Judaica: Neue digitale Folge 7 (2026)
https://doi.org/10.36950/jndf.2026.6

The Reception of Paradoxography in the Babylonian Talmud

Monika Amsler
University of Bern
monika.amsler@unibe.ch

Abstract: *This article demonstrates that the authors of the texts collected in the Babylonian Talmud, like their contemporaries, used nature miracles to think the unthinkable, to explore the biblical past and the world to come, or to unravel mysteries in the biblical text. Taking the Torah as the blueprint for creation, the rabbis see the text and the natural world as mirroring and explaining each other. To understand the mysteries in the blueprint and in the lands beyond their reach, the rabbis resort to the kind of knowledge that was systematized in collections of nature wonders, so-called paradoxographies. But the rabbis also add to the paradoxographic tradition by identifying nature wonders in the biblical text. The basis of the present analysis is a series of short stories that appear most prominently in tractate Baba Batra 73b–74b but have cognates or parallels elsewhere in the Talmud. The stories imagine rabbinic sages on the high seas or in the desert and look through their eyes at the landscape described by the biblical text, which they read as a map. Earlier scholarship dismissed these stories mostly as tall tales and entertaining hyperbole. In contrast, building on recent work on ancient world making, this paper argues that the stories reflect a systematic inquiry into the natural world at the height of the science of their time, using natural curiosity as a driving force for analysis and discovery.*

1 Introduction

In an entry on paradoxography in the *New Pauly*, Otta Wenskus writes that, "although paradoxographical texts were used up until the Byzantine Period as material-collections (e.g. for the composition of novels, especially by Achilles Tatius and Heliodorus) and as reference works (as appears from their use by scholiasts and etymologists), their significance for post-classical Christian literature and visual arts was rather marginal, particularly in comparison to Physiologus' treatise, which sometimes exhibits parallels with classical paradoxography as we know it."[1] The present paper will move beyond the notion that miracle collections or paradoxographies were used as reference works and argue that paradoxography served, in a fundamental way, to explore and test the

This article is part of the Special Thematic Section *Nature Miracles and Paradoxography in Biblical Reception of the First Centuries CE* (2026); for the conceptual framework and an overview of the other contributions, see the introduction (https://doi.org/10.36950/jndf.2026.3).
This research was funded by the Swiss National Science Foundation as part of the larger project "Concept and Impact of the Miracle in the Third Century" (PZ00P1_208647).

[1] Wenskus and Daston, "Paradoxographoi," https://referenceworks.brillonline.com/entries/brill-s-new-pauly/*-e907630, last accessed February 2026.

possibilities of the physical world, that is, in rabbinic terms, creation. In other words, the paradoxes of nature helped to think "things" that had not been thought before. I do therefore not agree with Wenskus' observation that the importance of paradoxographic knowledge declined in Late Antiquity. Neither in Christian nor in rabbinic texts, practice, or material culture did paradoxographical content lose its importance.[2]

Two recent studies help illustrate my point: Renaud Gagné's *Cosmography and the Idea of Hyperborea in Ancient Greece*, and Karen ní Mheallaigh's *The Moon in the Greek and Roman Imagination*.[3] Both books explore how the ancients imagined inaccessible geographical spaces: a mythological place in the far north, Hyperborea, and the Moon. It is indeed a great challenge for the human mind to imagine a place, its conditions, and the creatures that thrive there, that is very different from the world we know. How do truly different, impossible landscapes, bodies, and societies look like, function, and interact? When it comes to imagining difference, we tend to fall back conveniently on the opposite of what we perceive as standard.[4] Thus, the Hyperboreans are thought to be very long-lived; they know no disease and can choose their own time of death; they sow and harvest in a single day and sacrifice donkeys.[5] Hyperborea becomes a platform for the projection of an altogether reversed universe.[6] The ancient imagination of the people of the Moon also shows traits of inversion with regard to its inhabitants. Since they are said not to eat or excrete, they are associated with beings from other worlds, such as the gods or the dead.[7]

Imagining a truly different and not just opposite world is difficult because, as cognitive studies have shown, humans need a source of inspiration, a physical form, real or imagined, to provide a basis for metaphor and allusion drawing, which in turn are sources of invention.[8] Hyperborea was a place known from mythology that eventually became entangled in discussions about the moral value of myth and was used by geographers and chorographers as a place to position themselves vis-à-vis tradition. Eventually, Hyperborea was cancelled from the map.[9] The Moon, however, remains an object of scientific speculation to this day. Even though we now know with a high degree of certainty that there is no life on the Moon, the search for signs of life in space continues. To understand and develop theories about life in the most adverse (and non-earthly) circumstances, astrobiologists have turned to the simple organisms that thrive in the most inhospitable environments. These include spaces uninhabitable by humans, such as sulfuric volcanic caves, the anoxic deep dark sea, places exposed to high temperatures,

---

2 This has been amply demonstrated throughout this issue.

3 Gagné, *Cosmography and the Idea of Hyperborea in Ancient Greece*; ní Mheallaigh, *The Moon in the Greek and Roman Imagination: Myth, Literature, Science and Philosophy*.

4 On inversion as a kind of safe space of alterity, see Hartog, *Le miroir d'Hérodote*, 332–36.

5 Gagné, *Cosmography and the Idea of Hyperborea*, 329–30.

6 Gagné, *Cosmography and the Idea of Hyperborea*, 349.

7 ní Mheallaigh, *The Moon in the Greek and Roman Imagination*, 112-126.

8 See Malafouris, *How Things Shape the Mind*.

9 On the reception of Hyperborea, see Gagné, *Cosmography and the Idea of Hyperborea*, 332–412.

or places almost devoid of nutrition.[10] The same logic drove the ancient thinkers, ní Mheallaigh argues, when they turned to paradoxographic material to fantasize about life on the moon. Paradoxography enables "scientific imagination" by providing models of alien and alternative, and not just inverted, life forms.[11]

This scientific value, I argue, is precisely the reason why collections of nature paradoxes and wonders have been composed, transmitted, reorganized, and translated. More than anything else, the wonders of nature have the potential to provide the human mind with ideas, even facts, about the unthought, the unthinkable, and the seemingly impossible. Accounts of nature wonders allowed people to literally see new things.

The peoples, animals, and plants living under very different conditions and on the fringes of the inhabited world, described in paradoxographies, were valuable models for exploring what life might be like on the moon and other inaccessible places. While Plutarch turns to the sea and the desert to find templates for organisms that might fit the conditions of life on the moon, the rabbinic sages, as will be shown, turn to the sea and the desert to find things that belong to other worlds, such as the world to come or the underworld, to learn about the characteristics of primordial monsters, or to understand *hapax legomena* in the biblical text.[12]

The Enlightenment separated miracles from science.[13] But miracles have not disappeared. Rather, the anomaly and the singular case persist as a constant threat to the statistical and mathematical knowledge that governs modern science, and which holds that while "wondering" can be a philosophical method, "the miracle" can never be a fact. Slowly, however, the tables seem to be turning, giving way to a new logic that also affects the sciences. Recently, the occasional spontaneous remission of cancer has been shown to hold important information for understanding the behavior of cancer cells,[14] and "old wives' tales" such as the use of a snail on a wart have been shown to be effective because the human body responds to disgust by activating its immune system.[15] Moreover, the educational value of documentaries that focus on remote and inaccessible places and their incredible fauna, flora, and human communities is widely recognized.[16]

The time is ripe, then, to place these recent scientific and scholarly interactions with the paradoxical in conversation with stories from the Babylonian Talmud's tractate Baba Batra 73b–74b. This passage offers several travel accounts in which rabbinic sages see extraordinary things in the sea and in the desert. Previous scholarship has discussed the stories in the context of belief and disbelief, faith, fiction, or tall tales reflecting the

---

10 ní Mheallaigh, *The Moon in the Greek and Roman Imagination*, 119.

11 ní Mheallaigh, *The Moon in the Greek and Roman Imagination*, 115.

12 On Plutarch, see ní Mheallaigh, *The Moon in the Greek and Roman Imagination*, 119–20.

13 See Daston and Park, *Wonders and the Order of Nature, 1150–1750*.

14 See the pioneering research by Kappauf, *Wunder sind möglich*; Kappauf, "Spontaneous Remission of Cancer – Enigma and Paradigm"; Kappauf, "Spontanremissionen bei Krebs."

15 On disgust, see Curtis, de Barra, and Aunger, "Disgust as an Adaptive System for Disease Avoidance Behaviour."

16 Spittler, *Animals in the Apocryphal Acts of the Apostles*, 7.

hyperbole and yet mythical truth of folktales.[17] In his in-depth study of the Talmudic passage, James A. Redfield has recently provided a more nuanced classification. In his reader-centered literary analysis, he describes the stories as part of the paradoxographic project which produces "a catalogue of topoi on which tellers drew to craft characters and stories, and as a hybrid mode of inquiry, fusing natural science, ethnography, and geography, which mapped and made sense of paranormal phenomena at limits of the known world and the borders of literary genres."[18] Similarly, the present article will analyze the rabbinic testimony to extraordinary beings and events in the context of knowledge production understood as the process of gathering facts to enable orientation in the world, and science understood as the systematic study of the physical world through both scholarly tradition and observation.[19] The latter may require some clarification: In ancient scientific texts, observations made in writing are considered no less empirical than those made in nature.[20] Therefore, I will approach the aspect of autopsy—the wonders are often reported as having been *seen*—not with the general scholarly suspicion that this was meant to enhance the credibility of these stories, but rather as a way of zooming in on a subject and of seeing through someone else's eyes.[21] Rabbinic seeing, as Rafe Neis has shown, was also "being:" the sense of sight was intertwined with touch, physical experience, and material results.[22] A similar double standard appears to be at play among modern historians when the absence of explanations in paradoxographies or stories drawing from paradoxographical knowledge is evaluated as a way of making the paradox look more credible or more miraculous.[23] The idea that reason or cause (and, hence, science) resolves the miracle is inherently modern.[24] Rabbinic reasoning revolves generally around individual cases that are approached with a distinct set of rules.

---

17 The stories have been labeled tall tales by Ben-Amos, "Talmudic Tall Tales," 24–44 (with a summary of the allegorical approach to the stories by medieval scholars, 26–27); Stemberger, "Münchhausen und die Apokalyptik;" Stein, "Believing Is Seeing" [Hebrew]. Building on this scholarship, Frim, in "'Those Who Descend upon the Sea Told Me ...'," argues that the stories are appropriations which recast mythological motifs as symbols of rejected cultural alterity (2). The question of belief and faith was raised again in Stein, "The Blind Eye of the Beholder." Grossmark, "Talmudic Itineraria and Talmudic Pilgrimage," calls the stories a "strange mixture of fantasy and imagination" (100); Kiperwasser and Ruzer, "Aramaic Stories of Wandering in the High Seas of Late Antiquity," approach them as "travel fiction" (165). Redfield, "The Iridescence of Scripture," aligns the stories in a footnote with "another fantastical travelogue" (148 n120). In Redfield, *Adventures of Rabbah & Friends*, 57–82, he avoids the classification of the text and leaves this work to the reader.

18 Redfield, 210.

19 The theoretical underpinning of this article draws from Lehoux, *What Did the Romans Know?*

20 Thibodeau, "Six Modes of Reasoning."

21 For a summary of the issue of autopsy, see the discussion in Redfield, *Adventures of Rabbah & Friends*, 187–93. Crucially, references to autopsy are absent from other stories involving the mega fauna and flora of the land of Israel as found in b. Ketubbot 111b–112a and b. Hullin 59b, or of Rome in b. Megillah 6b, discussed by Berkowitz, "The Tall Tales of Babylonian Talmud Bekhorot 57b," 13–16. On *prosopopoeia* as a method for scientific imagination, see Amsler, "Education and Natural History."

22 Neis, *The Sense of Sight in Rabbinic Culture*.

23 E.g., Schepens and Delcroix, "Ancient Paradoxography," 382–89, and basically all scholarship on the subject that followed.

24 Daston and Park, *Wonders and the Order of Nature, 1150-1750*.

Cases are associated with other cases until the cluster can be identified as falling under a certain rule of interpretation.[25] In this system, knowledge proceeds from the case (or an *exemplum*) and its association with similar cases and rule-based interpretation, not from an explanation of the cause of the case.[26] Paradoxography "minimizes its *why*" not because it wants to deter people from questioning the validity of the miracle, or because the explanation is not known, but because it is (generally) much less important than the "*where*, *who*, and *what*."[27] These questions are also those who validate legal documents such as contracts.

For rabbinic scholars of Roman Palestine and Sassanid Babylonia, a systematic study of the physical world was only worthwhile in dialogue with the Hebrew Bible, whose text was taken as the "blueprint for creation."[28] Creation mirrored the Torah, and the mysteries of creation found their counterparts in the mysteries of the biblical text. In this paradigm, miracles such as the parting of the Red Sea (Ex. 14), the survival of the three men in the oven (Dan. 3), or Jonah's escape from the fish (Jonah 2) are already predetermined in creation.[29] The rabbinic sages' questions regarding miracles were therefore not so much about their possibility or impossibility as about their relationship to the text of the Hebrew Bible and their significance for Israel's history, their *raison d'être*.

The parameters that make someone believe, that make someone take something as a "fact," are culturally shaped. Today, academic knowledge qua science is informed by systematic observation, statistics, falsifiability, repeatability, and reproducibility. These methods and principles are also the basis of modern laws of nature. Rabbinic sages, like most of their contemporaries, used a different framework. Observation was a broader category. Seeing something written in a document, for example, was valid evidence,

---

[25] Moscovitz, *Talmudic Reasoning*; Similar strategies can alos be observed to have governed rabbinic medicine, see Amsler, "Function and Aesthetics of Talmudic Medical Recipes."

[26] Moscovitz, 4n9 quotes the following from Frederick Schauer's *Giving Reasons* (1995,658): "To give a reason is... to generalize. Reason-giving is therefore in tension with... case-by-case determination, and... recognition of the power of the particular. Conversely, reason-giving is the kin of abstraction."

[27] Redfield, *Adventures of Rabbah & Friends*, 194, although he assumes that there *is* 'a why' that could in principle rationalize the case: "Wonder is real: a paradoxography lists its *where*, *who*, and *what* but minimizes its *why*." The rationalizing example that he adduces from Antiquity is Palaephatus, whose rule-driven interpretations of myth are tedious and uninspiring, and were most popular among Christians, see Palaephatus, *On Unbelievable Tales*, 16-29, and 4-5. Redfield sees the narrative form in which the Talmud embeds paradoxographic knowledge as concerned with "evidence and explanation" (194), that is, *what* and *why*, but the why is generated by the readers themselves through the situatedness of the tales in the Talmud and intertexts.

[28] This fundamental assumption is most explicitly stated in the fifth century CE Palestinian midrash Genesis Rabbah 1:1: "the craftsman does not build it with his own knowledge, but from scrolls [made from hide, *diptera'ot*] and tablets that he has, so that he will know how to make rooms and furnishings. Thus, the Holy One, blessed be He, looked into the Torah and created the world," cited in Swartz, *The Signifying Creator*, 15. This text is an elaboration of m. Avot 3:14 and ultimately Prov. 4:2 (98n9). For the Christians, on the other hand, the Old Testament was a mere sketch, while the New Testament and the church were the true image of the heavenly creation, see Kominko, *The World of Kosmas*, 215–16.

[29] Kadushin, *The Rabbinic Mind*, 153–54.

and if two people saw the same thing, it was considered a fact.[30] Roman literary authority was dictated by the *mos maiorum*, the "custom of the ancestors," and an important component in fact-making for both authors and readers. Roman intellectuals were generally convinced that "voices from the past possess more authority than those of the present," and the attribution of knowledge to past authors became a hallmark of scholarship.[31] This same principle permeated rabbinic literature. Not only must new rulings and opinions always confirm older *mishnayot* and *baraitaot*, but the virtue of having faith in a teacher's words even without personally witnessing the evidence is exemplified in many stories.[32] These principles often led to the production of facts that appear incredulous to modern scholars. However, seeing is never a neutral activity, and the way seeing is transmitted to and interlinked in the brain is an ongoing mystery.[33] Modern science remains baffled by the fact that memory is a highly biased resource, influenced by all sorts of sensory, emotional, and bio-chemical predispositions.[34] Observation thus needs to be "situated, understood, and processed, because that is where the world we perceive gets put together as a coherent whole."[35] These insights will be taken into account in the following analysis; claims of seeing will neither be taken as fraudulent truth claims nor as an indicator of exclusive visual perception. Rather, it will be asked why it was important that things were "seen" that could not possibly be seen.

2 'One who sells a ship': Dismantling a Talmudic Commentary

Most of the texts under discussion here are found in a Talmudic commentary to a lemma from the Mishnah that reads 'One who sells a ship' (m. B. Batra 5:1). As I have argued elsewhere, it is likely that the composers of the Talmud crafted the commentaries on Mishnaic lemmas by assigning keywords to them before selecting previously classified texts according to these keywords.[36] The keywords were based on the lemma from the Mishnah, but sometimes also on the Palestinian Talmud's commentary on the same lemma. The text pieces returned by the keyword search were then organized into a commentary on the given word.[37] The first texts of a commentary were often lexical

---

30 See b. Yev. 22a, b. Sanh. 106b, and b. B. Metz. 85b, where the formula "I myself saw" is used for people who saw things written in certain documents.

31 Thibodeau, "Traditionalism and Originality in Roman Science," 593.

32 E.g., in b. B. Bat. 75a //b. Sanh. 100a, where a student, who had to see ministering angels cutting big chunks of jewels before believing in his teacher's exegesis of Isa. 54:12, was turned into a heap of bones, see Stein, "The Blind Eye of the Beholder," 59.

33 Neis, *The Sense of Sight in Rabbinic Culture*, 25–26.

34 E.g., the summarized scholarship in Zlotnik and Vansintjan, "Memory." My thanks to Andreas Schläpfer (University of Bern) for this reference. Cf. also Neis, *The Sense of Sight in Rabbinic Culture*, 5n11: "We might want to question the existence of a one-to-one relationship between the forms of representation (e.g. single-point perspective, abstraction, etc.) and the experience of vision; in other words, we might not want to assume a correspondence theory of representation and perception."

35 Lehoux, *What Did the Romans Know?,* 2.

36 Amsler, *The Babylonian Talmud and Late Antique Book Culture*, 56–93.

37 Amsler, *The Babylonian Talmud*, 94–132.

and responded directly to the lemma, as in Baba Batra 73a, where the commentary begins with a translation from Mishnaic Hebrew into Aramaic of the technical terms used in the Mishnah to describe the different parts of a ship (e.g., mast, sail, anchor, oars). The lemma obviously suggested the keyword *ship* to the compilers, who additionally associated the keyword *travel*: the commentary continues to relate stories of rabbinic sages who explore the deep sea and the desert until the next Mishnaic lemma is discussed on folio 75b.[38]

The commentary of the Palestinian Talmud on the same Mishnaic lemma gives only one *baraita* about selling ships before, oddly enough, repeating its commentary on Kil'ayim 2:5, a text on the conditions of land use in the land of Israel. The Babylonian Talmud does not address this issue until Baba Batra 80b–82a. Therefore, the Babylonian Talmud receives little help from the Palestinian Talmud in selecting and organizing the 'ship-commentary.' Nevertheless, the influence of the Palestinians should not be easily dismissed. After all, the Babylonian Talmud uses the same *baraita* as the Palestinian Talmud, directly following the lexical beginning. Moreover, the Babylonian commentary becomes decidedly eschatological in the second half of its commentary on m. B. Batra 5:1, adding texts about Jerusalem in the world to come.[39] Given the fact that the Mishnaic tractate Kil'ayim is concerned with the agricultural organization of the land of Israel—which, at the time of the Babylonian sages, was not only a geographical but also a political impossibility for Jews—the Palestinian Talmud's repetition of the Kil'ayim commentary may have led the Babylonian compilers to the association of the "ship" with the "world to come" and the "time to come": phrases that are repeatedly mentioned throughout the commentary.[40] These features all suggest that the text was meticulously crafted from pieces of text that were pasted together with anonymous or attributed comments and objections.

The arrangement of the 'ship-commentary' may also have been guided by an additional hodological principle, generated by the composers' concept of the structure of the world, their inner map. In their recent book, Rafe Neis observed that the rabbis seem to return time and again to the basic topographies known also from contemporary Greek and Latin sources: a distinction between settlement and wilderness (ישוב/οἰκουμένη and מדבר/ἔρημος), but also between the dry land (ישוב + מדבר = יבש) and the sea (ים/Ὠκεανός) that encircled the dry land. Within this geographic framework, "exotic and fabulous creatures" were often placed into distant lands and the deep sea.[41] The same basic topography appears to underly the composition in Baba Batra 73a–75b, as James Redfield observed: "It begins with Ocean; moves east, to the homeland of its own audience; then west, to the river Jordan, which is a boundary of the Land of Israel; then

---

[38] For translations of the entire commentary see Stein, "The Blind Eye of the Beholder," 125–35; and Redfield, "The Iridescence of Scripture," 155–75.

[39] Stein, "The Blind Eye of the Beholder," 61; Kiperwasser and Ruzer, "Aramaic Stories of Wandering"; Redfield, "The Iridescence of Scripture," esp. 124. 126–132.

[40] עלמא דאתי (73b: 1x; 74a: 1x; 74b: 1x); עולם הבא (75b: 1x); עתיד לבא (74b: 2x); עתיד (74b: 1x; 75b: 2x); עתידין (75a: 1x; 75b: 2x).

[41] Neis, *When a Human Gives Birth to a Raven*, 105–6.

south, to the Sinai Peninsula and the site of national origins; then it comes full circle to Ocean."[42] Granted, Redfield only has the first part of the commentary in mind (73b–74b) and notes the minor hiccup in the structure in 74b when another desert story is added after it came full circle to the Ocean. Yet, the rest of the commentary (74b–75b) takes the reader back to the Ocean, the *tehom*, and the Leviathan that roams it.

Of interest to this paper are only a few of these text pieces woven into the 'ship-commentary,' which, based on stylistic and material arguments, can be shown to have formed individual compositions before they were used independently and associatively in this commentary. Contextualized, these short compositions provide a better insight into the function of nature miracles and impossibilities in rabbinic thought than the entire commentary shaped by the constraints that arose from the process of creating a coherent commentary out of texts that were not originally written for this purpose.[43]

Three different textual compositions can be identified by their common vocabulary and especially their introductory formulas in Baba Batra 73b–74b. From a bibliographical point of view, these introductory formulas are more decisive than their attribution to certain rabbis, since the latter were often adapted by the compilers in the service of the associative flow or added to preserve the discursive mode of the Talmud. This "Talmudization," as Redfield calls it, is another way of weighting and establishing connections between different knowledge-pieces and of involving the reader.[44] In ancient documents, the beginnings of new textual units are often marked visually through color, signs or formulaic introductions.[45] Especially in lists such linguistic markers indicated the beginning of a new item. In the Baba Batra commentary, three stories are introduced with 'I myself saw' (לדידי חזי לי), twelve stories with 'One time it happened' (הוה זימנא חדא), and four stories with 'Come, I will show you' (תא אחוי לך).

In what follows, I will discuss these stories together with others that seem to have belonged to the same short compositions based on the shared formulaic introduction, but that have been used in different places in the Talmud in the compilation process. When the reconstructed three compositions are placed in conversation with paradoxography, it quickly becomes clear that they share the same interest: disproportionately large animals, peculiar animal behavior, astonishing plant properties, curious ethnography, and the sighting of intermediate beings such as demons or angels. Apart from the last two, which represent a late antique addition to the canon of 'possible impossibilities,' these topics are all commonly associated with paradoxography.[46]

---

[42] Redfield, *Adventures of Rabbah & Friends*, 196.

[43] For discussions of the entire commentary, see Stein, "Believing Is Seeing;" Stein, "The Blind Eye of the Beholder;" and Redfield, "The Iridescence of Scripture."

[44] On "Talmudization," see Redfield, *Adventures of Rabbah & Friends*, 48–54.

[45] Reggiani, "Towards a Socio-Semiotic Analysis," 120.

[46] The lost paradoxography of Damascius of Damascus contained a similar expansion of traditional paradoxographic themes with *52 chapters of marvelous stories on demons*, see Schorn, "Damaskios of Damaskos," 341.

3 One Time it Happened…

"One time" or "once" (זימנא חדא/זימנין) or "one day" (יומא חד) is an oft-used introductory phrase throughout the Talmud. The one translated here as "One time it happened" (זימנא חדא הוה), however, is only used to introduce nature paradoxes.[47] It seems carefully chosen to mark an event on a processual timeline without actually marking it, as if these things happened on an alternate, paradoxical timeline.[48] In total, the mini-composition "One time it happened" contains 19 stories: two stories confirm the behavior traditionally attributed to certain demons;[49] five stories concern ethnographic knowledge or knowledge imparted by someone from another people (four concern a *tayya'a*, a member of a nomadic Arab tribe, while one is about the Persian king Izgadar);[50] one story is about the miraculous properties of the herb dragon's blood and of broom, and another one about the properties of stars;[51] the majority of ten stories revolves around exceptional characteristics of animals, mostly fish.[52]

The natural history facts used in the stories can be traced back to paradoxographies. For example, a Syriac treatise on *Natural Things* going back to a late antique Greek paradoxography pseudepigraphically attributed to Aristotle lists the features of a huge Sea creature called *kētos* (κῆτος) in two separate entries.[53] One entry relates what happens when this huge fish washes ashore: people gather and use its ribs as beams for roofs, and they salt the fish's flesh. They take the fish's eyes, melt them, and use the oil for burning in lamps.[54] Another entry states that the *kētos* appears to sailors as an island and does not move unless they light a fire on the fish's back or dig into it, in which case the fish dives.[55] The rabbinic authors of the "One time it happened" stories were obviously aware of these puzzling characteristics of the *kētos*, for two stories closely parallel the paradoxographic tradition:

---

[47] An exception to this rule is b. Betzah 28a. A few Mss read "one time it happened" instead of "once" (Vatican 134; Oxford Opp. Add. fol. 23). Similarly, two ethnographic accounts, one about the inhabitants of a town called "Truth" (b. Sanh. 97a) and one about the irrational laws of the Sodomites (b. Sanh. 109b) are introduced by "one time" (or by "one day" by some text witnesses).

[48] For Jewish "time" as process, see Stern, *Time and Process in Ancient Judaism*. Paradoxical beings were often associated with temporary paradoxes such as at the first Shabbat at twilight, Neis, *When a Human Gives Birth to a Raven*, 138.

[49] Demons: b. Pesah. 111b and 112b.

[50] *Tayya'a*: b. RH 26b // b. Meg. 18a; b. Ketub. 72b; b. Sanh. 110a //b. B. Bat. 74a; b. B. Bat. 73b; Izgadar: b. Zevach. 19a.

[51] Dragon's blood and broom: b. B. Bat. 74b. Stars: b. B. Bat. 73b.

[52] Exceptional animals and animal characteristics: wild camels attack (b. Ber. 54a); sharks guard the basket of Hanina ben Dosa's wife (b. B. Bat. 74a–b); a fish with engraved horns (b. B. Bat. 74a); fight between *tannina*-monster and bird (b. B. Bat. 74a). Huge animals: a fish that destroyed sixty towns while beaching (b. B. Bat. 73b); a fish as big as an island (b. B. Bat. 73b); an extremely long fish (b. B. Bat. 73b); a huge bird (b. B. Bat. 73b); extremely fat geese (b. B. Bat. 73b); fish with eyes like the moon (b. B. Bat. 74a).

[53] Ahrens, *Das Buch der Naturgegenstände*, 4 (on the attribution to Aristotle).

[54] Ahrens, *Das Buch der Naturgegenstände*, 71–72 (§ 95).

[55] Ahrens, *Das Buch der Naturgegenstände*, 73 (§ 100).

> Said Rabbah bar bar Hanah: One time it happened that we travelled by ship and saw a *kwwra*-fish.[56] A "mud eater" entered its nostril and it died. Thereupon, the water cast [the fish] to the shore. This [incident] destroyed sixty towns. Sixty towns ate from it and sixty towns salted [its flesh]. Three hundred bottles of oil were filled from one of [the fish's] eyeballs. When we returned after twelve months, we saw that they sawed its bones and roofed those [sixty] towns with them.[57]
>
> Said Rabbah bar bar Hanah: One time it happened that we travelled by ship and saw a *kwwra*-fish. There were palm trees on its back and grass sprouted on it. Thinking that it was dry land we ascended, baked, and cooked. And when its back became hot it turned over. And if our ship would not have been near, we would have drowned. (b. B. Bat. 73b)[58]

Some details are so similar—the oil from eyeballs, the salting, the roofing, the kindling of a fire, as well as the order in which the characteristics are discussed—that it is difficult not to suggest that an identical or at least very similar treatise circulated among the Jews in Babylonia. However, the stories may also have circulated independently, for example on tablets, or even orally, although in this case we would expect longer and more elaborate versions. In any case, the Syriac traditions concerning the *kētos*-fish may help us understand the reason for the existence of this story in rabbinic literature. In a letter to John the Stylite, Jacob of Edessa refers to the *kētos*, the most famous of the Greek mythological sea monsters and according to the Septuagint's reading of Genesis 1:21 God's creation, as another name for the Leviathan.[59] This alignment allowed Jacob to learn about the nature of the Leviathan from non-biblical sources concerned with the *kētos*. The rabbis seem to have accepted the existence of such an enormous *kwwra*-fish (כוורא) but distinguished it from the biblical Leviathan.[60]

The next fish story in the "One time it happened" -series is very brief but adds a further detail about the Leviathan: it is big enough to swallow a 300-mile-long horned fish. Similarly, Jacob of Edessa states that *kētos*-fish can grow to over 300 miles in length.[61] Jacob's knowledge of the fish's location is consistent with the Syriac paradoxography (due to their size, *kētos*-fish live in the Indian Red Sea and in the Okeanos beyond the inhabited

---

[56] The term is otherwise used more generically for "fish," see Sokoloff, *Dictionary of Jewish Babylonian Aramaic*, s.v. כוורא.

[57] This translation follows Sokoloff, *Dictionary of Jewish Babylonian Aramaic*, s.v. טלל. It is a fair compromise between the varying endings, which all imply that beams were sawed from the bones of the fish and that the sixty towns were rebuilt with them.

[58] Unless otherwise noted, translations are mine. Biblical quotes follow the translation of the New International Version.

[59] Schröter, "Erster Brief Jakob's von Edessa an Johannes den Styliten," 295; and Iliad 20.147; Odyssey 12.97, although Homer mentions the κῆτος only en passant, mythographers such as Pseudo-Apollonius preserve stories on how Poseidon sent the *kētos* as a punishment. In addition to devastating the land, the creature also kept the daughters of the responsible culprit hostage, and a hero came to save her (Andromeda, *kētos* killed by Perseus in *Library* 2.3; and Hesione, *kētos* killed by Herkules in Library 2.9).

[60] Sokoloff, *Dictionary of Jewish Babylonian Aramaic*, s.v. כוורא.

[61] Schröter, "Erster Brief Jakob's von Edessa an Johannes den Styliten," 20.

world), but he adds the missing names to the deep seas and numbers indicating the length of the fish.[62] Similarly, the rabbinic author gave the number of the towns destroyed and roofed by a dead *kētos/kwwara* (b. B. Bat. 73b, cited above). Paradoxographic accounts generally tended to gain numerical detail rather than lose it.[63]

Although the rabbinic sages maintained a linguistic distinction between the Leviathan and *kētos/kwwra* creatures, the Leviathan's characteristics were clearly modeled after the *kētos*. For example, the *kētos* is said to emit a fragrant breath with which it lures food into its mouth, and the rabbis conclude from Job 41:23 'It [the Leviathan] makes the depths churn like a boiling caldron'[64] that the Leviathan's breath is boiling hot and that the creature obtains its food by boiling the surrounding waters.[65] Moreover, the rabbis classify the Leviathan as one of the *tanninim* (per Gen 1:21) the creatures translated as *kētē* in the Septuagint.[66]

The selection of the nature paradoxes used in these short stories thus appear relevant for the study of the Leviathan and other *tanninim*, and the writers' access to a diverse range of bookish knowledge must have been better and more sophisticated than previously assumed. The selective use of non-Jewish texts may not have been due to inaccessibility, but rather to the focus of the inquiry. As with the other compositions, the goal was to learn about the paradoxical animals of the Hebrew Bible, the blueprint of creation. This creation could also be found in the nature descriptions by gentiles.

The same scrutiny is at play in the other encounters with megafauna in this short composition:

> Said Rabbah bar bar Hanah: One time it happened that we travelled by ship and saw a bird. And it stood in the water up to its ankles and its head was in the sky. We said to each other: The water seems not [deep]. Let us descend and cool ourselves. [At that moment] a heavenly voice came forth and told us: "Do not descend here! For it happened that the axe of a carpenter fell into [these waters] seven years ago and it has not reached the ground yet." This is not because the water is deep but because the water flows rapidly.
>
> Rav Ashi said: (A) This was *zyz šaday* (זיז שדי), as it is written: ...and *zyz šaday* standing (Ps. 50:11). (b. B. Bat. 73b)

The subscription (A), which may have been part of the original (reference) work from which this story was taken (or after which it was modeled), identifies the giant bird as the Zyz, one of the names given to the phoenix, as Maren Niehoff has shown.[67]

---

[62] Ahrens, *Das Buch der Naturgegenstände* § 95; and Schröter, "Erster Brief Jakob's von Edessa an Johannes den Styliten," 20.

[63] The seven "wonders of the world," for example, appear with exact measures for the first time in Hyginus' *Fabulae* (§ 223), see Brodersen, *Die sieben Weltwunder*, 9–21, esp. 16–17.

[64] In the Christian Bible the verse is Job 41: 31.

[65] See Ahrens, *Das Buch der Naturgegenstände*, § 101 and further references given in the introduction to this issue, and b. B. Bat. 75a.

[66] b. B. Bat. 75a.

[67] Niehoff, "The Phoenix in Rabbinic Literature," 245–65.

There are several mentions of the phoenix in rabbinic literature. Taken together, they repeat the characteristics of the phoenix as described in Greek sources, with one notable difference: in rabbinic interpretations, the phoenix is enormous, likely due to its ability to overshadow the sun.[68] Like the Leviathan, the Zyz was given to the Jewish people to eat as compensation for the dietary restrictions on fish and fowl (Lev. R. 22.10), and like the Leviathan and the Behemot, the Zyz is destined to be eaten at the final "messianic *symposium*."[69]

The composition "One time it happened" seems to be a carefully crafted and learned journey through the deep waters, a place normally avoided by sailors, and, in the rabbinic scientific-exegetic imagination a place where primordial and timeless creatures dwell and guard some precious items. Thus, as the journey continues, we see through the eyes of the rabbis a fish with eyes the size of two moons;[70] a fish with inscribed horns; a basket of *tekhelet*-colored threads for the righteous in the world to come; and a battle between a gigantic *tannina* (Aramaic spelling) and a raven over a life-restoring gem. The deep sea is, in rabbinic geographic and cosmographic speculation, a place where the sky with its birds and the sea with its fish meet (all of them created on day five of the creation week, Gen 1:21), and where past and future converge:

> One time it happened that we were on our way. A wave lifted us up until we could see onto the birthplace of a small star. It appeared to me like [the size of land needed to sow] forty measures of mustard seed. And if [the wave] had lifted us further, we would have been burned by the heat. (b. Bat. 73b)

While modern scientists use lenses to see things they would not normally see, late ancient scientists looked through the eyes of others, such as rabbinic sages.[71] This is not a surprising development given that "ancient authors favored vision as the most reliable among the senses and posited an intimate relationship between sight and knowledge."[72]

"One time it happened" stories are scientific in the sense that they bring together recherché facts that help to understand the dimensions of "deep creation" in which space and time collapse (akin to Mikhail Bakhtin's chronotopes). Thus, in the last three stories of this composition, the rabbinic sages are placed in the desert, another inhospitable space. This foreign space could only be fully understood by the equally foreign *tayya'a*, a nomadic Arab, who can even tell how far away the nearest source of water is just by looking at the sand. (B. Bat. 73b). After meeting these marvelous nomads, the rabbis

---

[68] See Niehoff, "The Phoenix," 260–65. According to Ezekiel the Tragedian, the phoenix is also extremely big (ibid 262n51).

[69] Niehoff, "The Phoenix," 263, emphasis in original.

[70] The two large snakes that Alexander the Great sees in India have eyes the size of "Macedonian shields," see 134 f16c in Brill's New Jacoby. Most other parallels to Greek travel accounts, which by nature comprise paradoxical and wonderful observations, are accounted for in Redfield, *Adventures of Rabbah & Friends*.

[71] Seeing through the eyes of sages or biblical figures is a technique observable across rabbinic literature, see Bregman, "Aqedah: Midrash as Visualization," 84–100.

[72] Kominko, *The World of Kosmas*, 219.

also see fat geese reserved for the world to come, find herbs that heal wounds, and wood that turns into coals that still burn after twelve months in the paradoxical place that is the wilderness. The list of twelve "times that happened" ends with this reference to "twelve months" and another subtitle or reader's note, possibly taken from the original paradoxographic list that identifies the herbs and the nature of the coals: "These herbs: dragon's blood, and the coals: broom."[73]

4 I myself saw…

In Baba Batra 73a–75b, three stories introduced by the phrase "I myself saw" represent another case of seeing through, or rather with, someone else's eyes. The phrase seems at first reminiscent of juridic formulaic language typical for eyewitnesses. But when all the instances in which it is used in the Talmud are considered, it seems to be used more often in connection with classical paradoxographic themes such as animals, plants, geography, ethnography, angels, and demons than in legal contexts.[74] In fact, the phrase is predominantly used in connection with places. Eight reports of seeing a particular place contrast with four observations by *tayya'a* Arabs, three demon and one angel sightings, two accounts of giant animals, and one of Jonah's tree (which grew over night).[75]

All these literal "site-seeings" exhibit a chorographic interest because they indicate the size of a particular place or river, or the distances between places. They include the last resting place of the Israelites before they entered Canaan (Num. 33: 49), the distance between Sodom and Zoar (Gen. 19:23), the height of a rock east of Jerusalem called Keren Ofel (cf. t. Ta'an 3,1), the distance between the village Ludim and Lod (Lydda), the size of the King's Mountain of king Yannai (Alexander Jannaeus), and the size of the original Jerusalem.[76] The dimensions of the stream of milk and honey (Ex. 3:8) are given twice and differently.[77] Aside from Sodom and the flow of milk and honey, the list does not converge with the places "where miracles happened for Israel" and where thus a blessing must be said, or places where "idolatry was uprooted."[78] Rather, the list shows an interest in historically significant places, including those that were important to post-biblical Judaism. The list resembles the onomastic genre—lists of biblical place names with information about their locations and contemporary features. The *Onomasticon* of Eusebius of Caesarea, later translated into Latin by Jerome, is the main exponent of the

---

[73] Sokoloff, *Dictionary of Jewish Babylonian Aramaic*, s.v. סמתרי, and ריתמא.

[74] The formula is used in connection to reinforcement in b. Ber. 56a; b. Yoma 78b. The formula is used in a juridical context only in b. B. Qam. 58b.

[75] Demons: b. Taan. 25b; b. B. Bat. 73a; Sotah 48a // b. B. Qam. 21a; angels: b. Ta'an. 24b (Ms Munich 95); *tayya'a*: b. Yevam. 120a; b. Sanh. 67b; b. Shabb. 82a and 155b; animals: b. B. Bat. 73b//b. Zevah. 113b (aurochs); and b. B. Bat. 73b (frog); tree: b. Shabb. 21a.

[76] b. Eruvin 55b // b. Yoma 75b (last resting place); b. Pess 93b (Zoar); b. Ta'an. 22b (Keren Ofel); b. Git. 4a (Lod); b. Git 57a (King's Mountain); b. B. Bat. 73b (Jerusalem).

[77] b. Meg. 6a and b. Ketub. 111b, but the reports are not identical.

[78] See b. Ber. 54b, and Neis, "Pilgrimage Itineraries," 224–56.

genre, but the focus on the Old rather than the New Testament suggests that Eusebius may also have worked with Jewish precedents.[79]

It is not uncommon for a paradoxa to be very local phenomena, as was already briefly noted in the introduction. Not only are the listed miracles often tied to a specific place—sometimes a generic one (i.e., the sea, the forest, the north, "India"), sometimes a very specific one (i.e., Mount Tabor, the dome of the wall of Mahoza, the Sea of Tiberias)—but some paradoxographies even follow hodological principles in their structure.[80] The Syriac *Natural History* mentioned above contains a section of nine entries on the characteristics of places as diverse as Spain and the Sea of Galilee.[81] The presence of geographical material shows that the rabbinic authors of the "I myself saw" treatise continued the periegetic outlook of the paradoxographic genre. The itineration of the "I" in "I myself saw" further links the presence of miracles to the individual observer.[82] By way of attribution, the seeing sage becomes a locus of the miracle. Whereas the (original) "I myself saw" list offered the possibility to become a locus of the miracle to every reader or listener, the Talmud forecloses this possibility by identifying the one who sees as a rabbi.[83]

The paradoxographic eyewitness accounts in this composition differ from those above in that they are more interested in providing orientation in this world than in the world to come. Yet they remain tied to the blueprint of creation, the Hebrew Bible, which they seem to treat as a map. The sages blur the lines between what is observed in the biblical text and what is observed in creation. This again shows that paradoxes of nature are not necessarily seen in nature, but also in texts. Ideas about the possibilities of creation are thereby mutually stimulated by the existence of miraculous things and beings, as demonstrated in paradoxographic texts and the text of the Hebrew Bible, as in the following example, which discusses the size of a young aurochs (אורזילא דרימא).

> Said Rabbah bar bar Hanah: I myself saw the young of an aurochs, [only] one day old, and it was [as big as] Mount Tabor.
>
> And how big is Mount Tabor? Forty Persian miles.
>
> And the resting place of its head is one Persian mile and a half. And the length of its neck was three Persian miles. And it dropped an excrement, and it dammed up the Jordan. (b. B. Bat 73b//b. Zevah. 113b)

This account shows how information about distances and elevations was used in exegetical discussions and offering the specifics necessary to reconstruct certain events. The story appears also in tractate Zevachim in a discussion of how the aurochs survived the flood. Since the animal is so big, it is not feasible that Noah put two aurochs in the

---

79 Stenger, "Eusebius and the Representation of the Holy Land," 390–91.

80 Geus, "Paradoxography and Geography in Antiquity, 243–58.

81 Ahrens, *Das Buch der Naturgegenstände*, §80–§89.

82 On the physicality of seeing, see Neis, *The Sense of Sight in Rabbinic Culture*.

83 This is not unlike the case of Makarios the Roman described by van Pelt, "The Life of Makarios the Roman."

ark and the rabbis' reason that he must have taken two calves and put only their heads in the ark. However, based on the size of the calves' heads as inferred from the above information, even the heads were too large for the ark. Ultimately, the sages conclude that the calves merely placed their noses in the ark and tied to it by their horns. Since the discussion had previously concluded through similar minute exegesis that the waters of the Flood were hot, it is assumed that a miracle (*nes*) was performed for the aurochs and the water around the ark was cooler than the rest.[84] Interestingly, although the aurochs is astonishing in its size, it is not considered a miracle by the rabbis, who define a miracle as a change in the order of creation.[85] But the animal is considered part of that creation and deserves to be saved from the Flood.

Already the Hebrew Bible provides some information on the 'aurochs' (*re'em*), a term which is, in fact, highly conjectural.[86] The animal is said to be strong (Num. 23:22//24:8), untamable (Job 39:9–10), and has horns big enough to 'gore the nations, even those at the ends of the earth' (Deut. 33:17).[87] Psalm 29:6 states that God 'makes Lebanon leap like a calf, Sirion (Mt. Hermon) like a young wild ox,' a poetic parallelism which, if read literally, may be understood as the young wild ox being the size of Mt. Hermon.[88] The enormous size of the aurochs can further be gleaned from Is. 34:7, according to which the fall of a wild ox will drench the land with blood. Again, the rabbinic authors who compiled information about the aurochs did not invent its characteristics, but saw the aurochs through careful study of the biblical text, supported by reports of giant animals in paradoxographic accounts, including Persian ones:

> I, myself, saw a frog and it was like the fort of Hagronia.
>
> [Interjection: And how [big] was the fort of Hagronia? Sixty houses.]
>
> A *tannina*-snake came and swallowed the frog. A *pashqantsa*-bird (פשקצא) came and swallowed the *tannina*-snake. And it rose and sat on a tree. You see how great the strength of this tree must have been. (b. B. Bat. 73b)

Scholars have argued that this account is best interpreted on the basis of Persian natural history with roots in mythology, but with the important detail that the serpent that swallowed the frog is the biblical sea serpent Tannin (Ex. 7:12, Jer. 51:34).[89] A number of

---

84 Included in this miracle is Og, king of Bashan, the last survivor of the giant Rephaim, whose gigantic iron bed can still be seen in Rabbah of the Ammonites, according to Deut. 3:11. See Fine and Fine, "Rabbinic Paleontology," 8. It is imagined that he walked beside the ark (b. Zev. 113b).

85 On the rabbinic concept of *nes*, see Kadushin, *The Rabbinic Mind*, 156.

86 See Gesenius, *Hebräisches und Aramäisches Handwörterbuch*, s.v. רים; and Sokoloff, *Dictionary of Jewish Babylonian Aramaic*, s.v. רימא.

87 The horns are also mentioned in Ps. 22:21 and 92:10. The Septuagint translated the animal mentioned in Job 39:9 as μονόκερως, 'one horn.' This term was translated in the King James Bible as "unicorn." The Syriac Natural History and the *Physiologus*, however, describe the unicorn as small, so it is obviously different from the rabbinic *re'em*.

88 Quotes from the Hebrew Bible follow the New International Version.

89 I remain a bit skeptical of Kiperwasser and Shapira, "Irano-Talmudica I," 109n38, who suggest an impact of Bundahišn 24 on the sequence and nature of the giant animals mentioned in Baba Batra. They obviously

cultural, textual, and visual stimuli made the authors of the 'I myself saw' composition 'see' the things they described. Embodying these visions (as the I) allowed them to explore 'deep creation' the merging of time and space, past and future, above and below: scientific imagination.

5 Come, I will show you…

Five stories are introduced with "Come I will show you" in the Talmud, four of them in the commentary on the 'ship' lemma in tractate Baba Batra. Genre-wise, the composition was associated, at least by the compilers of the Talmud (or a later copyist), with the "One time it happened" accounts, since one of the stories from Baba Batra has a parallel in Sanhedrin 110a, where it is additionally introduced with the latter formula.

Interestingly, the introductory formula "Come I will show you" is the one that can be most clearly linked to an eyewitness account. In a story in Baba Batra 46a, the phrase introduces the case of a man who reclaims his cloak from a tailor or laundryman. But the craftsman denies having received the cloak, and the owner counters that he has witnesses who have seen the cloak in the craftsman's possession. The craftsman then claims that the cloak they saw belonged to someone else. When the owner asks to see the cloak, the craftsman refuses to show it to him. The formula thus introduces a story in which something is hidden from view, and only one party can decide who gets to see it. This is precisely the theme of the four stories in B. Bat. 73b–74a, and certainly not by accident. Rather, it is another example of the incredible minutiae of the rabbis' bibliographical data management.

The 'Come I will show you' stories in the 'ship' lemma commentary feature again a *tayya'a*-Nomad who shows Rav bar bar Hanah four paradoxes in the desert: the giant bones of the Israelites who died in the desert (Num. 14); Mt. Sinai (Ex. 19), which he finds surrounded by white scorpions the size of donkeys; the chasm that swallowed Korah and his people (Num. 16); and the place where the earth touches the sky and where the "wheel of the sky" can be seen revolving.[90] These places were not normally accessible because they have been hidden in the desert and in the custody of the *tayya'a.* In this desert, the past is buried in the sand next to a place where the passage of time can be observed. Like the deep sea and the desert, the past is also an inhospitable place, but there are guides.

---

have a point in that the פשקצא-bird is not a "raven" as traditionally interpreted (and which would turn this battle into something like the last battle between unkosher megafauna), but a huge bird like the rabbinic phoenix or the Iranian *Simōrg*. Then again, the name *pashqantsa* is more cognate to the name of a similar bird known from Armenia (and the Caucasus), the pasku̇. See Schmidt, "The Simorg" (2002), https://www.iranicaonline.org/articles/simorg, last accessed February 2026. Berkowitz, "The Tall Tales of Babylonian Talmud Bekhorot 57b," 17–18, recently pointed out the resemblance between another huge bird, the *bar yokhani*, and the Rukk known from *One Thousand and One Nights*.

90 For a discussion of possible intertexts and intertextual readings of these stories, see Redfield, *Adventures of Rabbah & Friends*, 197–200 (noting a striking parallel between the donkey-sized scorpions and the Alexander Romance) and 213–216.

The mental map that the little composition "Come, I will show you" depicts is revealing of the intellectual project underway here.[91] This brief, paradoxical travelogue locates three dire biblical miracles in the dire space in which they happened. Although far away in an inhospitable place, they are still part of the known world. And just as the sun wheel comes and goes, so might history.

The semantic history of the term used for miracle in Mishnaic Hebrew, *nes* (נס, plural *nissim*), explains the rabbinic connection between miracles and places. In the Hebrew Bible the term *nes* is used exclusively in the sense of 'standard,' 'pole,' or 'lag,' that is, a sign that marks a place.[92] In rabbinic texts, the term *nes* takes on the meaning of 'miracle' and is associated with historically significant places worthy of identification on the biblical map and of a visit (even if the journey remains imaginary or takes place on a decorated mosaic floor). In early Christian writings, the Greek term *gnorisma* (γνώρισμα) underwent comparable conceptual changes. The term originally referred to tokens identifying a legitimate but lost child (typically a god), a lost lover, or a wanted murderer.[93] Although the term belongs to the semantic field of *sēmeion*, sign, it differs from the latter in that a *gnorisma* involves an emotional and somewhat "active" recognition.[94] In Late Antiquity, Eusebius understood sites associated with the life of Jesus to be *gnorismata*—sites that are "encapsulating a specific meaning."[95] Compared to earlier literature, the term is exponentially more common in patristic texts.[96] What emerges in late Antiquity is a geographical version of the medieval *doctrine of signatures*, which claimed "that some natural objects are 'signed' with indications of their hidden qualities."[97] Both rabbinic and patristic texts are involved in the project of identifying places where miracles took place, thereby indicating the often hidden properties of a place.

6 Conclusion

At a time when geographical knowledge and orientation were mostly a textual matter, and maps served not only navigational put also decorative and devotional purposes, the rabbinic notion that the Torah was the blueprint of creation was not (or not just) a metaphor.[98] The rabbinic sages searched the Hebrew Bible for landmarks that could

---

91 On the history of the term "mental map" and its necessity for human cognition, see Podossinov, "Karte und Text," 12.

92 See the discussion in Kadushin, *The Rabbinic Mind*, 161–62, and Gesenius, *Handwörterbuch*, s.v. נס.

93 Hähnle, "ΓΝΩΡΙΣΜΑΤΑ," 12–116.

94 Hähnle, "ΓΝΩΡΙΣΜΑΤΑ," 140.

95 Stenger, "Eusebius and the Representation of the Holy Land," 396.

96 Hähnle, "ΓΝΩΡΙΣΜΑΤΑ," 141.

97 Principe, *The Scientific Revolution*, 29.

98 On the ancient map as subordinate to text, see Podossinov, "Karte und Text." The late-antique Madaba Map, a mosaic on a church floor in Jordan, the marble Forma Urbis Romae in the Roman *templum pacis*, or the "Dura Europos route map" engraved on the leather covering of a shield are just some prominent examples of maps that served purposes beyond orientation.

provide orientation or point to natural resources like a map or an itinerary. In the course of this process, the term for landmark, *nes*, became synonymous with miracle.

Paradoxography—gentile or biblical—becomes the convex or concave lens through which things can be seen that otherwise remain hidden or blurred. Nature miracles stimulate the scientific imagination about the unseen, which then becomes visible or, at least, plausibly imaginable. Paradoxography thus enables better guesses about the nature of other, and therefore likely paradoxical, worlds (such as the world to come, the primordial world, the antediluvian world, or the wilderness) than individual experience or imagination alone, which is rarely able of think beyond opposites when it comes to imagining 'the other.' At the same time, a physical presence is given to this imagination by the one (in the Talmud identified as a rabbinic sage) who *sees* these things and who becomes a locus of knowledge.

The use of verbal and textual descriptions instead of maps, a common practice in Late Antiquity, inevitably educated people's graphic thinking and memorization, but also their meticulous perception of landscape. Every tree needed to be noted, every topographical peculiarity memorized. When the mind is trained in this way, it will study a text and note all the details, imagining them in such a way that they can be recognized spontaneously. If details are missing, this mind will work tirelessly to provide them. Late antique commonsense geography therefore provides mental rather than real maps. Moreover, mental maps of areas beyond (personal) cognitive reach are communal and cultural products.[99] When the Talmudic episodes discussed in this article take their audience on a journey, when they force their audience to see, they create new mental landscapes and expand geographical, topographical, and ethnographic knowledge in a vivid and lasting way. Far from being tall tales, these stories are effective tools not only for modeling the inhabited world, but for creating paradigms that transcend the observable time and space. Scientific imagination is, then and now, nourished by possibility and irregularity rather than by predictability and regularity.

Bibliography

Ahrens, Karl. *Das Buch der Naturgegenstände*. Translated by Karl Ahrens. Kiel: C. F. Haeseler, 1892.

Amsler, Monika. *The Babylonian Talmud and Late Antique Book Culture*. Cambridge: Cambridge University Press, 2023.

Amsler, Monika. "Function and Aesthetics of Talmudic Medical Recipes." *Journal of Early Christian History* 12, no. 1 (February 2022): 1–22.

Ben-Amos, Dan. "Talmudic Tall Tales." In *Folklore Today: a Festschrift for Richard M. Dorson*, edited by Linda Dégh, Henry Glassie, and Felix J. Oinas, 24–44. Bloomington: India University, 1976.

Berkowitz, Beth. "The Tall Tales of Babylonian Talmud Bekhorot 57b: Zombie Mothers, Angry Birds, and Egg Drop Soup." In *Making History: Studies in Rabbinic Literature,*

[99] See Podossinov, "Karte und Text," 14.

History, and Culture in Honor of Richard L. Kalmin, edited by Carol Bakhos and Alyssa M. Gray, 3–24. Brown Judaic Studies 372. Providence RI: Brown University Press, 2024.

Bregman, Marc. "Aqedah: Midrash as Visualization." In *Agendas for the Study of Midrash in the Twenty-First Century*, edited by Marc Lee Raphael, 84–100. Williamsburg: College of William and Mary, 1999.

Brodersen, Kai. *Die sieben Weltwunder: Legendäre Kunst- und Bauwerke der Antike*. München: Verlag C.H. Beck, 1996.

Curtis, Valerie, Mícheál de Barra, and Robert Aunger. "Disgust as an Adaptive System for Disease Avoidance Behaviour." *Philosophical Transactions of the Royal Society B: Biological Sciences* 366, no. 1563 (2011): 389–401.

Daston, Lorraine, and Katharine Park. *Wonders and the Order of Nature, 1150-1750*. New York: Zone Books, 1998.

Fine, Elisha, and Steven Fine. "Rabbinic Paleontology: Jewish Encounters with Fossil Giants in Roman Antiquity." In *Land and Spirituality in Rabbinic Literature: A Memorial Volume for Yaakov Elman* ז״ל, edited by Shana Strauch Schick, 3–37. Leiden: Brill, 2022.

Frim, Daniel J. "'Those Who Descend upon the Sea Told Me ...': Myth and Tall Tale in Baba Batra 73a–74b." *The Jewish Quarterly Review* 107, no. 1 (2017): 1–37.

Gagné, Renaud. *Cosmography and the Idea of Hyperborea in Ancient Greece: A Philology of Worlds*. Cambridge Classical Studies. Cambridge: Cambridge University Press, 2021.

Gesenius, Wilhelm. *Hebräisches und Aramäisches Handwörterbuch über das Alte Testament*. 17th ed. Berlin: Springer-Verlag, 1921.

Geus, Klaus. "Paradoxography and Geography in Antiquity: Some Thoughts about the Paradoxographus Vaticanus." In *La letra y la carta: descripción verbal y representación gráfica en los diseños terrestres grecolatinos. Estudios en honor de Pietro Janni*, edited by Ponce Francisco J. González, F. Javier Gómez Espelosín, and Antonio L. Chávez Reino, 243–58. Monografías de GAHIA. Sevilla: Editorial Unversidad de Sevilla, 2016.

Grossmark, Tziona. "Talmudic Itineraria and Talmudic Pilgrimage: Tracing the Genre in the Babylonian Talmud." *Mediterranean Studies* 20, no. 1 (2012): 88–113.

Hähnle, Alfred. "ΓΝΩΡΙΣΜΑΤΑ." Tübingen, 1929.

Hartog, François. *Le miroir d'Hérodote: essai sur la représentation de l'autre*. Paris: Gallimard, 2001.

Kadushin, Max. *The Rabbinic Mind*. 3rd ed. New York: Bloch Publishing Company, 1972.

Kappauf, Herbert W. "Spontaneous Remission of Cancer – Enigma and Paradigm." *Onkologie* 29 (2006): 129–30.

Kappauf, Herbert W. "Spontanremissionen bei Krebs: Beobachtungen zu Häufigkeit und Wirkmechanismen." *Ars Medici* 21 (2020): 674–79.

Kappauf, Herbert W. *Wunder sind möglich: Spontanheilung bei Krebs*. Freiburg im Breisgau: Herder, 2003.

Kiperwasser, Reuven, and Serge Ruzer. "Aramaic Stories of Wandering in the High Seas of Late Antiquity." In *The Past Through Narratology*, edited by Mateusz Fafinski

and Jakob Riemenschneider, 161–77. Das Mittelalter. Perspektiven Mediävistischer Forschung 18. Heidelberg: Heidelberg University Publishing, 2022.
Kiperwasser, Reuven, and Dan D. Shapira. "Irano-Talmudica I: The Three-Legged Ass and Ridyā in B. Ta'anit: Some Observations about Mythic Hydrology in the Babylonian Talmud and in Ancient Iran." *AJS Review* 32, no. 1 (2008): 101–16.
Kominko, Maja. *The World of Kosmas: Illustrated Byzantine Codices of the Christian Topography*. Cambridge: Cambridge University Press, 2013.
Lehoux, Daryn. *What Did the Romans Know? An Inquiry into Science and Worldmaking*. Chicago: The University of Chicago Press, 2012.
Malafouris, Lambros, and foreword by Colin Renfrew. *How Things Shape the Mind: A Theory of Material Engagement*. Cambridge MA: The MIT Press, 2013.
Moscovitz, Leib. *Talmudic Reasoning: From Casuistics to Conceptualization*. Texts and Studies in Ancient Judaism 89. Tübingen: Mohr Siebeck, 2002.
Neis, Rafael Rachel. "Pilgrimage Itineraries: Seeing the Past through Rabbinic Eyes." *Jewish Studies Quarterly* 20 (2013): 224–56.
Neis, Rafael Rachel. *The Sense of Sight in Rabbinic Culture. Jewish Ways of Seeing in Late Antiquity*. Cambridge, UK: Cambridge University Press, 2013.
Neis, Rafael Rachel. *When a Human Gives Birth to a Raven: Rabbis and the Reproduction of Species*. Oakland: University of Califormia Press, 2023.
ní Mheallaigh, Karen. *The Moon in the Greek and Roman Imagination: Myth, Literature, Science and Philosophy*. Greek Culture in the Roman World. Cambridge: Cambridge University Press, 2020.
Niehoff, Maren R. "The Phoenix in Rabbinic Literature." *The Harvard Theological Review* 89, no. 3 (1996): 245–65.
Palaephatus. *On Unbelievable Tales = Peri Apiston : With Notes and Greek Text from the 1902 B.G. Teubner Edition*. Translated by Jacob Stern. Wauconda, IL: Bolchazy-Carducci Publishers, 1996.
Pelt, Julie Van. "The Life of Makarios the Roman (BHG 1004–1005) and the Alexander Romance: Truth, Fiction and the Paradoxographic." *Judaica: Neue digitale Folge* 7 (2026). https://doi.org/10.36950/jndf.2026.7.
Podossinov, Alexander. "Karte und Text: Zwei Wege der Repräsentation des geographischen Raums in der Antike und im frühen Mittelalter." In *La letra y la carta: descripción verbal y representación gráfica en los diseños terrestres grecolatinos. Estudios en honor de Pietro Janni*, edited by Francisco J. González Ponce, F. Javier Gómez Espelosín, and Antonio L. Chávez Reino, 3–32. Monografías de Gahia 1. Sevilla: Editorial Universidad de Seville, 2016.
Redfield, James A. *Adventures of Rabbah & Friends: The Talmud's Strange Tales and Their Readers*. Brown Judaic Studies. Providence RI: Brown University Press, 2025.
Redfield, James A. "The Iridescence of Scripture: Inner-Talmudic Interpretation and Palestinian Midrash." In *Studies in Rabbinic Narratives Vol. 1*, edited by Jeffrey L. Rubenstein, 115–75. Providence: Brown University Press, 2021.
Reggiani, Nicola. "Towards a Socio-Semiotic Analysis of Greek Medical Prescriptions on Papyrus." In *Novel Perspectives on Communication Practices in Antiquity: Towards*

a Historical Social-Semiotic Approach, edited by Klaas Bentein and Yasmine Amory, 113–30. Papyrologica Lugduno-Batava 41. Leiden: Brill, 2023.
Schepens, Guido, and Kris Delcroix. "Ancient Paradoxography: Origin, Evolution, Production and Reception." In *La letteratura di consumo nel mondo Greco-Latino: Atti del convegno internazionale, Cassino, 14-17 settembre 1994*, edited by Oronzo Pecere, 373–452. Cassino: Università degli Studi di Cassino, 1996.
Schmidt, Hanns-Peter. "Simorg." *Encyclopaedia Iranica*, 2002. https://www.iranicaonline.org/articles/simorg/.
Schorn, Stefan. "Damaskios of Damaskos." In *Die Fragmente der griechischen Historiker Part IV E: Paradoxography and Antiquities*, 339–53. Leiden: Brill, 2024.
Schröter, Robert. "Erster Brief Jakob's von Edessa an Johannes den Styliten." *Zeitschrift der deutschen morgenländischen Gesellschaft* 24, no. 3 (1870): 261–300.
Sokoloff, Michael. *Dictionary of Jewish Babylonian Aramaic of the Talmudic and Geonic Periods*. Jerusalem: Bar Ilan University Press and The Johns Hopkins University Press, 2002.
Spittler, Janet E. *Animals in the Apocryphal Acts of the Apostles: The Wild Kingdom of Early Christian Literature*. Wissenschaftliche Untersuchungen zum Neuen Testament 2. Reihe 247. Tübingen: Mohr Siebeck, 2008.
Stein, Dina. "Believing Is Seeing: A Reading of Baba Batra 73a-75b." *Jerusalem Studies in Hebrew Literature* 17 (1999): 9–32.
Stein, Dina. "The Blind Eye of the Beholder: Tall Tales, Travelogues, and Midrash." In *Textual Mirrors: Reflexivity, Midrash, and the Rabbinic Self*, edited by Dina Stein, 58–83. Divinations: Rereading Late Antique Religion. Philadelphia: University of Pennsylvania Press, 2013.
Stemberger, Günter. "Münchhausen und die Apokalyptik: Baba Batra 73a-75b." *Journal for the Study of Judaism in the Persian, Hellenistic, and Roman Period* 20, no. 1 (1989): 61–83.
Stenger, Jan R. "Eusebius and the Representation of the Holy Land." In *Brill's Companion to Ancient Geography: The Inhabited World in Greek and Roman Tradition*, edited by Serena Bianchetti, Michele R. Cataudella, and Hans-Joachim Gehrke, 381–98. Brill's Companions in Classical Studies. Leiden: Brill, 2016.
Stern, Sacha. *Time and Process in Ancient Judaism*. Liverpool: Liverpool University Press, 2007.
Swartz, Michael D. *The Signifying Creator: Nontextual Sources of Meaning in Ancient Judaism*. New York: New York University Press, 2012.
Thibodeau, Philip."Six Modes of Reasoning in Astrological Writers from the Imperial Era." In *Roman Laws of Nature*, edited by Monika Amsler, (forthcoming)
Thibodeau, Philip. "Traditionalism and Originality in Roman Science." In *Oxford Handbook of Science and Medicine in the Classical World*, edited by Paul T. Keyser and John Scarborough, 593–614. Oxford: Oxford University Press, 2018.
Wenskus, Otto, and Lorraine Daston. "Paradoxographi." Edited by Hubert Cancik and Helmuth Schneider. *Brill's New Pauly*. Brill, 2006.

Zlotnik, Gregorio, and Aaron Vansintjan. "Memory: An Extended Definition." *Frontiers in Psychology* 10 (2019).