

## Preface. Philosophy and History of Talmudic Logic

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*Abstract:* This volume contains the papers presented at the *Philosophy and History of Talmudic Logic* Affiliated Workshop of Krakow Conference on History of Logic (KHL2016), held on October 27, 2016, in Krakow, Poland.

*Keywords:* Talmudic logic, Judaism, *halakhah*, Judaic laws, *kelal uferat ukelal*, *heqqeš*, *qal wa-ḥomer*.

The purpose of the workshop *Philosophy and History of Talmudic Logic* held on October 27, 2016, in Krakow, Poland, was to examine the meaning of Talmudic hermeneutics in the contemporary epistemology and logic. One of the main features of Judaism is that Jewish religious laws are not dogmatic but based on specific legal reasoning. This reasoning was developed by the first Judaic commentators of the Bible (*Tann'ayim*) for inferring Judaic laws (*halakah*) from the *Pentateuch*. Our workshop was aimed to consider Judaic reasoning from the standpoint of modern philosophy: symbolic logic, rhetoric, analytic philosophy, pragmatics and so on. On the one hand, we are interested in possibilities to import into the Talmudic study modern logical methods. On the other hand, we are interested in possibilities to export from the *Talmud* new logical principles which are innovative to contemporary logic.

The *Talmud* introduces a specific logical hermeneutics, so different from the Greek logic. This hermeneutics first appeared within the Babylonian legal tradition established by the Sumerians to interpret the law codes which were first over the world: *Ur-Nammu* (c. 2100 B.C.); *Lipit-Ishtar* (c. 1900 – 1850 B.C.), and later by their successors, the Akkadians: *Hammurapi* (1728 – 1686 B.C.). In these codes the casuistic law formulation was used: 'if/when (Akkadian: *šumma*) this or that occurs, this or that must be done' – in the same way how it is formulated in the Bible. So, a trial decision looked like an inference by *modus ponens* or by other logical rules from an appropriate article in the law code. The law code was founded in a stele or on a stone wall. It was considered a set of axioms announced for all. For instance, in the *Samaritan Pentateuch* it is claimed that the Israelites should have written down the law code of the *Pentateuch* on stones, too:

And when *Shehmaa* your *Eloowwem* will bring you to the land of the *Kaanannee* which you are going to inherit it. You shall set yourself up great stones and lime

them with lime. And you shall write on them all the words of this law (*Exodus* 20:14a-14b, tr. by Benyamim Tsedaka).

Then the trial decisions are regarded as claims logically inferred from the law code on the stones. One of the first law codes of the Greeks that were excavated recently is the *Gortyn Code* (Crete, 5 c. B.C.). It is analogous with the Babylonian codes by its law formulations; therefore, we can suppose that the Greeks developed their codes under the direct influence of the Phoenicians: the Code as the words of the stele and the courts as logic applications to these words. In this way the Greek logic was established within a Babylonian legal tradition, as well. Hence, we can conclude that, first, logic appeared in Babylonia and, second, it appeared within a unique legal tradition where all trial decisions must have been transparent, obvious, and provable. The formal logic appears first not in Greece, but in Mesopotamia and this tradition was grounded in the Sumerian/Akkadian jurisprudence.

The *Talmud* just continues the Sumerian/Akkadian jurisprudence tradition with a specific logic. So, the *Talmud* is closer to the Sumerian/Akkadian origin of logic, than the Greek logic developed by Aristotle and Chrysippus within the Greek legal tradition. Hence, the tradition of Talmudic hermeneutics is really oldest with the roots in the Sumerian/Akkadian culture with the oldest jurisprudence. Therefore this hermeneutics is so significant to be studied not only from the standpoint of *halakah* (Judaic laws), but also from the standpoint of logic, history of thinking, and history of law.

This volume, devoted to different philosophical aspects of Talmudic hermeneutics, includes a variety of contributions. The first of them, written by Joshua Halberstam and entitled 'Epistemic Disagreement and 'Elu We'Elu,' is focused on the Hebrew notion 'elu w'elu divrey 'Elohim kayim, according to that both sides of *halakhic* disputes can have 'heavenly' legitimacy simultaneously. It means that Judaism is not dogmatic in its nature and allows us to have opposite views.

In the paper 'Developments in the Syntax and Logic of the Talmudic Hermeneutic *Kelal Uferat Ukela*' by Michael Chernick, there is considered a logical rule from the Talmudic hermeneutics, called 'a general statement (*kelal*) is followed by a particular statement (*ferat*) that is followed in turn by another general statement (*kelal*)' – *kelal uferat ukela*. The author shows that this rule was understood differently by the early Talmudic commentators of the Bible (*Tann'ayim*) and by the late Talmudic commentators of the Bible ('*Amor'ayim*). It is evidence that the Talmudic logic was a life tradition that changed in the course of time.

Mauro Zonta contributed the paper entitled 'Medieval Judaic Logic and the Scholastic One in the 14<sup>th</sup> – 15<sup>th</sup> Centuries Provence and Italy: a Comparison of the Logical Works by Rav Hezekiah bar Halafta (First Half of the 14<sup>th</sup> Century) and Rav Judah Messer Leon (Second Half of the 15<sup>th</sup> Century),' where he compares the logical ideas of the two "Jewish Schoolmen:" Hezekiah bar Halafta, who wrote in 1320 probably the first text on Peter of Spain's *Summulae Logicales* in Hebrew, and Judah Messer Leon, who lived in the 15<sup>th</sup> century also in Provence and Italy. At that time the Rabbinic logic was influenced by the Medieval tradition of the Aristotelian logic.

Sergey Dolgopolski wrote the paper 'Suspending New Testament: Do the Two Talmuds Belong to Hermeneutics of Texts?' to show that the Christian hermeneutic idea of the suspension of the Old Testament in the New Testament can be articulated within the Rabbinic literature as a suspension of any new testament to the divine or any other version of law. It is so important that in the Christian hermeneutics the Aristotelian logic was applied to suspend the 'Old' Testament, while in the Talmudic hermeneutics there was an own logical tradition and the Talmudic logic was regarded as a way to preserve the borders of Judaism to suspend any 'New' Testament.

The contribution written by Hany Azazy and entitled 'The Genesis of Arabic Logical Activities: From Syriac Rhetoric and Jewish Hermeneutics to āl-Šāfi'y's Logical Techniques' shows some Judaic roots of the Islamic logic appeared at āl-Šāfi'y's *Risāla*, the work on 'uswl āl-fiqh or methodology of law. So, the Hebrew logical rule called *heqqeš* for inferring by analogy was transformed into the rule called *qiyās* in Arabic (this word is with the same Semitic root as *heqqeš*).

The Tamudic logical rule *qal wa-ḥomer* (in Arabic: أقل و أكثر) was considered by āl-Šāfi‘y as the *argumentum a minore ad maius*:

فإما أن يثبت أنه إن كان الذي هو أقل، كان الذي هو أكثر

Demonstrating that if it was the less then it would be the more.

and the *argumentum a majori ad minus*:

وهذا الموضع هو أنه إن لم يكن ذلك الأمر للذي هو أحرى أن يكون، فواضح أنه ليس للذي هو أقل أو أنقص

This topic is if it was not the case for what is more likely to be, then it is obvious that it cannot be the case for what is less or from what something is missing.

These Judaic roots of some Islamic hermeneutic rules are evidence that the Islamic hermeneutics continues the Sumerian/Akkadian legal tradition as well as the Talmudic hermeneutics does. It distinguishes the Islamic logic from the Christian traditional hermeneutics established within the Hellenistic philosophy with completely eliminating the Babylonian tradition.

The paper ‘Connecting Sacred and Mundane: From Bilingualism to Hermeneutics in Hebrew Epitaphs’ contributed by Michael Nosonovsky analyzes complex hermeneutic mechanisms of indirect quotations in the epitaphs and shows that the methods of actualization of the Bible are similar to those of the Rabbinical literature. It means that the Talmudic hermeneutics is applied even in the Hebrew traditional epitaphs.

The contribution ‘Using Lotteries in Logic of *Halakhah* Law. The Meaning of Randomness in Judaism’ by Ely Merzbach examines a philosophical meaning of lottery in the *Talmud* and in the later Rabbinic tradition as not a blind process, but as randomness that is a form of logical determinacy. It shows the Sumerian/Akkadian roots of the Talmudic hermeneutics as well, because according to the Babylonian tradition of omens there is grounded the idea that the future is fully logically determined by our choices. Randomness is not accidental in essence. We remember that according to Aristotle, there exist accidental events (like the ‘sea battle tomorrow’) which cannot be foretold and there is no logical determinacy in any way. However, in Judaism, any accidental event is a sign from the Lord. So, it is not accidental in the pure meaning.

Moshe Koppel wrote the paper entitled ‘Probabilistic Foundations of Rabbinic Methods for Resolving Uncertainty’ about the meaning of the Talmudic logical rule ‘to follow the majority’. This rule is treated in the following two ways: as (i) *rub’a d’it’a qaman* (‘a majority which is in front of us’) and as (ii) *rub’a d’leyt’a qaman* (‘a majority which is not in front of us’). As the author shows, the first way corresponds to the classical interpretation of probability, while the second way corresponds to the frequentist interpretation of probability. When the first way is applied, a random object taken (*pariš*) from a set, a majority of the members of which have property *P*, may be presumed to have property *P*. However, in some cases (*qavu’a*) the object is regarded as being a mere fragment of a mixed set and hence is regarded as “mixed,” neither *P* nor not-*P*.

In the paper ‘On the Babylonian Origin of Symbolic Logic’ contributed by Andrew Schumann there are analyzed many examples of difficult logical schemata as results of applications of some inference rules to law codes. The Talmudic hermeneutics grew up from the Sumerian/Akkadian legal tradition.

Thus, this volume is devoted to different aspects of *Philosophy and History of Talmudic Logic*. I am thankful to all the authors for the valuable contributions and the brilliant presentations at the workshop.

In this volume the following transliterations of Hebrew and Arabic letters have been used:

Hebrew transliterations

א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ פ צ ק ר ש ש ת  
*t ś š r q ẓ f p ‘ s n m l k̄ k y ẗ ḥ z w h d g v b ’*

Arabic transliterations

ا ب ج د ه و ز ح ط ي ك ل م ن ص ع ف ض ق ر س ت ث خ ذ ظ غ ش  
*š ġ ẓ ḍ k̄ ṭ t s r q ḍ f ‘ ṣ n m l k y ẗ ḥ z w h d j b ā*