections from the Medieval Era onwards. In its long history of formulation, interpretation, transmission and study, the *Babylonian Talmud* reflects inner developments within Jewish tradition as well as the interactions between Judaism and the cultures with which the Jews came into contact.¹⁰ Written in Rabbinic Hebrew and Jewish Babylonian Aramaic and extremely rich in foreign loanwords, the *Bavli* is an exceptional document also from a linguistic point of view.¹¹

2.1. History and Transmission of the Babylonian Talmud

The history of the *Babylonian Talmud* is deeply related to another text, the *Mishnah*, which represents the oldest postbiblical authoritative Jewish corpus. The *Mishnah* was compiled in Israel in the first two centuries CE

KEVIN KNIGHT, *Deciphering Foreign Languages*, «Proceedings of the Association for Computational Linguistics 2011, 49th Annual Meeting of the Association for Computational Linguistics. Human Language Technologies», Portland, 19-24 June 2011, pp. 12-21.

⁹ Throughout the paper, I use the term 'Bavli' or 'Talmud' to refer to the *Babylonian Talmud*. I use the term 'Palestinian Talmud' when referring to the Talmud written in late antique Israel.

¹⁰ For a general overview on Rabbinic literature and the *Babylonian Talmud*, see HERMANN L. STRACK – GÜNTER STRIMBERGER, *Introduction to Talmud and Mishnah* (translated by M. Bockmuehl), Minneapolis, Fortress 1996², particularly pp. 190-225.

¹¹ For an introduction on the languages of the Talmud, see *ibidem*, pp. 101-108.

by different generations of scholars (*Tannaim*) and its final redaction is attributed to Rabbi Judah ha-Nasi (beginning of the third century CE).¹² The *Mishnah* collects oral laws, which supplement the Written Law (*Pentateuch*), preserving ancient legal (*Halakic*) and narrative (*Aggadic*) material, part of which transmitted orally at least from the fifth century BCE onwards.¹³ The *Mishnah* is organized in six 'orders' (*Sedarim*) corresponding to different categories of Jewish law, with a total of 63 tractates (*Massekhtaot*) and 525 chapters.¹⁴ For each subject, the *Mishnah* presents the different opinions in matters of law without giving a final ruling. In late antique Palestine and Babylonia, from the end of the third century, another generation of scholars (*Amoraim*) began to discuss and rule on the contents of the *Mishnah*, leading to the composition of two distinct, albeit deeply related, anthological corpora of teachings and commentaries of the Oral Law, respectively the *Palestinian Talmud* and the *Babylonian Talmud*.¹⁵ With minor variants, both *Talmuds* follow the orders and tractates of the *Mishnah*.¹⁶

The *Babylonian Talmud* was compiled in late antique Babylonia in the Talmudic academies of Sura, Pumbedita, Nehardea and Mahuza (contemporary Iraq). It collects heterogeneous sources spanning from the second to the sixth centuries.¹⁷ According to the *Bavli* itself (*bBaba Me'asia* 86a) and to medieval sources, the end of the redaction process is attributed to Rav Ashi and Ravina (the end of the fifth century). Nevertheless, scholars have shown that the *Babylonian Talmud* continued to be edited after this date and maintained a fluid form at least until the sixth century.¹⁸ Since the Medieval Era,

¹² The Hebrew term 'mishnah' literary means 'repetition' and generally indicates the 'doctrine'. According to the Jewish tradition, both the Written Law (*Torah she-be-kav*) and the Oral Law (*Torah she-be-peh*) were revealed by God to Moses on Sinai.

¹⁴ The six orders of the *Mishnah* and, later, of the *Babylonian Talmud*, are: 'Seeds' (*Ze'rainim*), 'Festivals' (*Moadot*), 'Women' (*Nashim*), 'Damages' (*Neziqin*), 'Holy Things' (*Kodashim*) and 'Purities' (*Tebhorot*).

¹⁵ The term 'talmud' derives from the Hebrew root **lmd*, which means, 'to learn', 'to study', 'to teach'.

¹⁶ Some of the structural differences in the orders and tractates of the *Mishnah* and the *Talmuds* attest to important changes within Jewish society. For instance, despite the *Palestinian Talmud*, the *Babylonian Talmud* discusses only the tractate *Berakhot* ('Benedictions') of the order *Ze'rainim* ('Seeds'), probably due to the fact that agricultural laws concern only the Land of Israel and, thus, were not relevant in Babylonia, where the *Babylonian Talmud* was compiled.

¹⁷ Most of the rabbis quoted in the *Babylonian Talmud* lived between the 20 BCE and the 450 CE. On the later layer of the *Talmud* (*Stammaitic*), see SHAWMA FRIEDMAN, *A Critical Study of Yerushalmi X with a Methodological Introduction*, in HAIM Z. DIMATROVSKY (ed.), «Texts and Studies, Analecta Judaica 13, New York, Jewish Theological Seminary, 1977, pp. 275-441 [Heb.]; DAVID W. HALLIN, *The formation of the Babylonian Talmud*, (Transl. by Jeffrey Rubenstein), New York, Oxford University Press 2013. For a new perspective on the composition of the *Babylonian Talmud*, see MOULIE VIDAS, *Tradition and the Formation of the Talmud*, Princeton, Princeton University Press 2014.

the *Babylonian Talmud* has received much more attention than the *Palestinian Talmud* from commentators and scholars, becoming the most important legal source for Orthodox Judaism and the foundation for all the successive developments of *Halakha* and *Aggadah*. The *Bavli* covers all the six orders of the *Mishnah*, but discusses only 36 tractates.¹⁹

The history of transmission of the *Babylonian Talmud* is very complex, with several repercussions also on its edition and translation. While the *Talmud* had been studied orally in the Babylonian Talmudic academies during all the second half of the first millennium CE, later on the modality of learning the Oral Law was radically changed by historical and political upheavals. From the beginning of the second millennium, the *Babylonian Talmud* started to be transmitted primarily in a written form. Before its *editio princeps* by Daniel Bomberg in Venice in 1520-23, the *Talmud* had been copied and recopied thousands of times, accumulating innumerable textual errors.²⁰ Clearly, Bomberg did not use the best available manuscripts for his edition, which, with little alterations, became the basis for later editions. Therefore, the standard and authoritative Talmudic text used nowadays, which corresponds to the 'Vilna Shas' first printed in Vilna at the end of the nineteenth century, by no means corresponds to the text orally transmitted in late antique Babylonia and arguably contains many more textual errors than the earliest manuscripts available to us nowadays.²¹

¹⁹ From the order *Ze'rainim* ('Seeds') the *Babylonian Talmud* discusses only the tractate *Berakhot* ('Benedictions'), while from the order *Tebhorot* ('Pure Things') comments only the laws on the woman's menstrual period in the tractate *Niddah* ('Menstruating Woman').

²⁰ Before the *editio princeps*, isolated tractates of the *Talmud* were first printed in Spain (Gualajara or Toledo), Portugal and Italy (Soncino and Pesaro). The standard *Talmud* page, which has portions of *Mishnah* followed by the *Gemara* in the middle and in the inner and outer margins the commentaries of Rashi and of the Tosaphists respectively, was first shaped by the Soncino family. With little change, all the editions of the *Babylonian Talmud* follow the model fashioned in the Soncino edition of *Yebamot*, printed in 1508 in Pesaro. The best work on the history of printing of the *Talmud* remains, RAPPAPORT, N. RABINOWICZ, *On the Printing of the Talmud*, Jerusalem, Mossad Ha-Rav Kuk 1952 [Heb.]. On the early printings, see MARVIN J. HEILNER, *Earliest Printings of the Talmud*, in Sharon Liberman Mintz and Gabriel M. Goldstein (eds.), «Printing the Talmud. From Bomberg to Schottenstein», New York, Yeshiva University Museum 2005, pp. 61-78.

²¹ The Vilna edition was published by the Widow and Brothers Romm in 1880-86, see MICHAEL STANISLAWSKI, *The 'Vilna Shas' and East European Jewry*, in Sharon Liberman Mintz - GABRIEL M. GOLDSTEIN (eds.), «Printing the Talmud. From Bomberg to Schottenstein», New York, Yeshiva University Museum 2005, pp. 97-102. A large amount of manuscripts of the *Babylonian Talmud* – or more likely, of some of its sections – have been preserved and are particularly useful for Talmudic philology; for instance, Cod. Hebr. 95, dated to the 1342 and today preserved in the Bayerische Staatsbibliothek in Munich is particularly relevant, transmitting the text of the *Babylonian Talmud* almost entirely. Besides medieval manuscripts, there are also quotations from the *Talmud* in other texts – such as in the late antique corpus of the *Babylonian* incantation bowls – and the priceless collection of fragments from the Cairo Geniza, the earliest of which are dated to the ninth century. This manuscript material is of great value for Talmudic scholars attempting to restore, at least in part, the original text of the *Talmud*.

Within our project, the Italian Rabbinic College decided to use the Vilna edition – studied in *Yeshivot* (Talmudic academies) all over the world – also for the Italian translation of the *Babylonian Talmud*. This choice adheres to the general purpose of the project to produce a translation aimed for educational study within rabbinic colleges and schools and for the divulgation of this text among Italian speakers. Although the Vilna edition represents a valuable starting point for studying the *Babylonian Talmud*, any philological, historical, and philosophical analysis carried out on this textual corpus for academic purposes would require a thorough examination of the relevant manuscripts and earliest printed editions. Particularly, in the context of the production of the critical edition of specific tractates of the *Babylonian Talmud* – or, more ambitiously, of the whole corpus – it would be necessary to manage an extremely intricate critical apparatus. Although the research infrastructure originally developed for the Talmud Translation Project does not include the management of the manuscript *recensio* of the *Babylonian Talmud*, it can be easily upgraded with specific applications for this task, such as those employed in Greek into Arabic and described in the previous contribution by Bozzi-Marchi. The possibility of producing an advanced computerized synoptic presentation of all the relevant *lectiones* would offer a great advantage for Talmudic philology, offering a valuable alternative to the traditional apparatus.

2.2. Languages and Style of the Babylonian Talmud

Beside the historical and philological complexity of the *Babylonian Talmud*, we shall underline the linguistic richness presented by this textual corpus, since it inevitably affects any attempt of translation and any research infrastructure focusing on this text. In its extant form, the *Babylonian Talmud* attests to a variety of different languages and idioms. We can roughly argue that the portions of *Mishnah* in the *Bavli* are written in Mishnaic Hebrew, while the *Gemarah*, i.e. the later comments on the *Mishnah*, in Jewish Babylonian Aramaic. Mishnaic Hebrew, known also as Rabbinic Hebrew, represents a specific development of the Hebrew language. Mishnaic Hebrew was spoken in Greco-Roman Palestine and, after the destruction of the Temple, the rabbis began to employ it for the composition of their literature.²² The lexicon of Mishnaic Hebrew is formed by Biblical vocab-

ulary, some of which underwent semantic or morphological changes, and incorporates words from both Semitic (Akkadian and, particularly, Aramaic) and non-Semitic languages (Persian, Greek, and Latin).²³ Most scholars acknowledge two layers of Mishnaic Hebrew: (a.) Tannaitic Hebrew used in the Tannaitic period (roughly, 1-220 CE) – both spoken and written – in all domains of life, and (b.) Amoraic Hebrew used in the Amoraic period (approximately, 220-500 CE), when this language became a written language only and its spoken form was replaced by Aramaic.²⁴ Within the *Babylonian Talmud*, the older layer, Tannaitic Hebrew, is acknowledged in the portions from the *Mishnah*, in quotations from the *Tosefta*, another Tannaitic composition, and in the *Baraitot*, i.e. external Tannaitic material not incorporated in the canonical *Mishnah*; the later stratum, Amoraic Hebrew, is attested in the discussions of the *Amoraim*. The most extensive part of the *Bavli*, to in the discussions of the *Amoraim*. The most extensive part of the *Bavli*, in the dialect close to Mandaeic and attested to, besides the Talmud, in the corpus of Babylonian incantation bowls. In addition, the *Babylonian Talmud* presents a high number of citations from the Bible, thus, written in Biblical Hebrew, a few quotations from other rabbinic writings in Palestinian Aramaic (also called Galilean Aramaic), and several foreign loanwords mainly from ancient Greek and Persian, but also from Akkadian, Latin, Syriac and Arabic.²⁵

population could not understand the Scripture in its original language without the aid of translations (*targumim*): "They read from the Book of the Law of God, making it clear and giving the meaning so that the people understood what was being read" (Nehm. 8:8). Although the spoken dialect had existed alongside the literary language, it developed according to its own pattern. With minor variants, this dialect is attested to in the Copper Scroll (first century CE) and in the letters of Bar Kokhba (132-135 CE), besides rabbinic literature; part of the Dead Sea Scrolls and the Hebrew version of Ben Sirah also present influences from Mishnaic Hebrew.

²³ For instance, *zaz* (זז), 'a monetary unit', from Akkadian *zazu*; *vered* (וּרֵד), 'rose', from Persian *varda*.

²⁴ See EDUARD Y. KUTCHER, *Some problems of the lexicography of Mishnaic Hebrew*, in EDUARD Y. KUTSCHER (ed.), *Archiv der Neu-Ditionary of Rabbinical Literature*, Ramat Gan, Bar Ilan University 1972, vol. I, pp. 29-82 [Heb.]. The division between Tannaitic and Amoraic Hebrew is much more blurred. In particular, it shall be taken into account that Aramaic was spoken in Palestine already in the Tannaitic period and that, in the Amoraic period, Talmudic material was still transmitted orally and not only in writing. Moreover, the final redaction of the Talmud caused a linguistic uniformity between the two dialects. For an overview on these issues, see YOGHANAN BREUER, *Amoraic Hebrew*, in GEOFFREY KHAN (ed.), *Encyclopaedia of Hebrew Language and Linguistics*, I-IV, Brill Online Edition, http://referenceworks.brillonline.com/entries/encyclopedia-of-hebrew-language-and-linguistics/amoraiic-hebrew-EHLL_COM_000001582s.num=8 (last entry: October 2014).

²⁵ See PAUL S.J. MANKOWSKI, *Akkadian Loanwords*, SHAI HEJMAN, *Greek Loanwords*, CYRIL ASLANOV, *Latin Influence on Hebrew*, THAMAR E. GINDIN, *Persian Loanwords*, and HASHEB SHEHADI, *Arabic Loanwords*, in GEOFFREY KHAN (ed.), *Encyclopaedia of Hebrew Language and Linguistics*, 4 vols., Brill Online Edition, <http://referenceworks.brillonline.com/browse/encyclopedia-of-hebrew-language-and-linguistics> (last entry: October 2014).

²² For a long period classical Biblical Hebrew coexisted in Palestine with a dialect variant. Sources from the Second Temple Period onwards suggest, in fact, that classical Biblical Hebrew represented the written language, understood only by erudite people. According to the *Book of Nehemiah*, already at the time of the narrated events (sixth-fifth century BCE), the majority of the

The linguistic complexity of the *Bavli* is reflected by an intricate structure and very peculiar literary style. The Talmud, in fact, presents thousands of stories and dialogues concerning all aspects of life, narrated through a sort of stream-of-consciousness. These stories are generally very short, but can extend also for some pages. In several instances, the dialogues between the rabbis are incongruent from a temporal and geographical perspective. As noted, the *Gemarah* develops in the form of a dialectical exchange between numerous rabbinic authorities belonging to different generations, epochs (*Tannaim* and *Amoraim*), and geographical areas (Graeco-Roman Palestine and Sassanid Babylonia). The thorough exegetical work on the *Mishnah* operated in the *Gemarah* implies discussing the positions and lexicon adopted by the *Tannaim*, speculating on the principles behind the *Mishnah's* case laws, linking the different rules stated in the *Tannaitic* text to the Bible, and harmonizing the contradictions occurring in the *Mishnah*. The *sugya'* represents the basic literary unit of the *Gemarah*, which displays the relevant textual material in a succession of question and answers. To each *mishnah* ['statement'/'law' from the *Mishnah*] corresponds one or more *sugyot*. Although constructed according to specific literary conventions, the succession of *sugyot* in the *Babylonian Talmud* gives the perception of a fluent and live debate between rabbinic authorities. The *Babylonian Talmud* certainly represents the commentary of the *Mishnah*, but it is also a reflective literary creation. Together the *Mishnah* and the *Gemarah* attest to an extremely vast body of legal and narrative knowledge, which was continuously transmitted and re-interpreted in late antique Judaism.

To a certain extent, the *Babylonian Talmud* can be considered an intricate web of different textual material. The *Bavli*, in fact, is studded with quotations of portions from the *Mishnah*, long *Amoraic* discussions, innumerable Biblical quotations, periscopes of *Tannaitic* statements, dictums of individual *Amoraim* quoted by name and later anonymous connective passages. Besides the numerous quotations from other written and oral sources, the *Babylonian Talmud* is often characterized by repetitive and formulaic language.²⁶ In several passages based on threefold repetition, an event or a pattern in a dialogue is repeated three times with almost no changes.²⁷ In some instances, the same

²⁶ For instance, note the high recurrence of the following formulae: "אין וי" ("And if you will say"), which is a formula generally used to introduce other variants and authorities: "אמר רבי" ("Another version"); "אמר רבי" ("We then raised the question"); "אמר רבי" ("We have opposed [another teaching to the one which has been quoted]"); "אמר רבי" ("We have learned"); "We have received by tradition"; which represents the conventional formula to introduce *Mishnahic* passages: "אמר רבי" ("Whence have we it?"), which represents the conventional formula to introduce an inquiry concerning the Biblical basis of a saying.

²⁷ This is a typical feature of folkloric tales and, in general, oral genres, see JEFFREY L. RUBENSTEIN, *Stories of the Babylonian Talmud*, Baltimore, The John Hopkins University Press 2010, p. 18.

passage is even repeated in a different tractate. In general, a certain story or passage in the *Babylonian Talmud* might be retold in other rabbinic sources, such as *Tosefta*, *Mishnah*, and *Palestinian Talmud*.

The *Babylonian Talmud* is extremely rich also in its content. With a strong exegetical and homiletical nature, it deals with ethics, jurisprudence, liturgy, ritual, philosophy, trade, medicine, astronomy, magic and so much more. As it will be outlined later (3.3.), the high amount of genres, quotations and cross-references embedded in the Talmud makes this text particularly suitable for been studied within a research infrastructure endowed with computational tools for advanced annotation and mark-up and allowing the collegial effort of several experts from different fields.

For centuries, the Jews studied the *Babylonian Talmud* in its original languages, often relying only on the vast literature of commentaries related to it. Nevertheless, in the mid-nineteenth century the need of the aid of translation became more urgent in the Talmudic studies, due to its linguistic and stylistic complexity. The *Babylonian Talmud*, thus, began to be translated in the different vernacular languages spoken by the Jews, inaugurating a new scientific sub-field, i.e. the translation of the *Babylonian Talmud* in modern languages.²⁸ Our project, the Talmud System, is situated in this context and aims to make available for the Italian speaking public the *Babylonian Talmud* and its cultural lore.²⁹ In the next part (3.), we will outline the main features of the system and the advantages it offers for the translation of ancient corpora such as the *Bavli*.

²⁸ So far, the *Babylonian Talmud* – the whole corpus or part of it – has been translated, to date, in German, English, Hebrew, French and Russian. For an exhaustive overview on the history of translation of the *Babylonian Talmud* and on the different polemics on translations, see ADAM MINTZ, *The Talmud in Translation*, in SHARON LIBERMAN MINTZ – GABRIEL M. GOLDSTEIN (eds.), «Printing the Talmud. From Bomberg to Schotenstein», New York, Yeshiva University Museum 2005, pp. 121-141.

²⁹ Before the ongoing translation carried out within the Talmud Translation Project, the only attempt of a printed translation in Italian of the *Babylonian Talmud* is, to our knowledge, ZOLLI's translation of the tractate *Berakhot*, see EUGENIO ZOLLI, *Il Talmud Babilonese. Il trattato delle benedizioni. Con uno studio introduttivo di Sofya Cavalletti*, Bari, Laterza 1958.