

## **CAN YOU ANSWER THESE QUESTIONS?**

1. What is the true relationship between Torah and science?
2. What is the Jewish attitude regarding the study of astronomy?
3. How did the Arabs become knowledgeable in Greek philosophy and science?
4. Who was al Khawarizmi?
5. What were the principle contributions of Avicenna?

This and much more will be addressed in the fifth lecture of this series: "The Cultured Arabs".

To derive maximum benefit from this lecture, keep these questions in mind as you listen to the tape and read through the outline. Go back to these questions once again at the end of the lecture and see how well you answer them.

**PLEASE NOTE:** This outline and source book was designed as a powerful tool to help you appreciate and understand the basis of Jewish History. Although the lectures can be listened to without the use of the outline, we advise you to read the outline to enhance your comprehension. Use it as well as a handy reference guide and for quick review.

THE EPIC OF THE ETERNAL PEOPLE  
Presented by Rabbi Shmuel Irons

Series V Lecture #5

THE CULTURED ARABS

I. The Revelation of Science

A.

חמשים שערי בינה נבראו בעולם, וכולן ניתנו למשה חסר אחד, שנאמר (תהלים ח) ותחסרהו מעט מאלקים. ראש השנה כא:

Fifty gates of understanding were created in the world, and all were given to Moses save one, as it says: Yet thou hast made him but little lower than G-d (Psalms Chapter 8).

**Rosh HaShanah 21b**

B.

ר' ברכיה אמר כתיב (דברים ד) ויגד לכם את בריתו ויגד לכם את ספר בראשית שהוא תחלת ברייתו של עולם, אשר צוה אתכם לעשות עשרת הדברים, אלו עשרת הדברות עשרה למקרא ועשרה לתלמוד, וכי מניין יבא אליהוא בן ברכאל הבוזי ויגלה לישראל חדרי בהמות ולויתן ומניין יבא יחזקאל ויגלה להם חדרי מרכבה אלא הה"ד הביאני המלך חדריו. שיר השירים רבה (וילנא) פרשה א ד"ה ב ר' ינאי

Rabbi Berachiah said: In Scripture it is written (Deuteronomy 4:13), "And he declared unto you **his covenant**, **which he commanded you to perform ten commandments** ."

**His covenant** בריתו refers to the book of Genesis which is the beginning of the creation בריתו of the world. **Which he commanded you to perform ten**

**commandments** refers to the ten commandments both on the level of Scripture and also on the level of Talmud. For [if the secrets of creation were not revealed in the Torah] how could Elihu ben Berachel HaBuzi come and reveal to the Jews the hidden things of the animals and leviathin, and how could Yechezkel [the prophet] come and reveal the secrets of the Divine Chariot. This is what is meant by the verse: The king has brought me into his inner chambers. (Shir HaShirim Chapter 1) **Midrash Shir HaShirim**

**Rabbah Chapter 1**

C. You should know that the true understanding that our nation had regarding these areas (in science, philosophy and metaphysics outside of direct Halachic or Scriptural knowledge) was lost through the course of time and persecution. This was due to the fact that the knowledge of these areas was not handed down to the masses as was Scripture. You are already well aware that even the Oral Law (Torah SheBaal Peh) was not originally written down . . . This area of knowledge (science and philosophy) was handed down (orally from Sinai) by a select few exceptional individuals to a select few... This is the reason why this knowledge was ultimately lost. **Maimonides - Guide to the**

**Perplexed. Book I Chapter 71**

D. The Sage: "One cannot fault the philosophers (for their lack of knowledge) for they never inherited Torah or Wisdom because they were Greeks and Yovon (Ion) [the progenitor of the Greeks] was from the race of Yefes (Japheth) who dwell in the north. That inherited wisdom from Adam, which was acquired through Divine communication, was only preserved by the progeny of Shem, the most exceptional descendant of Noah. That wisdom did not discontinue nor will it from [Shem] the most distinguished descendants of Adam. Wisdom was not found in Greece until their conquests when it was taught to them by the Persians. Persia had received it from the Chaldeans [whom they conquered]. [The Chaldeans had received their wisdom from the Jews whom they had previously conquered] It was only at that time (the conquest of Persia), not before or after, that Greece produced famous philosophers. From the time that the Greeks were conquered by the Romans they have not produced a philosopher of note. **Cuzari 1:63**

The Sage: What do you say about the wisdom of Shlomo [Solomon]? He lectured on all areas of wisdom, theology, logic, and science. The [scholars of the civilized] world from as far as India came to him to be taught his wisdom. All the areas of wisdom were originally given over to the Chaldeans [after the conquest of Israel] and afterwards to the Persians and Medes and afterwards to the Greeks and afterwards to the Romans. Through the course of time and great travail the Hebrew origins of wisdom was forgotten and the misconception arose that the Greeks and Romans had been its originators. **Cuzari 2:66**

E. Pythagoras, therefore, of Samos, lived in very ancient times, and was esteemed a person superior to all philosophers in wisdom and piety towards G-d. **Now it is plain that he did not only know our doctrines, but was in very great measure a follower and admirer of them.** There is not, indeed, extant any writing that is owned for his; but many there are who have written his history, of whom Hermippus is the most celebrated, who was a person very inquisitive in all sorts of history. Now this Hermippus, in his first book concerning Pythagoras, speaks thus:- "That Pythagoras, upon the death of one of his associates, whose name was Calliphon, a Crotoniate by birth, affirmed that this man's soul conversed with him both night and day, and enjoined him not to pass over a place where an ass had fallen down; as also not to drink of such waters as caused thirst again; and to abstain from all sorts of reproaches." After which he adds thus:- **"This he did and said in imitation of the doctrines of the Jews and Thracians, which he transferred into his own philosophy." For it is very truly affirmed of this Pythagoras, that he took a great many of the laws of the Jews into his own philosophy.** **Flavius Josephus, Against Apion Book I**

F. The Jews are a race of philosophers; they do not cease to occupy themselves with the divinity. **Theophrastes (Aristotle's successor in the Peripatetic school) as quoted in Theodore Reinach, Textes d'auteurs Grecs et Romains relatifs au Judaisme.**

G. Plato derived his idea of G-d from the Pentateuch. Plato is Moses translated into the language of the Athenians. **Numenius in Eusebius, Praeparatio Evangelica**

## II. The Greeks in the Tents of Shem

### A.

אמר רבי יוחנן: מאי טעמא דרבן שמעון בן גמליאל - אמר קרא (בראשית ט') יפת אלקים ליפת וישכן באהלי שם - דבריו של יפת יהיו באהלי שם. - ואימא גומר ומגוג אמר רבי חייא בר אבא: היינו טעמא דכתיב יפת אלקים ליפת - יפיותו של יפת יהא באהלי שם. מגילה ט:

R. Yochanan further said: What is the reason of R. Shimon b. Gamaliel? Scripture says: G-d enlarge Japheth, and he shall dwell in the tents of Shem; [this means] that the words of Yapheth shall be in the tents of Shem. But why not say [the words of] Gomer and Magog? — R. Hiyya b. Abba replied: The real reason is because it is written: Let G-d enlarge [yaft] Japheth: implying, let the chief beauty [yafyuth] of Japheth be in the tents of Shem. **Megilla 9b**

### B.

אלוף מגדיאל אלוף עירם אלה אלופי אדום למשבתם בארץ אחזתם הוא עשו אבי אדום. בראשית פרק לו פסוק מג

Duke of Magdiel, duke of Iram: these be the dukes of Edom, according to their habitations in the land of their possession: he is Esau the father of Edom. **Genesis 36:43**

מגדיאל – היא רומי. רש"י בראשית פרק לו פסוק מג

**Magdiel refers to Rome. Rashi**

### C.

א"ר הונא בשלשה דברים קדמה מלכות יון למלכות הרשעה בנימוסין ובפנקיסין ובלשון. בראשית רבה (וילנא) פרשה טז ד"ה ד אמר רבי

Rav Huna said, "Through three things the kingdom of Greece preceded the evil kingdom: Through its laws and etiquette, its writing and its language." **Midrash Beraitis Rabbah Chapter 16:4**

## III. Astronomy and Medicine in the Talmud

### A.

אמר רבי שמעון בן פזי אמר רבי יהושע בן לוי משום בר קפרא: כל היודע לחשב בתקופות ומזלות ואינו חושב עליו הכתוב אומר (ישעיהו ה) ואת פעל ד' לא יביטו ומעשה ידיו לא ראו. אמר רבי שמואל בר נחמני אמר רבי יוחנן: מנין שמצוה על האדם לחשב תקופות ומזלות שנאמר (דברים ד) ושמרתם ועשיתם כי היא חכמתכם ובינתכם לעיני העמים איזו חכמה ובינה שהיא לעיני העמים הוי אומר זה חישוב תקופות ומזלות. שבת עה.

R. Shimon b. Pazzi said in the name of R. Yehoshua b. Levi on the authority of Bar Kappara: He who knows how to calculate the cycles and planetary courses, but does not, of him Scripture saith, but they regard not the work of the L-rd, neither have they considered the operation of His hands. R. Shmuel b. Nachmani said in R. Yochanan's name: How do we know that it is one's duty to calculate the cycles and planetary courses? Because it is written: For this is your wisdom and understanding in the sight of the peoples. (Deuteronomy 4) What wisdom and understanding is in the sight of the peoples? Say, that it is the science of cycles and planets. **Shabbos 75a**

B.

אמר שמואל: נהירין לי שבילי דשמיא כשבילי דנהרדעא, לבר מכוכבא דשביט דלא ידענא מאי ניהו. ברכות נח:

Shmuel also said: I am as familiar with the paths of heaven as with the streets of Nehardea, with the exception of the comet, about which I am ignorant. **Berachos 58b**

C.

אמר שמואל: יכילנא לתקוני לכולה גולה. ראש השנה כ:

Shmuel said: I am quite able to make a calendar for the whole of the Diaspora. **Rosh Hashana 20b**

D.

כתב שדר ליה עיבורא דשיתין שני. חולין צה:

He (Shmuel) thereupon sent [to R. Yochanan] the calculations for the intercalation of months for sixty years. **Chullin 95b**

E.

שמואל ירחינאה אסייה דרבי הוה, חלש רבי בעיניה. אמר ליה: אימלי לך סמא. אמר ליה: לא יכילנא. אשטר לך משטר? [אמר ליה]: לא יכילנא. הוה מותיב ליה בגובתא דסמני תותי בי סדייה, ואיתסי. הוה קא מצטער רבי למסמכיה, ולא הוה מסתייעא מילתא. אמר ליה: לא לצטער מר, לדידי חזי לי סיפרא דאדם הראשון, וכתיב ביה: שמואל ירחינאה, חכים יתקרי, ורבי לא יתקרי, ואסו דרבי על ידו תהא. רבי ורבי נתן סוף משנה, רב אשי ורבינא סוף הוראה. וסימנך: (תהלים ע"ג) עד אבוא אל מקדשי קל אבינה לאחריתם. בבא מציעא דף פה:

Shmuel Yarhina'ah was Rabbi's physician. Now, Rabbi, having contracted an eye disease, Shmuel offered to bathe it with a lotion, but he said, 'I cannot bear it.' 'Then I will apply an ointment to it,' he said. 'This too I cannot bear,' he objected. So he placed a phial of chemicals under his pillow, and he was healed. Rabbi was most anxious to ordain him, but the opportunity was lacking. 'Let it not grieve thee,' he said; 'I have seen the Book of Adam, in which is written, "Samuel Yarhina'ah shall be called 'Sage', but not 'Rabbi', and Rabbi's healing shall come through him. Rabbi and R. Nathan conclude the Mishnah, R. Ashi and Ravina conclude [authentic] teaching.'" A sign thereof is the verse: Until I went to the sanctuary of G-d; then understood I אבינה their end. (Psalms 73:17) **Bava Metzia 85b**

F.

מהו לא בשמים היא שמואל אמר אין התורה מצויה באיסטרולוגין שאומנותן בשמים אמרו לשמואל הרי אתה איסטרולוגין וגדול בתורה אמר להן לא הייתי מביט באיסטרולוגים אלא בשעה שהייתי פנוי מן התורה אימתי כשהייתי נכנס לבית המים. מדרש דברים רבה ח:ו

What is meant by the verse: It is not in the heavens (30:12)? Shmuel said, "**The Torah is not found amongst the astrologers (or astronomers) whose profession deals with the stars.**" They said to Shmuel, "Behold you are an astronomer and yet you are a great man of Torah?" He replied, "I only looked into the subject at a time when I was free from learning. When was this? When I went to the place of water (this refers to either a bathhouse or a restroom)." **Midrash Devorim Rabbah 8:6**

#### IV. The Jewish Contribution to Science in the Early Middle Ages

As for the eighth nation, they are the Children of Israel, and they have not become famous in the sciences of philosophy; however, their concern was with science of the religious law (*shari'a*) and the biographies of the prophets. Their scholars are the most learned of men in the knowledge of the prophets and the beginning of Creation, and it is from them that the scholars of the Muslims, such as 'Abd allah ibn 'Abbas (619-686/88), Ka'b al Ahbar (died 652/653) and Wahb ibn Munbbih (656-732/738), took it. . . .

And there was among them in the empire of Islam, of those who became famous in the art of medicine, Masarjuwayh the physician, who was entrusted by Umar ibn 'Abd al Aziz (717-720), may Allah be pleased with him, with the translation of the book of Aharan al-Qass about medicine, and it is an excellent compendium, one of the finest of the ancient compendia.

And of them was thereafter among the recent ones Ishaq ibn Sulayman (ca 832-932), a disciple of Ishaq ibn Imaran, who is known as *samm sa'a* (Instant Poison). He was an outstanding physician who served in medicine 'Abd Allah al-Mahdi, the master of Ifriqiyya (Africa). He, moreover, possessed knowledge in logic, and was an expert in the varieties of science. He reached a very high age, beyond a hundred years. He never took a wife, and did not acquire property. He authored excellent works, among them a book on foods and a book on fever, which has no equal, and a book on urine, and a book on elements, and a book on definitions and prescriptions, and a book known as "Garden of Wisdom" on the questions of metaphysics. And he died close to the year 320 [ca. 932 C. E.)

Sahl enb Bishr Habib (died ca. 820) was a Jew who was a distinguished astrologist. He was the author of fine studies, known in the sciences, among them his book on the *mawlad*s [the monthly conjunctions of the moon with the sun], and the Book of Revolutions of the Years of the World, and the Book of Questions and Choices. . . . **Tabaqat al-Uman (Categories of the Nations), Abu al-Qasim Sa'id ibn Ahmad ibn 'Abd al-Rahman (1029-1070)**