



“And Gabriel Kept on Writing” (Megilla 16a). Literary Features of Traditions Involving Supernatural Entities in the Babylonian Talmud according to the *Elyonim veTachtonim* Project*

Wojciech KOSIOR  <https://orcid.org/0000-0002-1555-5952>

Jagiellonian University, Centre for Comparative Studies of Civilisations

E-MAIL: wojciech.kosior@uj.edu.pl

Abstract

In this paper, I explain the theoretical and pragmatic aspects of the annotation system of the literary features used in the Talmudic database developed within the *Elyonim veTachtonim* project. In the first section, I recapitulate the theses concerning the production of the Babylonian Talmud and operationalise the formal indicators (i.e., language and attribution) of its specific layers. In the second section, I review the scholarship on the Talmudic genres and propose a categorisation that adheres to the cross-cultural framework of the *Elyonim veTachtonim* project. In the final section, I offer an illustration: a qualitative scrutiny of a fragment from Berakhot 62a and a quantitative-qualitative analysis of the data gathered from the Talmudic inventory.

KEYWORDS: *Babylonian Talmud, Digital Humanities, literary studies, angelology, demonology*

SŁOWA KLUCZOWE: *Talmud babiloński, humanistyka cyfrowa, literaturoznawstwo, angelologia, demonologia*

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Introduction

In its current form, the *Elyonim veTachtonim* (hereinafter: EvT) project is a customisable system of quantitative and qualitative analysis of the textual traditions involving supernatural entities (hereinafter: SEs) and their interactions with humans. The system operates with a set of abstract categories pertaining to both the formal and thematic features and, as such, offers wide possibilities for cross-cultural comparative application. The main tool used in the project is a database that contains the partitioned and standardised units of text, annotated with a hierarchical system of predefined hashtags (Flanders and Jannidis 2020, 315; Rydberg-Cox 2006, 15). Thus far, two databases have been developed within the confines of the project: the Talmudic one was first published in 2017 and reached its near-final version 006 in 2021, while the Biblical one was first published in 2021, with a second version appearing later the same year.

Since its inception, the EvT has been strongly informed by the formal approach in literary studies according to which the objective features of a text provide the scaffolding for its interpretation (Bertens 2014, 4–26; Castle 2007, 174–180; Strack and Stemberger 1996, 51–53). Following the classical work of Vladimir Propp (1994/1928), the emphasis has been on the recurring actants playing various functions in the narratives and certain schemes of interactions between humans and SEs (Kosior 2021b), but no attention has yet been paid to other formal attributes. Hence, in the present paper, I expound on the theoretical and pragmatic aspects of the system of annotation of the literary features used in the Talmudic database.¹

Language and Attribution

The BT is a massive work redacted by post-Judean sages in the Sassanian Empire between the 3rd and 8th centuries CE and, within

¹ I wish to express my deep gratitude to the anonymous reviewers for challenging the weak points of my approach, and suggesting literature I previously overlooked, thus helping to clarify my stance and sharpen my argument. All the remaining flaws are, of course, my own.



the scope of three thousand pages, covers nearly every aspect of life, presenting models of rabbinic outlook and piety (Neusner 2004, 2136–2137). At first glance, the composition resembles a lengthy stenograph of the sages' discussions, and this aura is only reinforced in the Geonic works (Jacobs 1991, 31–33, 38; Rubenstein 2003, 5). The essential change in the Talmudical hermeneutics occurred in the 20th century when the scholars started to appreciate the variety of forms utilised in the ancient Jewish literature (Neusner 1970; Strack and Stemberger 1996, 45–46, 49–51; Vidas 2009, 3–4).

In this regard, a crucial role was played by David Weiss Halivni (2013) who designed a method of literary stratification based on dividing the sages responsible for producing the BT into three groups: Tannaites, Amoraites and Stammaites (see also Vidas 2009, 6–12, 30–32, 59–60). The Tannaites lived in Palestine during the first two centuries CE and enacted their ordinances in the form of short, apodictic Hebrew phrases. Afterwards (3rd–6th century CE) came the Palestinian and Persian Amoraites. They elaborated on the Tannaites' corpus and submitted their laconic Hebrew dicta to the "repeaters" (Heb. *tannaim*, other than the Palestinian Tannaites), who memorised the final decisions together with the attribution to their authors. The conclusive role in the shaping of the BT was played by the Persian Stammaites (6th–8th centuries CE), who rearranged the Hebrew Tannaitic and Amoraic materials, supplemented them with sophisticated discourses formulated in Aramaic and submitted it all to the *tannaim*. It follows from Halivni's theses that the text of the BT contains several types of formal indicators distinguishing between the Tannaitic, Amoraic and Stammaitic layers, three of which are particularly important for the present project: language (Hebrew versus Aramaic), attribution (ascription to the specific sage versus anonymity), and style (apodictic and laconic versus discursive and dialectic). The recognition of these facets allows the textual conglomerates to be dissected into segments and their relative chronology to be estimated, which is a prerequisite for more intricate analyses (Berger 1998, 17; Jacobs 1991, 105; Kalmin 1989).

Halivni's theory has several limitations which are relevant for this study. First, whereas the Tannaites and Amoraites are the social and historical groups recognised by the BT itself, the Stammaites are Halivni's own theoretical creation grounded in his



interpretation of the corpus. While such a method of reconstructing the historical, sociological, and psychological realities based on textual and iconographic artefacts has a long tradition of application in the humanities, it is far from being unequivocally accepted. For instance, Sergey Dolgopolski (2013, 45–51) notes Halivni’s implicit Cartesian assumption (*cogito ergo sum*) behind his reconstruction and suggests a more cautious stance, while Marton Ribary (2017, 129) bluntly calls it an error of category: Halivni infers a historical phenomenon from a literary reality and does so based solely on the BT. Second, if to agree with Halivni and to adopt the existence of Tannaites, Amoraites and Stammaites as the actual historical entities, new sociological problems pile up. Hence, although the rule of thumb is that the earlier sources are in Hebrew and the later ones in Aramaic, this does not preclude the possibility of the Stammaites and Amoraites concocting fake traditions and attributing them to the Palestinian Tannaites (Friedman 2000, 35–57; Vidas 2009, 62). In a similar vein, it ought to be admitted that the Stammaites themselves undermined their own credibility: they explicitly furnished alternative attributions, put the same words into the mouths of distinctive figures, and mentioned different sages possessing the same names (Elman 1999, 61; Jacobs 1991, 6–17). Third, Halivni’s method permits speculations about the internal dynamics between the layers but does not address the problem of its reception. Hence, subsequent generations of consumers have been experiencing the BT primarily as a coherent composition with its overall message, a kind of a stenographic record of the sages’ discussions, rather than a structure built of different “layers” or “bits” (Kraemer 1996, vii–viii, 3–10). These and other constraints of Halivni’s method were addressed most comprehensively by Jacob Neusner (1991, xvii–xxix) according to whom the creation of the BT was an enterprise aimed at unifying the “voice” of the text through diligent selection, modification, and systematisation of the earlier traditions. Seen from the perspective of a “documentary approach,” the final form reflects the complete free will with which the redactors transmitted and modified the earlier sources, and consequently, any attempts at assessing the dating of specific fragments are futile.

Given the above sketched problems I adopt Halivni’s framework with some minor modifications. I take up his historical and



literary division into the Tannaitic, Amoraic, and Stammaitic textual layers which unfold chronologically, and which are characterised by certain formal features. When it comes to the Stammaitic layer I treat it as mostly equivalent to the Saboraic one which has much better grounding in the literature of the era. I also treat this division as one of the foundations for the Talmudic hermeneutics, yet I refrain from adopting his more specific hypotheses regarding the Stammaites understood as a historical entity. In result, I use the latter concept as a kind of a convenient mental shortcut to designate the hypothetical redactors and authors of the younger parts of the BT. Moreover, and following Karl Popper’s (2002, 276–281) theses, I see Halivni’s theory with all its blemishes as a child of the present scientific era, to be eventually substituted with a one better suited for the task. In other words, and to paraphrase Zvi Septimus’ (2013) remark, Halivni’s framework, while not perfect, appears to be among the least unconvincing methods of the Talmud study available today.² I also concur with David Kraemer (1990, 21–43, 70–79) who claims that most of the remaining shortcomings do not annul the general usefulness of Halivni’s method. First, due to the limited cultural storage capacity, the composers had to be picky about what they submitted to the *tannaim*, and hence it can be assumed that the BT preserved mostly important and factual contents. Second, although the exact dates of the lives of the specific sages are difficult to assess, the sources allow a relative chronology to be construed thus roughly discerning between the earlier and later strata. Third, the formal differences between them are discrete, but the layers can be distinguished with the help of quantitative methods.

With these theoretical considerations in mind, I can move on to the operationalisation of the essential literary features (see Bortolusi and Dixon 2003, 38–41) and the first to be considered is the language of a given unit and piece,³ including strictly tech-

² “Though Halivni’s theory might contain lacunae and minor flaws, [...] it is still the most complete and convincing account to date” (Septimus 2013).

³ The “unit” is a basic building block of text coherent with regards to its form and contents, while a “piece” is a thematically coherent aggregate of units. The details of the text partitioning will be tackled in the further part of this paper because they demand prior explanation of the matters of genre, language, and attribution.



nical terminology and the remaining contents.⁴ It follows from Halivni’s theory that the Stammaites used Aramaic to construe the relatively late discursive layers of the BT, while Hebrew was chosen by the Tannaites and Amoraites (see: Yadin-Israel 2020, 55–67). The category of language used in the Talmudic database contains three tags:

- #aramaic – unit in Aramaic.
- #hebrew – unit in Hebrew.
- #hebaram – unit in Aramaic and Hebrew.⁵

In virtually all the cases, the decision on how to classify a particular section was straightforward. When a unit interlaced Hebrew contents with Aramaic technical terminology (e.g., “in the name of,” “school of,” “opposed”), it was annotated with the #hebrew tag.

The second literary characteristic is the attribution of a tradition, usually provided in the form “Rabbi X said.” If it is attributed, the hashtag denoting the specific character from the controlled list (see below) is provided, otherwise the unit is marked with the #unattributed tag. Only the sages who tackle the subject of the SEs are indicated; if they touch upon some other aspect not associated with the SE present in the unit, they are omitted (e.g., Megillah 3a–b, Bava Batra 15b, Pesahim 111a). If a unit lists several sages in one attribution (e.g., “Rabbi X said in the name of Rabbi Y that Rabbi Z said” or “Rabbi X said about it...,” “Rabbi Y said about it...”), all the contributors are annotated to mark the traditions which go across the textual layers (e.g., Pesahim 112a). Square brackets indicate that the attribution was inferred based on the content of the surrounding text (e.g., Shabbat 145b–146a).

The third feature is the actor. This category denotes a literary character being the protagonist of an account transmitted in a unit,

⁴ However, the EvT does not distinguish between the specific technical terms and expressions in Aramaic which, as argued by Richard Kalmin (1988), might be adopted as an additional layer of formal indicators helpful in further distinction between Amoraites and Saboraites. Yet, as I shall demonstrate in the further section of this paper, even without this aspect, my system enables the accounts to be divided into several clearly different groups.

⁵ The presentation of the formal features adheres to the system routinely utilised in the EvT project and relies on a “schema,” i.e., an abstract ideal type (Hogan 2003, 57–59). The schemas are produced so as to be readily translatable into the original languages of the BT and this basic test of the etic categories’ adequacy has been inspired by Anna Wierzbicka’s scholarship of (e.g., 2014).



usually introduced by a phrase “Rabbi X did this” or “it happened to Rabbi X that.” If a unit speaks about an exact actor, the specific character from the controlled list is provided, otherwise, the unit is not annotated. Analogically as was the case with the attribution, only the characters that are directly associated with the SEs are indicated. When the same character is both the teller and the actor of a given narrative, the same tag appears in both categories (e.g., Rabbah b. Bar Hana in Sanhedrin 110a–b).

The categories of attribution and actor operate with circa 200 characters flocked in a supplementary database maintained in a separate spreadsheet file (Elyonim veTachtonim 2021). Most of these are the sages, but the database contains also nonrabbinic characters such as Onkelos the proselyte, Alexander the Great, or King Shapur. Each of the figures is annotated in two subcategories. The first is the locale, which denotes the region or regions in which a given human or group dwells:

- #palestine – the human lives in Palestine.
- #babylonia – the human lives in Sassanian Empire.

The second subcategory is the group. It denotes the historically contextualised social body to which a given human belongs and operates with five tags based on the emic division found in the Rabbinic literature:

- #early – the human lives in the early post-biblical times.
- #kohen – the human is a priest living in Judea of the second temple period or is his contemporary.
- #zugot – the human is a sage working in pair with another sage living at the break of eras or is their contemporary.
- #tanna – the human is a Tanna or lives in the Tannaitic times.
- #amora – the human is an Amora or lives in the Amoraic times.

If a given human lives in a transitory period, two tags denoting the groups in question are used. For the sake of clarity, I added two aggregating categories to the Talmudic database:

- attribution_locale_and_group – the category aggregates the locale and group tags of all the characters to whom the traditions in a unit are attributed;
- actor_locale_and_group – the category aggregates the locale and group tags of all the characters appearing as actors in a unit.



Thus, if a unit features a range of characters from different times and places, all of them are indicated in the aggregating categories.

As already mentioned, the identification of the specific Talmudic characters poses numerous problems: there are manuscript variations, the text may resort to ambiguous abbreviations, different sages can bear the same name and the name of a single sage can come in different forms – to name just a few difficulties (Jaffee 2007, 17–37; Schäfer 1986, 139–152; Stern 1994, 49–50). For the sake of consistency, I followed the interpretations present in the *William Davidson Talmud* (2017–2022).⁶ If this edition indicated two or more sages bearing the same name, as was often the case with Elazar ben Shamua and Elazar ben Pedat, all were annotated in the database. In most instances, however, such sages were contemporaries, which hardly changed the overall description of a given unit. I extracted the historical and geographical whereabouts of the specific figures from the classical work of Chanoch Albeck (1969, 144–451) and supplemented it with the data from the studies of Shulamis Frieman (2000), and Gershom Bader and Solomon Katz (1940). Of much help was also the recently developed *Mi vaMi* project, which offers a dynamic graph of relationships between the rabbis (Waxman and Fishman n.d.).

Genre

Whereas the indicators of language and attribution translate easily into the EvT mechanics, the matter is more complicated with the style. Halivni (2013, 22–23) envisaged the latter marker specifically

⁶ *William Davidson Talmud* is offered by the *Sefaria* platform (2011–2022). It is directly based on the *Noé Edition* of the *Koren Talmud Bavli* (Steinsaltz, Weinreb, and Schreier 2017), digitised, hyperlinked, and supplemented with additional contextual commentary. Although it has some drawbacks stemming from the specificity of Adin Steinsaltz’s work (e.g., the tendency to simplify some of the translational problems), and these typical for a digital dynamically developed project (e.g., it is not always clear, what are the sources for the specific contextual commentary or whether a given sage is identified properly and consistently), I chose this version for its wide availability, ease of use, and richness of annotations.



for the investigation of the halakhic (i.e., legal) content, and as such it cannot be simply transposed to the study of the aggadic (i.e., nonlegal) materials, the typical context for the traditions about the SEs (contra: Rubenstein 2003). Therefore, instead of style I suggest operating with a genre, that is, a set of recurrent formal-thematic textual features that provide hermeneutical clues for its interpretation (Kraemer 1990, 9–11). This has been one of the central categories in the formal approach in literary studies (Bertens 2014, 4–33; Castle 2007, 174–180) and as such was adopted by Talmudic scholars. For instance, Strack and Stemberger (1996, 54) suggested treating early rabbinic works *in toto*, as “citation literature,” Arkady Kovelman (2005, 44–62) argued that the narratives present in the BT should be approached as *spoudogeloion*, a mixed genre combining seriousness with farcical elements, while Alexander Samely (2007, 173) occasionally and cautiously called the BT a “national encyclopaedia of Babylonian sages.” David Kraemer (1996, 7–16) in turn proposed an apophatic literary study of the BT. Accordingly, Talmud is not a novel, though it is sometimes fictional; it is not history, though it may present some accounts as historical; it is not a law code, though it concerns legal matters, it is not a commentary, though it comments on the Tanakh and Tannaitic traditions, etc. By doing so, he convincingly showed that to squeeze the BT in its entirety into the confines of one genre would mean ignoring its complexity.

It is no surprise then that the search for a general category for the BT is rarely practised in lieu of the recognition of the genres of the specific passages. These attempts are based on the division into halakhah and aggadah, originating in the traditional rabbinic thought and later adopted by academicians (Almog 2003, 32; Herr, Wald and Bakhos 2007, 454; Lorberbaum 2007). The simplest explanation of these two formal-thematic literary types is that halakhah (Heb. “way of acting,” literally “way of walking”) refers to legal material expressed in the form of rules, case studies and role models (Neusner 2004, 2120), whereas aggadah (Heb. “story,” “narrative”) covers everything else which does not refer to the law, *inter alia*, “narrative, legends, doctrines, admonitions to ethical conduct and good behavior [...], parables and allegories, metaphors and terse maxims; lyrics, dirges, and prayers, [...] plays on words, permutations of letters, calculations of their arithmetical values



(*gematria*) or their employment as initials of other words (*notarikon*)” (Herr, Wald and Bakhos 2007, 455; see also Almog 2003, 33; Lifshitz 2007). The halakhah constitutes between a half (Wimpheimer 2018, 143–144) and two-thirds (Jacobs 1991, 3–4; Safrai 1987, 336) of the BT and even such a crude generalisation makes it clear that both types of content were important for the sages.

While the basic division into law and non-law serves as a handy guideline, it falls short in the face of diversity of Talmudic forms and contents, and contemporary scholars resort to other categories to supplement these two “supergenres.” Thus, Karl-Gottfried Eckart (1959) offered a classification based on two types: narratives (miracle stories, exempla, narrative paraphrases, parables, and controversies) and expositions (comparisons of biblical passages, expositions from the lemma, interpretations of words and *qal vachomer* arguments). In turn, Dan Ben-Amos (1967) focused on the aggadic content and recognised genres such as legend, tall tale, fable, exemplum, and riddling tale (see also Saldarini 1977, 257–274). Catherine Hezser (2009, 101–104) relied on the comparative method and proposed a fourfold division: rabbinic parables reflecting their Hellenistic counterparts; rabbinic stories paralleling the *chreia* and *apophthegma*; midrashes interpreting the Tanakh; and halakhah formulated in the form of exemplary cases. Among analogical proposals, two are particularly thorough. Jacob Neusner (1972, 354–390; see also: Strack and Stemberger 1996, 50–53) offered a system based on the emic threefold division into aggadah, halakhah and exegesis, supplemented with a number of subclasses that are both emic, such as *ptichah*, *chatimah*, *taqanah*, and etic, such as sayings (e.g., wisdom, attestations), narratives (e.g., fables, legends) and others (e.g., science, *sorites*). A similarly meticulous and intricate system has been devised by Alexander Samely (2007, 14–15; 2013). His scheme envisages the basic division into thirteen recurrent small forms organised in two main groups: small forms consisting of a single sentence or part of a sentence (e.g., unconditional legal norm, a list, or a speech report) and small forms consisting of several sentences or clauses (e.g., midrash, *maaseh* or *mashal*).

These classifications served as the inspiration and the starting point for tailoring the system to be used in the EvT project, but neither could be fully embraced for three reasons. First, the EvT



aims for cross-cultural applicability and as such requires abstract etic categories to accommodate the specific emic types of various kinds of world literature and so the Talmudic classification had to follow from a more universal division. Second, the more elaborate systems reflect the diversity of both the form and contents of the texts and provide separate labels for each combination of features. Meanwhile, aiming at abstractness means that the devised categories cannot be too numerous, and the criteria need to concern the formal side of a given text rather than its contents. Third, although the systems reviewed above rely on the pool of the emic categories, the scholars differ in how they define these terms, especially *maaseh* and *midrash*, while the definitions adopted by the EvT project had to be as unequivocal as possible to facilitate the classification process.

The present version of the EvT system addresses these problems. First, in agreement with the scholars arguing for the existence of literary universals (Hogan 2003; Oatley 2012), it distinguishes between just three main genres – a statement (“it is so and so in the world”), a recommendation (“do this and do not do that or else”), and an anecdote (“they did this and then it happened”) – which apply to a broad range of literary phenomena. Second, to compensate for the low number and abstractness of genres, the EvT project utilises a battery of topical tags which refer strictly to the contents of the text (Kosior 2021b). Third, it offers a clear heuristic of genre classification which permits reducing the personal bias and maintaining the categorisation consistency. Fourth, it relies on the precise text-partition system which allows acknowledging the presence of various genres in a single section.

Let us now have a closer look at these features. The Talmudic database operates with four genres:

- #stat – a general statement, an assertion concerning some aspect of the world and involving SEs, e.g., when a child is born an angel slaps it on its mouth thus causing it to forget the Torah (Niddah 30b).
- #prag – a pragmatic recommendation or instruction in the form of do’s and don’ts and if-thens on how to behave vis-à-vis SEs, e.g., Avodah Zarah 12b speaks about Shabriri, a demon residing in the drinking water at night, and warns against drinking it.



- #rab – a rabbinic anecdote, a narrative that features the sages (Tannaites or Amoraites) or their contemporaries and describes their encounters with SEs, e.g., Rabbi Johanan’s disciple meets the ministering angels occupied with cutting gemstones (Sanhedrin 100a).
- #bib – a biblical anecdote, a narrative reiterating or reimagining a scriptural account featuring SEs, e.g., Sanhedrin 95b retells the Assyrian siege of Jerusalem and identifies the destroying angel as Gabriel.

This division was devised in version 005 *Hormin* of the Talmudic database. The previous editions acknowledged several other genres, inter alia, a cosmic statement (explaining the role played by SEs in the cosmic order), a cultic protocol (a prescription of acts to be performed in the ritual context and involving SEs) and a proverb (a petrified conventional manner of speech taking the form of an adage, a euphemism, or a rhetorical figure concerning an SE). Since these were highly content-specific and lacked distinctive formal features, they have been abandoned as genres and incorporated into the system of the topical tags.

The genre classification heuristic is organised around three questions (Figure 1) and the first one asks about the pragmatic implications. For instance, in Qiddushin 81b Satan advises Pelimo to use the Zechariah 3:2 quote (“Yahweh rebuke you, Satan!”) for apotropaic purposes. In this case, the pragmatic recommendation is “nested” in a longer fragment, but its applicability transcends the immediate context. The second question distinguishes between statements and anecdotes: if a textual unit provides a general assertion that, like a recommendation, surpasses its adjacent background, then it is considered a statement. For instance, Berakhot 4b starts with a contextualising formula “a Tanna taught” but provides the general comparison of the agility of Michael, Gabriel, Elijah, and the angel of death. Otherwise, if a textual unit contains a narrative revolving around some specific circumstances involving particular literary figures, then it is considered an anecdote. Finally, the purpose of the third question is to distinguish between biblical and rabbinic anecdotes, based on the cast, locale, and the like. For instance, Berakhot 7a describes Rabbi Ishmael’s (a Palestinian Tannaite) encounters with Akathriel in the Jerusalem Temple, while Shabbat 145b–146a retells the biblical account of Eve and the primeval serpent



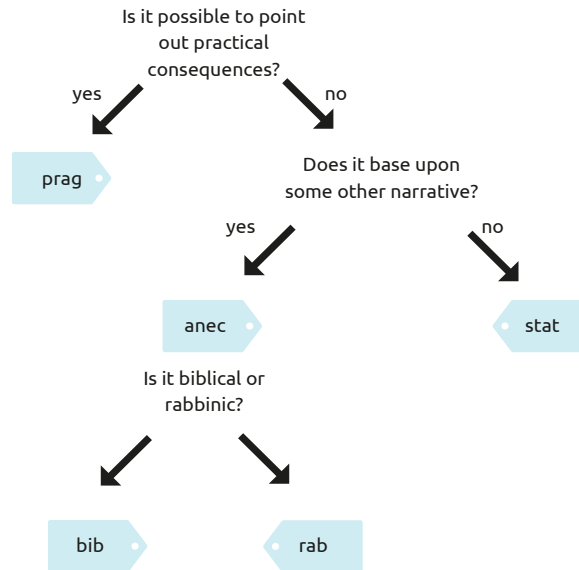


Figure 1. Genre classification heuristic

The next problem is, what should be treated as the elemental building block of text, subject to further analysis and annotation. Traditionally, this function was played by *sugya* (Aram. “course,” “lesson”), a basic segment of the Talmudic discussion in which a given Mishnaic lemma is treated in full (Safrai 1987, 337–339; Strack and Stemberger 1996, 203). However, this concept is not up to the task at hand, because *sugya* can be dissected into even simpler components: a Tannaitic or Amoraic statement followed by the Stammaitic discussion of varying complexity (Brodsky 2014, 173; Klein 1953, 341–363). Instead, contemporary scholars tend to recognise the primary building blocks of the Talmudic discourse based on their formal and thematic independence from the most immediate context (Friedman 1987, 67; Hezser 2009, 97–110). An elaborate system of such text partitioning has been offered by Alexander Samely (2007, 13; 2013) who argued that the smallest building blocks of the rabbinic documents are statements: single sentences or small sets of sentences unified by the topic and forming recognisable patterns. The statements in turn constitute more complex structures such as aggregates and compounds based on their thematic arrangement.

Taking Samely’s proposal as the point of departure, I have designed the partition system specifically for the EvT project. Accordingly, the basic building block is a unit – a formally and thematically coherent, independent segment of text. The basic criterion for isolating the textual unit is its genre and each unit can be classified as belonging to one genre only. The units can constitute more elaborate aggregates, i.e., pieces. A piece is a longer and thematically coherent passage of text consisting of two or more units which can vary regarding their genres. For instance, Berakhot 51 transmits two similarly construed pieces, containing a rabbinic anecdote depicting an encounter between a sage and a SE, and a series of pragmatic recommendations marshalled by the given SE. In terms of technicalities, a unit occupies a single cell in the database spreadsheet with the rest of the row used for annotation, while the units belonging to a single piece are marked with different hues of blue.

The partition into units and pieces serves two basic purposes. First, it allows longer accounts to be dissected and annotated with higher precision, which makes the database a convenient concordance. Second, this standardisation, together with the detailed description, enables the introduction of the quantitative methods, so important in the study of massive corpora lacking systematic presentation (Flanders and Jannidis 2018, 3–5; Samely 2007, 20–22, 137–144). Approached this way, each unit of text becomes the basic unit of measurement of frequency, distribution, and correlations of the specific tags in the scale of the whole corpus. These operations in turn allow for “distant reading” of the BT: going beyond the limitations of the traditional close examination of the text and supplementing it with the macroscale perspective that provides insight into implicit regularities (Moretti 2013; Hayles 2012, 43–44).

Exemplification

Let me now offer some examples. First, the hereby proposed system can be used to facilitate the close reading of selected passages, for instance, the one below coming from Berakhot 62a.



Rabbi Tanḥum bar Ḥanilai said: Anyone who is modest in the bathroom will be saved from three things: From snakes, from scorpions and from demons {Heb. *maziqin*}. And some say that even his dreams will be settling for him.

The Gemara relates: **There was a particular bathroom in the city of Tiberias, where, when two would enter it, even during the day, they would be harmed by demons. When Rabbi Ami and Rabbi Asi would each enter alone, they were not harmed. The Sages said to them: Aren't you afraid? Rabbi Ami and Rabbi Asi said to them: We have learned through tradition: The tradition to avoid danger in the bathroom is to conduct oneself with modesty and silence. The tradition to end suffering is with silence and prayer.**

Because fear of demons in bathrooms was pervasive, the Gemara relates: **Abaye's mother raised a lamb to accompany him to the bathroom.** The Gemara objects: She should have **raised a goat for him.** The Gemara responds: **A goat could be interchanged with a goat-demon {Aram. *sair*}. Since both the demon and the goat are called *sa'ir*, they were afraid to bring a goat to a place frequented by demons. Before Rava became the head of the yeshiva, his wife, the daughter of Rav Ḥisda, would rattle a nut in a copper vessel for him.** This was in order to fend off demons when he was in the bathroom. **After** he was chosen to **preside** as head of the yeshiva, he required an additional degree of protection, so **she constructed a window for him, opposite where he would defecate, and placed her hand upon his head.**⁷

The piece tackles the problem of appropriate toilet behaviour and consists of three units. The first one is a pragmatic recommendation attributed to a Palestinian Amoraite and transmitted in Hebrew. This unit is immediately followed by two unattributed (hence probably Stammaitic according to Halivni's standards) rabbinic anecdotes formulated in Aramaic and featuring different Palestinian and Babylonian Amoraites. The formal analysis shows

⁷ Quoted from *William Davidson Talmud* (2017–2021). The citation retains the orthography and visual convention: the bold font indicates the translation, the normal font – the supplement, while square brackets contain additional data provided by the editors. The curly brackets indicate my remarks. I introduced the division into paragraphs to distinguish between the units constituting the piece. The online EvT database quotes the *Soncino Talmud* (Epstein 1935–1952) which is in public domain.



the continuity and dynamics in the proliferation of the apotropaic traditions: in this specific case, the earlier sources mention only the modest behaviour, while the later ones add prayer and noisemaking. The demonological vocabulary is no less important, and the piece identifies the *sair* as one of the *maziqin* of the earlier sources. The passage further demonstrates that a certain belief functioned not only as a pragmatic recommendation but also as a custom which was practised by the distinguished sages.

Second, apart from supplementing the close reading of the Talmudic sources, the acknowledgement of the textual features permits sketching the formal profile of the traditions about SEs.⁸ The quantitative analysis (Table 1.) shows that three quarters of all the units are attributed. From among the attributed material, more contents are attributed to the Palestinian rather than the Babylonian sages and to the Amoraites rather than the Tannaites. In a similar vein, the Palestinians (both Tannaites and Amoraites) appear more often as actors than the Babylonians. Far more units are formulated in Hebrew than in Aramaic and just a handful of cases is provided in a mixed form. When it comes to the genres, there are also some clear tendencies. More than two thirds of the units come in the form of biblical retellings. The rabbinic anecdotes and statements occupy the same position while the pragmatic recommendations turn out to be the least popular genre. Despite the difference in their density, each of the genres retains the general profile: all tend to be attributed rather than unattributed, Palestinian rather than Babylonian, Amoraic rather than Tannaitic and Hebrew rather than Aramaic – except for the rabbinic anecdotes which tend to be provided in Aramaic. These observations taken together suggest that most of the traditions concerning SEs belong to the older strata of the Rabbinic lore and are derived from the scriptural accounts. In other words, and as far as the subject of SEs is concerned, the *Babylonian Talmud* turns out to be mostly *Palestinian* and *Biblical*.

⁸ All the calculations have been performed on the version 006 *Uzzah* of the Talmudic database. The sum of all the units (N) is 797. One should underline that most of the hashtags are not mutually exclusive. For instance, a given unit can be annotated with both #palestine and #babylonia and hence the sum of such units is greater than the number of the units annotated with the #attributed hashtag.



Table 1. The frequency of the units annotated with specific tags

percentage	66,2%	26,5%	7,2%			
language frequency	528	211	57			
hashtag	#hebrew	#aramaic	#hebaram			
percentage	15,6%	25,1%	23,3%	35,9%		
genres frequency	124	200	186	286		
hashtag	#prag	#stat	#rab	#bib		
percentage	10,5%	12,9%	14,8%	8,0%	53,8%	
actors frequency	84	103	118	64	427	
hashtag	#tanna	#amora	#palestine	#babylonia	[no actor]	
percentage	73,1%	26,7%	35,6%	53,5%	52,6%	32,4%
attributions frequency	583	213	284	426	419	258
hashtag	#attributed	#unattributed	#tanna	#amora	#palestine	#babylonia



Third, the acknowledgement of the formal literary characteristics can serve as the starting point for more intricate analyses and so far, I have deployed this system in two other endeavours.⁹ The first one concerned the problem of the perceived reality of the Talmudic traditions involving SEs. I based this on the Bayesian epistemology (operating with the probability scores) on the one hand, and the contemporary empirical research into the psychology of beliefs on the other, and utilised the specific formal features of the text as indicators of the perceived experiential distance. Combining and quantifying these features allowed me to construe a simple calculating formula that approximated how close to everyday experience these traditions might have appeared to the Stammaites. Based on the quantitative and qualitative analyses, I offered that these were the traditions about the demons, which appeared relatively most real: they are usually provided in Aramaic, have the form of pragmatic recommendations, and are either attributed to the later Amoraites or left unattributed, thus suggesting Stammaitic origins (Kosior 2021c). In the second study, I approached the BT questioning whether the accounts concerning the SEs meet the criteria of literary horror. Taking Noël Carroll's scrutinies into art-horror (1990, 52–58) and the evolutionary psychology of emotions (Lazarus 1991, especially 29–34) as the starting point, I conceptualised horror as a quality of a text, which appears mysterious, real, fearful, and disgusting, and operationalised it using the categories of the Talmudic database. Thus, for instance, the tags #colossus (a SE is massive) and #theriomorphic (a SE is compared to an animal or possesses animal features) were counted as fearful, the tags #privy (a SE inhabits a toilet) and #evacuation (a SE is associated with defecation or urination) were counted as disgusting, the brevity of a unit (measured by the number of characters) was counted as mysteriousness, while the reality was assessed based on the previous study. Next, I invented a formula that acknowledged a combination of these features and could calculate a single score. Although, unsurprisingly, few of the accounts met all the criteria of literary horror thus understood, this showed that even the BT contains potentially spooky materials (Kosior 2021a).

⁹ Due to the volume constraints, here I offer just the overview of these studies – the interested reader is advised to check the referenced materials.



The above presented applications constitute just the tip of the iceberg of the possible usages of this feature of the Talmudic database. Moreover, and given the cross-cultural potential of the EvT system, one may think of applying an analogical feature in the different databases. So far, I have construed an inventory of the SEs found in the Hebrew Bible which operates with nearly an identical set of genres (anecdote, pragmatic recommendation, and statement) supplemented with specifically biblical genres (inter alia, law, poetry, and prophecy). Although a detailed analysis of the formal character of Tanakh is still to be performed, already now it is possible to say that the basic categories remained compatible. The most obvious extension of the project would be the construction of an inventory based on the Palestinian sources, especially the Jerusalem Talmud. Hence, it would be possible check whether the apparently Palestinian traditions featured in the BT have their own counterparts in the West, if these sources are based on the common core of traditions, in what ways they modify them and in what literary genres they involve them, and so on. In turn, the further inclusion of the slightly later Midrash Rabbah collection would help to demonstrate not only the geographical diversity but also the historical dynamics of these traditions. Hopefully, the following years will witness the materialisation of these plans.

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