
CONTROLLING DESTRUCTIVE ANIMALS USING MAGIC METHODS ACCORDING TO THE ANCIENT JEWISH SOURCES

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Abstract

During the history, several animals have been a source of annoyance, disease and death for human and his property. This study explores the magic methods and ways of preventing destructive animals from inflicting harm (incantations, images and amulets) in the Roman-Byzantine Period. It also discusses the attitude of the rabbinic law to these methods (practices that designated *hover haver*). In contrast to the Eretz Israel sources that took a strict approach, which completely forbade any use of incantations to protect oneself from animals, the approach of Babylonian Amoraim was more lenient. They permitted recitation of incantations in order to subdue dangerous animals that assault people actively but forbade this when no danger was evident. Moreover, the Babylonian sources portrayed several incantations that might be beneficial in case of danger. 'Sefer Harazim' recommends controlling animals by the image of the hazard and an amulet that will be attached to the image.

Keywords: controlling, incantations, amulets, Talmudic, era

1. Introduction

Over the generations, small and large animals have been a source of annoyance, disease and death for humans and domestic animals, as well as inflicting harm on agricultural property. Methods utilized in ancient times to keep out, overcome, or kill such pests included conventional techniques such as pesticides and setting the pests' natural enemies against them, as well as magic means [1].

Dealing with anticipated harm by animals using prayers, incantations and amulets is a very ancient practice. Biblical sources already reflect attempts to control harmful animals or the damage they cause using metaphysical means. Moses eliminated the frogs (Exodus 8.8), wild beasts (Exodus 8.25), and locusts (Exodus 10.18) with which Egypt was inflicted in the Ten Plagues by praying. He cured those bitten by snakes in the Sinai Desert using an image of a brazen

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serpent (Numbers 21.9), and similar types of snake images were found in several archaeological digs in Eretz Israel in sites from the biblical era, such as in temples in Hatzor and Timna [2].

Driving away harmful elements was considered an occupation for experts. Those who employed incantations received the designation of ‘skilful enchanter’ (*navon lahash*) and their activities included warding off the bites of poisonous snakes and chanting incantations as a remedy for their bites. Such sorcery techniques were customary in the cultures of the Ancient Near East, for instance in Assyria, Babylonia, and Egypt. Snake enchanters are mentioned in a list of professions found in Sumer from the third millennium BC [3]. In the Akkadian and Sumerian cultures various incantations were customary against snakebites, dog bites, and harm inflicted by other animals [4, 5]. Inscriptions in the pyramids and in Egyptian papyri cite incantations for restraining spirits capable of harm as well as for protecting against the hazard caused by scorpions and snakes [6, 7].

Eradicating pests using prayers, incantations and amulets was common in the classical era as well [8]. One of the problems encountered by Greek and Roman armies and legions in their conquests were areas replete with poisonous reptiles. In order to contend with such problems, the fighting armies employed special people who dealt with the snakes and their victims. Plutarch relates that Marcus Porcius Cato Uticensis (Cato the Younger, 95-46 BC), in his voyage to Cyrene, included among his warriors the *Psylli* who knew how to cure snake bites by sucking the poison from the wound and who were proficient in putting the snakes to sleep using incantations [9].

Christopher A. Faraone had shown that the Greeks inscribed the word *adam* at the four corners of their homes (‘the four-corners strategy’), bedrooms and the windows to keep snakes away [8, p. 247]. He also indicates on an image of a naked child throttling snakes (originally a scene of Heracles and the snakes) which was deployed in the Roman house or the bedroom against snakes or to heal their bites.

The Sassanians ruled Babylonia in Talmudic era (224-651 BCE) and their Zoroastrian faith and cultural world had an impact on Babylonian Jews and on the Talmud itself [10, 11]. As shown by researchers, the influence of the non-Jewish environment on the Jews of the Sassanian Empire was manifested, among other things, in the field of the occult in general and in practices related to protection against harmful entities in particular [12]. The considerable material discovered, mainly amulets written on earthenware bowls, deals mostly with protection against metaphysical hazards (demons, spirits) but also against material-natural entities such as water, fire, animals, and so on [13-15].

2. Purpose of the study

In Jewish communities in Eretz Israel and Babylonia in the Roman-Byzantine Period (1th-7th centuries), damage inflicted by animals was dealt with by various religious practices such as fasts, prayers, and blowing a ram’s horn [16]. This study seeks to explore magic methods and ways of preventing

destructive animals from inflicting harm and the attitude of contemporary Jewish law to these methods. The article focuses on practices designated *ḥover ḥaver*, i.e. animals charming. The questions we shall address in the study are:

1. What supernatural methods used to deal with harmful or dangerous animals were mentioned in Jewish sources from the Roman-Byzantine Period?
2. What are the boundaries of the Jewish prohibition against subduing animals using supernatural means?

Is the attitude of Eretz Israel sources to controlling dangerous animals by supernatural methods is different from the Babylonian sources?

3. Discussion

3.1. ‘*Ḥover ḥaver*’ in rabbinical literature - Jewish law, practices and the activity of the animal charmer (*ḥabar*)

Several rabbinical sources discuss magical practices aimed at subduing animals as part of the halakhic interpretation and discussion of the prohibitions mentioned in Deuteronomy 18.10-11. The biblical text, which enumerates several activities related to idol worship, sorcery, casting lots, and divination. The sages of the Mishnah and Talmud (*Tannaim* and *Amoraim*) disagreed as to the interpretation of ‘*ḥover ḥaver*’ in this verse. As early as the period of the Tannaim, the most common interpretive approach among the sages was that *ḥover ḥaver* is an act of sorcery aimed at controlling animals. The phrase ‘*ḥover ḥaver*’ was linked in rabbinical sources to two types of activity:

- A. Gathering animals - This interpretation appears in several Aramaic translations originating from Eretz Israel. The Aramaic translation attributed to Yonatan ben Uziel on Deuteronomy 18.10-11 states that the charmer gathers and ties snakes, scorpions and all kinds of insects [17]. The Yerushalmi-Aramaic translation also translates the phrase ‘*ḥover ḥaver*’ as the charmer controls bad things (animals?) and ties snakes, scorpions and all kinds of insects (Deuteronomy 18.10-11).
- B. Killing animals - Some sources link the prohibition of *ḥover ḥaver* to killing animals to prevent damage or for some beneficial use and not necessarily to gathering them in one place [18], as we shall elaborate below.

A later Babylonian Talmudic tradition claimed that *ḥover ḥaver* is not only controlling animals, but also act of dealing with demons, i.e. a magic practice aimed at gathering demons to activate them for medical purposes or some other beneficial purpose [19]. The ancients believed that metaphysical evil forces (demons) might cause harm to humans and to their property. It is also possible, however, to communicate with them or to contact them, for instance by offering incense, and to use them for beneficial purposes, such as to cure illness, prevent harm, etc. (Controlling demons and utilizing them for beneficial purposes was also ascribed in rabbinical literature to prominent Jewish figures such as King Solomon [20].)

The expression ‘*hover haver*’ refers to an act of sorcery aimed at controlling animals. However, the term *habar* in the Talmudic literature refers to two different types of people - one who engages in controlling harmful animals by incantations and oaths, and Persian clerics who worship fire [21]. Various sources from Eretz Israel and Babylonia in the Talmudic era (5th century) speak of *habarim* and their professional activity, including Eretz Israel sages who engaged in controlling animals by methods that are in accordance with Jewish law [19, Sanhedrin 65a; 22; 23].

3.2. Features of *hover haver* - types of animals, size, quantity, and what is inflicted upon them (death, castration)

The Tosefta that is a Tannaitic source from Eretz Israel deals extensively with several aspects related to the practice of *hover haver* and with the sages’ attitude to the prohibition [18]. The Tosefta indicates several features of *hover haver* as the practice was customary in the Mishnah and Talmud Period:

- A. *Hover haver* is described as the act of killing live creatures. The Tosefta does not explicitly mention acts of silencing or calming an aggressive animal.
- B. The Tosefta relates to two features of *hover haver* - qualitative and quantitative:
 - 1) A qualitative feature - killing live creatures of all species (male and female), size (large and small), and type - reptiles, fowls, beasts, animals, as well as humans [24];
 - 2) A quantitative feature - killing a small or large number of animals. This distinction may relate to killing a solitary pest (for instance, a large predator) versus eliminating multiple pests, such as rats or mice during a population explosion (plagues).
- C. The purpose of the *hover haver* - The Tosefta does not relate to the purpose of the *hover haver*, whether it is due to a danger to human beings or for some use of the animal, for instance for its skin, fur, or to prepare a medical substance. With regard to killing a person, this probably refers to inflicting harm on a dangerous person or an enemy who might pose a danger.

Several Midreshei halakha in the Talmudic era have shorter versions regarding the prohibition of *hover haver*. Reference to the number of animals in the context of the act of *hover haver* is mentioned in the Sifrei on Deuteronomy, a Tannaitic midrash halakha from the school of R. Akiva that was edited in Eretz Israel during the third century [25]. The Sifrei, similar to the Tosefta, forbids charming of a small or large number of animals. However, in contrast to the Tosefta that lists various species of animals who are subjected to *hover haver*, the Sifrei does not note the type of animal, aside from snakes and scorpions.

Midrash Tannaim on the book of Deuteronomy contends that the prohibition included *hover haver* of large and small animals [26]. Anyway, a similar version is found in the Babylonian Talmud: ”Our Rabbis taught: ‘*hover haver*’ - This applies to one who charms large objects, and to one who charms small ones, even snakes and scorpions” [19, Sanhedrin 65a].

3.3. The prohibition of *hover haver* - the boundaries of the permitted and the forbidden

The Tannaitic and Amoraic sources mentioned, both of Eretz Israel and Babylonia, stress that snakes and scorpions charming is forbidden, although they are dangerous and capable of harm. These pests were commonly found in human residential areas and agricultural fields, and because the harm they wrought was relatively prevalent in daily life. Indeed, many ancient sources report human encounters with them and with their ravages, particularly snakes [22, Terumot, 8:3 (46a)].

In contrast to the Tannaitic sources originating from Eretz Israel (the Tosefta and the Sifrei on Deuteronomy), which take a strict approach that completely forbids use of incantations to protect oneself from animals, the approach of the Babylonian Amoraim in subsequent centuries is more lenient. Rav (ca. 175-247 CE), the first Babylonian amora and founder of the Sura yeshiva, not only permitted use of such incantations rather also suggested beneficial incantations, as we shall discuss further below. The well-known Babylonian amora Abaye (278-338 CE) explains that when encountering dangerous animal, it is necessary to distinguish between two situations: "He who wants *le-mitzmad* [=to cast] a spell over a wasp and a scorpion - It is prohibited, but if they follow him - it is permitted" [19, Keritot 3b].

The Aramaic word *le-mitzmad* means to attach or to connect, i.e. to overcome the pest or pests by gathering them in one place [27]. In a situation where scorpions or oriental hornets (*Vespa orientalis*) do not actively attack humans Abaye forbids use of incantations. However, when they attack people who must therefore defend themselves it is permitted to use oaths and incantations in order to subdue them.

3. 4. Magic practices for coping with hazards posed by animals

In the ancient world, magic techniques aimed at generating change included three main operations involving speech and action:

- A. invoking (*invocatio*) the name of a metaphysical being, reciting an incantation or oath expected to have an effect or influence ('executive statement');
- B. presenting the content of a plea;
- C. a practical magic action ('executive technique') [28].

According to some sources, *hover haver* involves uttering a sound. This practice was first mentioned in Jewish literature in Psalms 58.5: "so that it [=the serpent] does not hear the voice of charmers or of the cunning enchanter". Namely, the injurious snake will not be affected by the action of the sorcerer who is attempting to prevent it from doing harm by means of an incantation.

In contrast to the Babylonian Amoraim, sages of Eretz Israel in the Mishnaic period do not state how *hover haver* was conducted - through an executive statement or an executive technique, and perhaps both together [29].

Moreover, there is no reference to the metaphysical power to which the sorcerer is appealing in order to help drive away or kill the destructive animal. The disregard of Tannaitic sources for the form of the *hover haver* may stem from the sages' focus on the sorcerer's punishment, while the aspect of how the *hover haver* was carried out was less crucial for the halakhic debate.

At present, the only source we found from the Tannaitic period that relates, indeed laconically, to how *hover haver* is carried out, is Onkelos' Aramaic translation (Eretz Israel, 2nd century): '*Ve-hover haver - Ve-ratin ratan*'. *Ratan* in Aramaic means grumble or mumble [30]. Onkelos appears to be referring to an executive statement, i.e. reciting an incantation or oath, however he does not say explicitly that the incantation is related to animals.

In sources from Talmudic era we find various beliefs and practices associated with the control of animals. In the following lines we shall focus on reciting incantations and preparing images and amulets.

3.5. Use of incantations to eradicate pests in the Babylonian Talmud literature

Several versions of incantations were mentioned in the Babylonian Talmudic literature. The Babylonian amora Rav not only permitted self-defence against dangerous animals by using incantations (see above) rather also suggested several incantations that might be useful when concerned of injury by domestic animals, wild animals, or locust swarms. "Rab said: <*Nizha de-Tora* [=The incantation for the harm of an ox] is 'hen, hen'; *Nizha de-Arye* [of a lion] - 'zeh zeh'; *Nizha de-gamla* [of a camel] - 'da da'; *Nizha de-Arbeh* [of locusts] is 'helani hayya hela we-hiluk hulia'>" [19, Pesahim 112b].

It seems that Rav suggested incantations against harmful animals. However, commentators on the Talmud deliberated over the meaning of the practice suggested by Rav. R. Samuel ben Meir (*Rashbam*, Troyes, c. 1085-c. 1158), one of the famous French Tosafist claimed that the phrases mean 'reprimand' and not as his grandfather R. Shlomo Yitzhaki (*Rashi*, North France 1040-1105) interpreted - a magic incantation. He writes: "*Nizha de-Tora* - incantation against the bull to prevent it from goring him, such was Rabenu's [=Rashi's] interpretation. And in my opinion, it is not an incantation rather a reprimand that uses these words to drive it away from him or to urge it to work, and so in other places as well." (*Rashi's* commentary on Pesahim 112b)

Rashbam contends that this is a rebuke in words familiar to the animal in order to keep it away from the person or to urge it to work. He may have preferred this interpretation in order to avoid ascribing to the amora Rav permitting use of problematic incantations. Jastrow, Melamed and Sokoloff interpret Aramaic word *nizha* as a 'reprimand', 'chiding off' or 'stirring on' as *Rashbam* suggested [21, p. 890; 27, p. 296; 30, p. 739]. The Israeli zoologist Simon Bodenheimer recorded many forms of callings or reprimands which are used by the Bedouins to expedite their camels, such as to get up (*sag*) to come to eat (*ha, he, eluk*), to come to the water (*ta, ya, jay, ju*), to march carefully (*huah, da, la, al*) or to stop (*vo-ho*) [31].

In any case, as it stated, the impression is that this is an incantation and not a mere reprimand devoid of magic meaning.

The amora Rav concentrates on incantations that might help protect one from four species of animals - lions, camels, bulls, and locust swarms that inflict great damage on plants and groves. The reason for presenting incantations in connection with these creatures is because in the ancient world they were considered dangerous or harmful. In contrast to camels and bulls that are domesticated farm animals that live in a human environment, lions and locust swarms arrived from time to time in inhabited areas and in the agricultural belt around the cities (hinterland). (On the Asiatic lion (*Panthera leo persica*) which was common across Eretz Israel and Babylonia in the Mishna and Talmud era, see [32, 33].)

In ancient agricultural farms, bulls were used for various purposes. Owning bulls, particularly when not castrated, for instance for ploughing, involved damages and hazards resulting from goring or trampling. Rabbinical sources contain many descriptions and debates that involve injuries inflicted by bulls, in which people and animals were hurt or killed [16, p. 27; 31, p. 71; 34]. Camels are farm animals known to be very beneficial mainly in the deserts of Eretz Israel and Babylonia. In general, this is an animal with a relatively moderate temperament, however at times it might be aggressive and lethal, especially in in the breeding season [19, Bava Mezi'a 93a; 35].

The verbal incantations mentioned in the Babylonian Talmud are based on the uttering of allegedly meaningless syllables, for instance repeating the same syllable twice ('hen, hen'; 'zeh zeh'; 'da da') or reciting a sequence of similar words ('helani hayya hela we-hiluk hulia'). As Gideon Bohak has stated the use of magic words or meaningless syllables is very common in the occult literature, such as the Egyptian, Greek and Jewish and in the magic traditions of many other ancient cultures [36].

3.6. Preparing an image of the hazardous animal - Sefer Harazim

An important source for understanding the magic ways of dealing with harmful animals is 'Sefer Harazim' (The Book of Secrets) written in Talmudic period (3th-5th centuries). According to 'Sefer Harazim' in order to keep animal away from the city it is necessary to perform three acts: 1) to prepare an image of the hazard, 2) to prepare an amulet that will be attached to the image, 3) to place the image at the city gates [37].

3.6.1. Preparing an amulet in the form of an image of the hazard

Healing by means of the hazard itself or its simulation is rooted in biblical literature as well as in the later world of beliefs. The inspiration for using an image of the hazard, and specifically one made of bronze, may be the biblical story of creating an image of a brazen serpent to resolve snake bites inflicted, in the Sinai Desert (Numbers 21.9, 2 Kings 18.4). In this story, the people ask Moses

to ‘take the snakes away from us’, i.e. remove the snakes from the camp limits. Moses prays to God and the proposed solution is not to keep away the snakes rather to save those who had been bitten by having them look at an image of a brazen serpent; namely, healing the injury rather than preventing it to begin with. A similar magical therapeutic approach of portraying the hazard in its dead form (and not in the form of an image) to the injured person is also mentioned in non-Jewish sources from the Roman period [38].

Another biblical example of treating animal hazards by using images is the story of the epidemic inflicted upon the Philistines following the capture of the Ark of the Covenant (1 Samuel 6.4). According to the description in the scriptures, a mice epidemic raged and ‘devastated the land’, with many victims among the Philistines. As stated by Y. Feliks, the term ‘mice’ (*akhbarim*) is a collective noun for various types of rodents. The ‘mice that are devastating the land’ were probably Günther's vole (*Microtus guentheri*) that increase rapidly and devour the crops, particularly towards the end of years of war and destruction when they can multiply undisturbed. The term ‘mice’ (*akhbarim*) also includes rats (*Rattus* sp.), which caused a plague with human victims [32, p. 127-133]. To resolve the problem the Philistines prepared images of golden mice and sent them together with the ark to Kiryat Ye’arim. (See also the testimony of Herodotus (c. 484-c. 425 BC) concerning the mice epidemic that erupted in Sennacherib’s camp and the offering of golden mice by the Egyptians, who believed that this had saved them [39].)

3.6.2. Preparing an amulet and attaching it to the image

In order to activate the image an amulet is needed. Unlike the image that was made of bronze, the amulet must be a plate (flattened metal surface) made of iron and bearing the names of angels who are guardians of the destructive forces of nature and capable of preventing their harm. Amulets were written on different writing surfaces, for instance animal skins, clay, Papyrus or plates made of different types of metal (lead, tin, silver and gold) [40-42]. The selection of a certain metal also stemmed from the outlook that the type of metal has an effect on the power of the amulet [43].

3.6.3. Placing the image at the city gates

The city gates are a central strategic site within a walled inhabited area. On one hand, they are a route by which traffic can enter and leave, and on the other they are a weak point as through them negative and harmful forces may enter the city, such as enemy soldiers in time of siege or predators. The rationale of placing the image at the city gates is to form a barrier and protection from the hazard, which might come precisely from this exposed direction. The northerly orientation of the occult object may certainly also be based on ancient Hebrew sources that note the coming of an enemy, hazard, or evil from the north (“From the north disaster will be poured out”) (Isaiah 14.31; Jeremiah 1.14, 51.48).

4. Conclusions

Biblical law forbade acts of charming (*hover haver*), but it is unclear from the verses themselves what occult or idolatrous practice this refers to. In the time of the sages, the prohibition was interpreted as meaning a charming practice aimed at controlling demons or animals, i.e. gathering demons in order to activate them for some goal or causing animals to collect in one place.

According to Eretz Israel sources from the Roman-Byzantine Period the practice of killing creatures by sorcery included animals of all sizes and types, namely reptiles, fowls, beasts, animals, and even human beings. Moreover, *hover haver* was used for limited or mass elimination of animals and it was also capable of castrating animals and people. The Talmudic sources mention several potentially harmful animals against which charming was utilized, such as snakes, scorpions, oriental hornets (*Vespa orientalis*), types of locusts, and predators. It is to be assumed that the sources focused on dangerous and destructive animals whose harm was more prevalent and common, but these practices were used with a wide array of animals [44].

In contrast to the Eretz Israel sources that took a strict approach which completely forbade any use of incantations even to protect oneself from animals, the approach of Babylonian Amoraim in subsequent centuries was more lenient. Babylonian Amoraim permitted recitation of incantations in order to subdue dangerous animals that assault people actively but forbade this when no danger was evident. Unlike the Eretz Israel sources that did not explicitly mention the actual forms of *hover haver*, the Babylonian sources portrayed several incantations that might be beneficial in case of danger.

It is difficult to know for certain why the Babylonian sources present a more lenient approach than the Eretz Israel sources regarding the use of incantations to protect against animals. Some possible explanations can be offered:

- A. In Babylonia it may have been necessary to respond to multiple local incidents involving serious injuries inflicted by animals, which were partly related to local nature. The Babylonian region is characterized as a relatively warm area, a climatic reality that encourages snake and scorpion activity. From the Babylonian sources that report on the existence of snakes in the homes and offer practical ways of dealing with them and their bites, it seems that snakes were common. Quite a few Babylonian sources also report on damage done by wasps, which in some cases culminated in the death of those injured [19, Sabbath 80b, B. Gittin 70a, B. Avodah Zarah 12b]. The fear of harm by wasps is the basis of the words of Rav Yosef, a Babylonian Amora in the third generation, who said that on the Sabbath one may kill the ‘wasp of Nineveh’ and the ‘scorpion of Adiabene’, two dangerous species in the Mesopotamian area, in order to prevent their damage [19, Sabbath 121b]. Apparently, Abaye’s permit to defend oneself by incantations, specifically against wasps and scorpions, is part of a broader trend of trying to deal with local natural problems.

- B. The use of magic practices was very common among the Jews of Babylonia in the Talmudic era, and even the sages did not avoid engaging in sorcery [45]. Hence, the use of incantations against harmful animals by Babylonian Jews is part of this reality. The attitude of some researchers was that engaging in the occult was less common in Eretz Israel than in Babylonia [46, 47]. However, Saul Lieberman has demonstrated that in Eretz Israel as well magical practices occupied a prominent place and that the Jews of Eretz Israel did not differ in this respect from the Jews of Babylonia [48].

In fact, most of the sources in the Tannaitic period disregard how *hover haver* is executed, aside from Onkelos who described *hover haver* as an act of reciting an incantation or oath, however he did not note explicitly that the incantation is related to animals. In contrast to the Babylonian Amoraim who described *hover haver* as an executive statement, sages from the Mishna era did not note whether *hover haver* is conducted via an executive statement or technique or perhaps both. Moreover, there was no reference to the metaphysical power to which the sorcerer appealed to help with the act of driving away or killing the destructive animal.

From the third century on, several practices for controlling animals were mentioned in Jewish literature. The most prominent method noted in Talmudic literature appears to be the use of executive statements. The Babylonian Amora Rav suggested several incantations that might be helpful when there is concern of harm by domestic animals, wild animals, or locust swarms. The incantations he mentioned are based on uttering allegedly meaningless syllables, sometimes repeating the same syllable and sometimes saying a sequence of close words, in order to contend with an attack by a plague of locusts.

The author of 'Sefer Harazim' suggested the use of a metal image of the harmful animal that dangerous animals be kept away from inhabited areas by placing an image of the hazard, containing an amulet, at the gate of the city. This technique, which does not involve saying words, but writing on amulet, utilizes an executive technique rather than an executive statement.

References

- [1] D. Nevo, *Phytoparasitica*, **24(1)** (1996) 7-32.
- [2] J. Milgrom and I. Avishur (eds.), *Numbers: The Bible's World, Divrei ha-Yamim*, Davidson-Eti, Tel Aviv, 1997, 129.
- [3] M.J. Geller, *Ancient Babylonian Medicine: Theory and Practice*, Wiley-Blackwell, Chichester, 2010, 45-46.
- [4] M.C. Astour, *J. Near Eastern Stud.*, **27(1)** (1968) 13-36.
- [5] I.L. Finkel, *On Some Dog, Snake and Scorpion Incantations*, in *Mesopotamian Magic: Textual, Historical, and Interpretative Perspectives, Ancient Magic and Divination*, T. Abusch & K. van der Toorn (eds.), Styx, Groningen, 1999, 213-250.
- [6] R.K. Ritner, *The Mechanics of Ancient Egyptian Magical Practice*, The Oriental Institute of the University of Chicago, Chicago, 1993, 151, 224.
- [7] R.C. Steiner, *Early Northwest Semitic Serpent Spells in the Pyramid Texts*, Eisenbrauns, Winona Lake, Indiana, 2011, 23-58.

- [8] C.A. Faraone, *The Transformation of Greek Amulets in Roman Imperial Times*, University of Pennsylvania Press, Philadelphia, 2018, 186.
- [9] J. Langhorne & W. Langhorne (eds.), *Plutarch's Lives*, Book VI, Richardson & Co., London, 1821, 294.
- [10] S. Shaked, *Iranian Influence on Judaism: First Century BCE to Second Century CE*, in *Cambridge History of Judaism*, W.D. Davies & L. Finkelstein (eds.), vol. I, Cambridge University Press, Cambridge, 2003, 308-325.
- [11] I. Gafni, *The Jews of Babylonia in the Talmudic Era*, Zalman Shazar Center for Jewish History, Jerusalem, 1990, 149-176.
- [12] M.G. Morony, *Magic and Society in Late Sasanian Iraq*, in *Prayer, Magic, and the Stars in the Ancient and Late Antique World*, S. Noegel, J. Walker & B. Wheeler (eds.), Pennsylvania State University Press, University Park, 2003.
- [13] J. Naveh and S. Shaked, *Amulets and Magic Bowls: Aramaic Incantations of Late Antiquity*, Magnes Press & Hebrew University, Jerusalem, 1985.
- [14] J. Naveh and S. Shaked, *Magic Spells and Formulae: Aramaic Incantations of Late Antiquity*, Magnes Press, Jerusalem, 1993.
- [15] G. Bohak, *Ancient Jewish Magic: a history*, Cambridge University Press, Cambridge, 2008.
- [16] ***, *Mishnah*, H. Albeck edition, Mossad Bialik and Dvir, Jerusalem, 1952, 338-339.
- [17] M. Ginzburger, *Translation of Yonatan ben Uziel on the Torah*, Kaloari, Berlin, 1903, 332.
- [18] ***, *Tosefta, Makkot 5:6*, M.S. Zuckerman edition, Bamberger and Wahrmann, Jerusalem, 1937, 444.
- [19] ***, *Babylonian Talmud*, The Widow and Brothers Romm, Vilna, 1882, Keritut, 3a.
- [20] P.A. Torijano, *Solomon the Esoteric King: From King to Magus Development of a Tradition*, Brill, Leiden, 2002, 41-87.
- [21] M. Jastrow, *A Dictionary of the Targumim, The Talmud Babli and Yerushalmi, and the Midrashic Literature*, G. Putnam's Sons, London, 1903, 422.
- [22] ***, *Jerusalem Talmud*, Venice edition, Daniel Bomberg, Venice, 1523, Demai 1:3 (22a).
- [23] ***, *Vayikra Rabba*, M. Margoliot edition, vol. II, Jewish Theological Seminary, Jerusalem, 1993, 504.
- [24] Y. Harari, *Jewish Studies*, **37(1)** (1997) 111-142.
- [25] ***, *Sifrei Devarim*, E.A. Finkelstein edition, Aguda Tarbutit Yehudid be-Germania, Berlin, 1940, 219.
- [26] ***, *Midrash Tannain on Deuteronomy*, D.Z. Hoffman edition, Itzkovsky, Berlin, 1908, 110.
- [27] E.Z. Melamed, *Aramaic-Hebrew Dictionary of the Babylonian Talmud*, Samuel and Oddete Levy Foundation, Jerusalem, 1992, 264.
- [28] P. Artzi, *Keshafim (=Sorcery)*, in *Enziklopedya Mikrait [=Biblical Encyclopedia]*, N.H. Tur-Sinai (ed.), vol. IV, Bialik Institute Publishing, Jerusalem, 1962, 349.
- [29] Y. Harari, *Jerusalem Studies in Jewish Folklore*, **19-20(1)** (1997-1998) 365-392.
- [30] M. Sokoloff, *A dictionary of Jewish Babylonian Aramaic of the Talmudic and Geonic periods*, Bar Ilan, Ramat-Gan, 2002, 1072.
- [31] S.F. Bodenheimer, *Animals in biblical lands*, vol. II, Mossad Bialik, Jerusalem 1957, 346.
- [32] J. Felix, *Nature and Land in the Bible: Chapters in Biblical ecology*, Reuven Mass, Jerusalem, 1992, 114.

- [33] H. Mendelssohn and Y. Yom-Tov, *The Distribution of mammals in Israel and the local factors which influenced on it*, in *Plants and Animals of the Land of Israel: An Illustrated Encyclopedia*, vol. VII: *Mammals*, A. Alon (ed.), Ministry of Defense, Tel Aviv, 1990, 44-47.
- [34] S. Liberman, *Tosefta ki-Peshuta*, Jewish Theological Seminary, New York, 1962, 18.
- [35] I. U. Köhler-Rollefson, *Mammalian species*, **375(1)** (1991) 1-8.
- [36] G. Bohak, *Zmanim*, **100(1)** (2007) 6-17.
- [37] M. Margalioth, *Sefer Harazim: A Book of Sorcery from the Time of the Talmud*, Keren Yehuda Leib and Mini Epstein & Academy of Jewish Studies in USA, Jerusalem, 1966, 87.
- [38] Gaius Secundus Plinius, *Naturalis Historia*, H. Rackham & W.H.S. Jones (eds.), Book XXIX, Loeb Classical Library, Harvard University & Heinemann, Cambridge (MA) & London, 1989, 27.
- [39] Herodotus, *The Histories*, A.D. Godley (ed.), Book II, Harvard University Press, Cambridge, (MA), 1920, 141.
- [40] E.W. Budge, *Amulets and superstitions*, Oxford University Press & H. Milford, London & New York, 1930, 394-396.
- [41] R. Kotansky, *Greek Magical Amulets: The Inscribed Gold, Silver, Copper, and Bronze Lamellae*, Part I: *Published Texts of Known Provenance*, Westdeutscher Verlag, Opladen, 1994.
- [42] S. Shaked, *Qadmoniot*, **38(129)** (2005) 2-13.
- [43] M. Bar-Ilan, *Beit-Mikra*, **30(102)** (1985) 375-81.
- [44] A. O. Shemesh, *Arquivo Maaravi*, **14(27)** (2020) 86-95.
- [45] E.E. Urbach, *The Rabbis: Doctrines and Beliefs*, Magnes Press, Jerusalem, 1969, 84-85.
- [46] S.Y. Rapoport, *Erekh Milin*, Landau, Prague, 1852, 227.
- [47] Z. Frankel, *Mavo Hayerushalmi*, Anonymous, Jerusalem, 1967, 49a.
- [48] S. Lieberman, *Greek and Hellenism in Jewish Palestine*, Mossad Bialik, Jerusalem, 1963, 82-83.