

Judaism's Quest for Knowledge, Discovery & AI

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(based on sources prepared by Rabbi Elie Kaunfer, Hadar Institute)

Mishnah Peah 1:1

אלו דברים שאין להם שיעור. הפאה, והבכורים, והראיון, וגמילות חסדים, ותלמוד תורה. אלו דברים שאדם אוכל פרותיהן בעולם הזה והקרן קיימת לו לעולם הבא. כבוד אב ואם, וגמילות חסדים, והבאת שלום בין אדם לחבירו,

ותלמוד תורה כנגד כלם:

These are the things that have no definite quantity: The corners [of the field]. First-fruits; [The offerings brought] on appearing [at the Temple on the three pilgrimage festivals]. The performance of righteous deeds; And the study of the torah. The following are the things for which a man enjoys the fruits in this world while the principal remains for him in the world to come: Honoring one's father and mother; The performance of righteous deeds; And the making of peace between a person and his friend; And the **study of the torah** is equal to them all.

Rabbi Lord Jonathan Sacks, The Great Partnership: Science, Religion & the Search for Meaning

Curiosity leads to science, but it also leads to questions unanswerable by science. The search for G-d is the search for meaning. The discovery of G-d is the discovery of meaning. And that is no small thing because we are meaning-seeking animals. It is what makes us unique. To be human is to ask the question, why?

Science is the search for explanation. Religion is the search for meaning.

Martin Luther King, Jr

Science investigates, religion interprets ... Religion and science are two hemispheres of human thought.

Rabbi Lord Jonathan Sacks

Science takes things apart to see how they work. Religion puts things together to see what they mean. The difference between them is fundamental and irreducible. They represent two distinct activities of the mind. Neither is dispensable. Both, together, constitute a full expression of our humanity.

Science reveals the wisdom of G-d in creation and wisdom is itself the gift G-d gave humanity when (G-d) made us in (G-d's) image and likeness, which Rashi, the classic Jewish commentator, reads as “with the capacity to understand and discern.” But there is a difference between wisdom and Torah. Wisdom tells us how the world is. Torah tells us how the world ought to be. Wisdom is about nature. Torah is about will. It is about human freedom and choice and the way we are called on to behave. Wisdom is about the world G-d makes. Torah is about the world G-d calls on us to make, honoring others as bearers of G-d's image, exercising our freedom in such a way as not to rob others of theirs... Moral laws are not scientific laws. They belong to a different world, the world of freedom, G-d's most fraught and fateful gift. The Hebrew Bible is entirely about this drama of human freedom.

Science fulfills three functions that I see central to the Abrahamic faith. It diminishes human ignorance. It increases human power. And it exemplifies the fact that we are in G-d's image. G-d wants us to know and understand. G-d wants us to use the intellectual gifts G-d gave us.

Albert Einstein

But science can only be created by those who are thoroughly imbued with the aspiration toward truth and understanding. This source of feeling, however, springs from the sphere of religion. To this there also belongs the faith in the possibility that the regulations valid for the world of existence are rational, that is, comprehensible to reason. I cannot conceive of a genuine scientist without that profound faith. The situation may be expressed by an image: science without religion is lame, religion without science is blind.

in ‘Science, Philosophy and Religion: A Symposium’, *Ideas and Opinions*

Weekday Amidah Shemoneh Esrei Blessing #4

<p>You grace people [Adam] with knowledge And teach humans [Enosh] discernment Grace us from You Knowledge, discernment, and intelligence [or: wisdom, discernment and knowledge – Nusah Sefard] Blessed are You, YHVH, who graces knowledge.</p>	<p>אתה חונן לאדם דעת. ומלמד לאנוש בינה: חננו מאתך דעה בינה והשכל [חכמה בינה ודעת] ברוך אתה ה', חונן הדעת</p>
<p>Grace us, our Father, With knowledge from You [And teach us] discernment and wisdom from Your Torah [Lighten our eyes to follow Your mitzvot] Blessed are You, YHVH Who graces knowledge - Eretz Yisrael version of blessing</p>	<p>חנינו אבינו דיעה מאתך [ולמדינו] בינה והשכל מתורתך [האירה עינינו לשמור מצותיך] ברוך אתה ה' חונן הדעת</p>

Bakashot- Requests in Weedkay Amidah

1. Knowledge/Understanding/Insight
2. Repentance
3. Forgiveness
4. Redemption
5. Healing
6. Sustenance
7. Return of Exiles
8. Justice
9. Against Heretics/Enemies
10. Righteous
11. Jerusalem
12. Messiah
13. Accept our prayers

Rabbi Jonathan Sack's Koren Siddur

This is the first of the “request” blessings. King Solomon, when asked by G-d to name the thing he most desired (1 Kings 3:5-15) asked for wisdom; so do we. Knowledge is prior to emotion, because “the heart is deceitful above all things.” (Jer. 17:9). Untutored emotion can be misdirected, even destructive. This paragraph replicates the structure of the Amida as a whole. It begins with praise, “You grace humanity with knowledge”, proceeds to request “Grace us with the knowledge” and ends with thanks “who graciously grants knowledge.”

The next blessing is repentance. Knowledge and understanding allow us to see where we have drifted from the right path of life...

Or Hadash Prayerbook Commentary

By placing intelligence and understanding at the beginning of our petitions, this blessing emphasizes their importance. The ability to learn and to understand is a great gift from G-d upon which all else is based.

Elliot Dorff, My People's Prayerbook

All other blessings we might offer and indeed all requests that we might voice depend on our ability to know ourselves and G-d's world in the first place.

There are three kinds of knowing:

“Knowledge” (de’ah) is factual information.

“Discernment” denotes the ability to analyze things and to distinguish between them as the root b.y.n. means “between.”

“Wisdom” (referred to here by the verb haskel like the yiddish Sekhel) means experiential knowledge.

Rabbi Lord Jonathan Sacks, Future Tense: Jews, Judaism and Israel in the 21st Century

There are two ways of knowing. One is called Chochma “wisdom” and the other is Torah “teaching, law or guidance.”... Wisdom is universal; (Torah is particular). Wisdom is the product of observation, experience and insight. Chochmah is the truth we discover; Torah is the truth we inherit. Chochmah is the universal heritage of humankind; Torah is the specific heritage of Israel. Chochmah is what we attain by being in the image of G-d; Torah is what guides Jews as the people of G-d. Chochmah is acquired by seeing and reasoning; Torah is received by listening and responding. Chochmah tells us what is; Torah tells us what out to be. Chochmah is about facts; Torah is about commands. Chochmah yields descriptive, scientific laws; Torah yields prescriptive behavioral laws. Chochmah is about creation; Torah is about revelation.

Chochmah is the gift of G-d. It is available to everyone. Chochmah is what allows us to understand the world as G-d's work through science and humanities. The sages had harsh words for those able to study science who failed to do so. The neglect of science is tantamount to a religious failure to appreciate the greatness of the creator through creation. Maimonides ruled that study of natural science is the way to love and fear G-d; love by understanding the vastness and wisdom of creation, fear through the contemplation of the smallness of humankind in the grand scheme.

To redeem the world, you have to understand the world. Torah and Chochmah must be reunited if Judaism is to recover its ability to speak to the world. We cannot apply Torah to the world unless we understand the world.

Genesis 2 – 3

G-d formed **the Human** from the dust of the earth blowing into his nostrils the breath of life: **the Human** became a living being. G-d planted a garden in Eden, in the east, and placed there the Human who had been fashioned. And from the ground G-d caused to grow every tree that was pleasing to the sight and good for food, with the tree of life in the middle of the garden, and **the tree of knowledge** of good and bad... And G-d YHVH commanded the Human, saying, “Of every tree of the garden you are free to eat; but as for **the tree of knowledge of good and bad**, you must not eat of it; for as soon as you eat of it, you shall die.” ...but G-d knows that as soon as you eat of it your eyes will be opened and you will be like divine beings who know good and bad.” Then the eyes of both of them were opened and **they perceived** that they were naked; and they sewed together fig leaves and made themselves loincloths.... And G-d YHVH said, “Now that humankind has become like any of us, knowing good and bad, what if one should stretch out a hand and take also from the tree of life and eat, and live forever!”

בראשית פרק ב - פרק ג

(ז) וַיִּצְרֶה יְהוָה אֱלֹקִים אֶת־הָאָדָם עָפָר מִן־הָאֲדָמָה וַיִּפַּח בְּאַפּוֹ נְשִׁמַת חַיִּים וַיְהִי הָאָדָם לְנֶפֶשׁ חַיָּה:
(ח) וַיֹּטֶעַ יְהוָה אֱלֹקִים גֶּן־בְּעֵדֶן מִקְדָּם וַיִּשָּׂם שָׁם אֶת־הָאָדָם אֲשֶׁר יָצָר:
(ט) וַיִּצְמַח יְהוָה אֱלֹקִים מִן־הָאֲדָמָה כָּל־עֵץ נֹחֵמַד לְמַרְאֶה וטוֹב לְמַאֲכָל וְעֵץ הַחַיִּים בְּתוֹךְ הָגֶן וְעֵץ הַדַּעַת טוֹב וְרָע...
(טז) וַיִּצֹו יְהוָה אֱלֹקִים עַל־הָאָדָם לֵאמֹר מִכָּל עֵץ־הָגֶן אָכַל תֹּאכַל:
(יז) וּמִעֵץ הַדַּעַת טוֹב וְרָע לֹא תֹאכַל מִמֶּנּוּ כִּי בְיוֹם אֲכָלְךָ מִמֶּנּוּ מוֹת תָּמוּת...
(ה) כִּי יֵדַע אֱלֹהִים כִּי בְיוֹם אֲכָלְכֶם מִמֶּנּוּ וּנְפַקְחוּ עֵינֵיכֶם וְהִיִּיתֶם כְּאֱלֹקִים יוֹדְעֵי טוֹב וְרָע...
(ז) וַתִּפְלֹחַנָּה עֵינֵי שְׁנֵיהֶם וַיֵּדְעוּ כִּי עֲרֻמִּם הֵם וַיִּתְּפוּרֻּ עָלֶיהָ תְּאֵנָה וַיַּעֲשׂוּ לָהֶם חִגְרֹת...
(כב) וַיֹּאמְרוּ יְהוָה אֱלֹקִים הֵן הָאָדָם הָיָה כְּאֶחָד מִמֶּנּוּ לְדַעַת טוֹב וְרָע וְעַתָּה פֶּן־יִשְׁלַח יָדוֹ וְלָקַח גַּם מִעֵץ הַחַיִּים וְאָכַל וַחֲיִי לָעַלָּם:

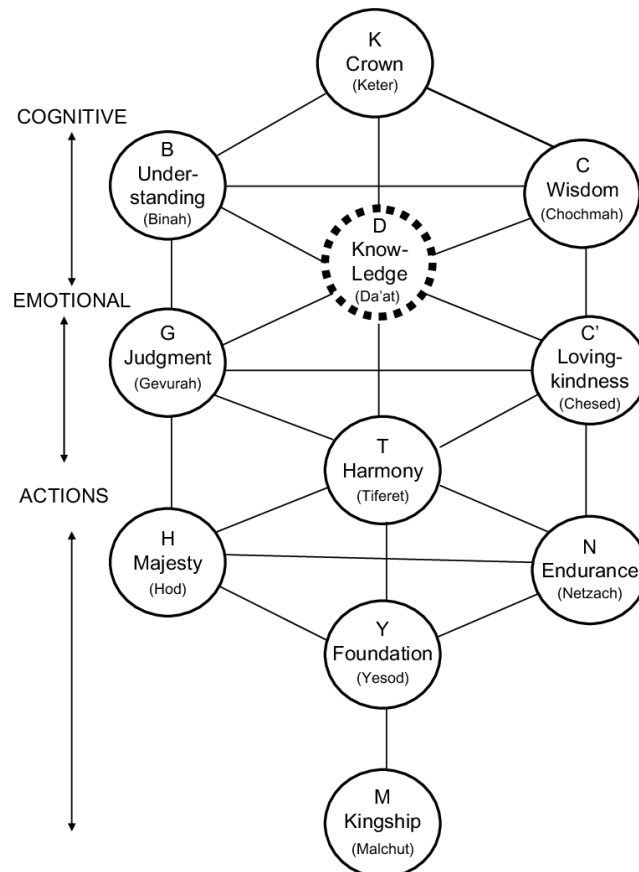
As it is taught (in a Baraita): The tree that Adam the First ate from [what was it?...]...R. Yehuda said: It was wheat, for a baby doesn't **know** how to call "Abba" and "Imma" until it tastes the taste of wheat.

- B Berakhot 40a and Sanhedrin 70b

תלמוד בבלי מסכת ברכות דף מ עמוד א
 דתניא אילן שאכל ממנו אדם הראשון
 ...רבי יהודה אומר: חטה היתה, שאין
 התינוק יודע לקרות אבא ואמא עד
 שיטעום טעם דגן.

To believe in G-d means to understand the question about the meaning of life. To believe in God means to see that the facts of the world are not the end of the matter. To believe in G-d means to see that life has a meaning.

Ludwig Wittgenstein



Note: A system of interconnected fundamental attributes describing creation and the cognitive, emotional and action levels of any created system

<p>Adam knew his wife again, and she gave birth to a son, and she called his name Shet, because G-d has provided me (<i>shat</i>) another offspring instead of Hevel, whom Kayin killed.</p> <p>And Shet also had a child, and he called his name Enosh; It was then that people began to invoke YHVH by name.</p> <p>- Genesis 4:25-26</p>	<p>בראשית פרק ד (כה) וַיֵּדַע אָדָם עוֹד אֶת־אִשְׁתּוֹ וַתֵּלֶד בֶּן וַתִּקְרָא אֶת־שְׁמוֹ שֵׁת כִּי שָׁת־לִי אֱלֹהִים זָרַע אַחֲרֵי תַחַת הַבֵּל כִּי הָרָגוּ קַיִן: (כו) וּלְשֵׁת גַּם־הוּא יָלַד בֶּן וַיִּקְרָא אֶת־שְׁמוֹ אֱנוֹשׁ אָז הוּחַל לִקְרָא בְּשֵׁם יְקֹוֹק:</p>
<p>Rebbe said: I am surprised! How did they cancel “who graces with knowledge” on Shabbat! If there is no knowledge, whence prayer/Amidah?</p> <p>- Yerushalmi Berakhot 4:4; 8b</p>	<p>תלמוד ירושלמי (ונציה) מסכת ברכות פרק ד דף ח טור ב /ה"ד דרכי אמר תמיה אני היאך בטלו חונן הדעת בשבת אם אין דיעה מניין תפילה</p>
<p>“Then they began (<i>huhal</i>)” (Gen 4:26) – the language of <i>hullin</i> – profane. To call the names of people and the names of nature by the name of the Holy Blessed One, in order to do idolatry and to call them by divinity.</p> <p>- Rashi to Gen 4:26</p>	<p>רש"י בראשית פרק ד פסוק כו (כו) אז הוחל - (לשון חולין) לקרא את שמות האדם ואת שמות העצבים בשמו של הקדוש ברוך הוא לעשותן עבודה זרה ולקרותן אלהות</p>
<p>Four things happened in the generation of Enosh...and they became vulnerable to demons. They were responsible themselves for becoming vulnerable to demons, for they argued: What is the difference whether one worships an image or worships man? Hence it is written: “Then man became degraded (<i>huhal</i>) to call upon the name of YHVH” (Gen 4:26).</p> <p>- Genesis Rabbah 24:6, p. 235</p>	<p>בראשית רבה (תיאודור-אלבק) פרשת בראשית פרשה כד ד"ה [זה] ספר תולדות ארבעה דברים נשתנו בימי אנוש... ונעשו חולין למזיקים אמר ר' יצחק הן הן שגרמו לעצמן ליעשות חולין למזיקין מה בין דגחין לצלמה לדגחין לבר נש אז הוחל לקרא בשם י"י (בראשית ד כו).</p>

<p>See I have called by name Bezalel son of Uri son of Hur of the tribe of Judah. I have endowed him with a divine spirit of wisdom, discernment, and knowledge in every kind of craft to make designs for work in gold, silver, and copper...</p> <p>- Exodus 31:2-4</p> <p>And Moses said to the Israelites: See, YHVH has called by name Bezalel, son of Uri son of Hur, of the tribe of Judah. [God] has endowed him with a divine spirit of wisdom, discernment, and knowledge in every kind of craft.</p> <p>- Exodus 35:30-31</p>	<p>שמות פרק לא (ב) רָאָה קִרְאתִי בְשֵׁם בְּצַלְאֵל בֶּן־אוּרִי בֶן־חֹור לְמִטָּה יְהוָה: (ג) וְאִמַּלְא אֹתוֹ רוּחַ אֱלֹקִים בְּחָכְמָה וּבְתַבּוּנָה וּבְדַעַת וּבְכָל־מְלָאכָה:</p> <p>שמות פרק לה (ל) וַיֹּאמֶר מֹשֶׁה אֶל־בְּנֵי יִשְׂרָאֵל רְאוּ קָרָא יְהוָה בְּשֵׁם בְּצַלְאֵל בֶּן־אוּרִי בֶן־חֹור לְמִטָּה יְהוָה: (לא) וַיִּמַּלֵּא אֹתוֹ רוּחַ אֱלֹהִים בְּחָכְמָה וּבְתַבּוּנָה וּבְדַעַת וּבְכָל־מְלָאכָה:</p>
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<p>The blessed G-d, who is great in knowledge/ Prepared and worked on the rays of the sun</p> <p>- Daily Shaharit</p>	<p>א-ל בָּרוּךְ גָּדוֹל דַּעַה, הַכִּין וּפָעַל זָהָרֵי סִמָּה,</p>
<p>Knowledge and understanding surround Him...Good are the lights that our G-d created. [G-d] fashioned them with knowledge, understanding and discernment.</p> <p>- Shabbat Shaharit</p>	<p>דַּעַת וּתְבֻנָּה סִבְבִּים אוֹתוֹ... טוֹבִים מְאוֹרוֹת שִׁבְּרָא אֱלֹהֵינוּ, יִצְרָם בְּדַעַת בְּבִינָה וּבְהַשְׁכָּל,</p>
<p>Blessed are You, YHVH, our G-d, king of the universe, who by His word brings on evenings, with wisdom opens the gates, and with understanding changes the seasons...and separates between day and between night.- Arvit Blessing 1</p>	<p>בָּרוּךְ אַתָּה יי, אֱלֹהֵינוּ מֶלֶךְ הָעוֹלָם, אֲשֶׁר בִּדְבָרוֹ מַעְרִיב עֶרְבִים, בְּחָכְמָה פוֹתַח שְׁעִים, וּבְתַבּוּנָה מְשַׁנֶּה עֵתִים, ... וּמַבְדִּיל בֵּין יוֹם וּבֵין לַיְלָה</p>

<p>1. “Wisdom” (חכמה) is what a person hears from others and learns (makes his own). “Discernment” (תבונה) is understanding a matter by one’s own intelligence deducing it from the things one has already learned. “Knowledge” (דעת) means holy inspiration. Rashi to Ex 31:3</p> <p>2. Wisdom (חכמה) – from learning Discernment (תבונה) – from one’s self Knowledge (דעת) – who learns something from another thing - Lekah Tov, Exodus 35:31, p. 107b</p> <p>3. Wisdom (חכמה) – refers to what one learns from a teacher Discernment (תבונה) – What a person arrives at on one’s own without a teacher Knowledge (דעת) – refers to what a person discovers through research and investigation - Saadia Gaon, in Torah Sheleimah, vol 23, p. 32, n.121</p>	<p>רש"י שמות פרק לא פסוק ג (ג) בחכמה - מה שאדם שומע מאחרים ולמד: ובתבונה - מבין דבר מלבדו, מתוך דברים שלמד: ובדעת - רוח הקדש:</p> <p>פסיקתא זוטרתא (לקח טוב) שמות פרשת ויקהל פרק לה סימן לא לא) וימלא אותו רוח אלהים בחכמה ובתבונה ובדעת. גדולה חכמה שבחר בה הקדוש ברוך הוא, החכמה מלימוד, התבונה מעצמו, הדעת הלומד דבר מדבר:</p> <p>סעדיה גאון חכמה – נופלת על מה שהאדם לומד מרבו, ותבונה תורה על פי על מה שהאדם מגיע אליו בעצמו בלי מורה, ובדעת – נופלת על מה שהאדם ימצא על ידי חקירה ודרישה</p>
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12 Moses said to YHVH, "See, You say to me, 'Lead this people forward,' but You have not **made known** to me whom You will send with me. Further, You have said, 'I **know you** out by name, and you have, indeed, gained My **grace**.'

13 Now, if I have truly found **grace** in Your eyes, pray **let me know** Your ways, **that I may know** You and continue in Your **grace**. Consider, too, that this nation is Your people."...

16 For how shall **it be known** that Your people have gained Your **grace** unless You go with us, so that we may be distinguished, Your people and I, from every people on the face of the earth?"

17 And YHVH said to Moses, "I will also do this thing that you have asked; for you have truly found **grace** in My eyes and I **know** you out by name."

18 [Moshe] said, "Oh, let me behold Your Presence!"

19 And [G-d] answered, "I will make all My goodness pass before you, and I will proclaim before you the name YHVH, but I shall grant **grace** to whom I grant **grace**, and have compassion for whom I have compassion.

- Ex. 33:12-13;16-19

שמות פרק לג

(יב) וַיֹּאמֶר מֹשֶׁה אֶל־יְקֹזֶק רְאֵה אֶתָּה אֹמֵר אֵלַי הֵעַל אֶת־הָעָם הַזֶּה וְאַתָּה לֹא הוֹדַעְתָּנִי אֶת אֲשֶׁר־תִּשְׁלַח עִמִּי וְאַתָּה אֹמֶרְתָּ יִדְעִיתִי בְּשֵׁם וְגַם־מִצָּאתָ חֵן בְּעֵינַי:

(יג) וְעַתָּה אִם־נָא מִצָּאתִי חֵן בְּעֵינֶיךָ הוֹדַעְנִי נָא אֶת־דֶּרְכְּךָ וְאִדְעֶךָ לְמַעַן אֶמְצֵא־חֵן בְּעֵינֶיךָ וְרְאֵה כִּי עֲמָךְ הִנְּנִי הַזֶּה:...

(טז) וּבִמְהֵרָה יוֹדַע אֲפֹא כִי־מִצָּאתִי חֵן בְּעֵינֶיךָ אֲנִי וְעַמָּךְ הַלֹּא בִלְכֻתְךָ עִמָּנוּ וְנִפְלִינוּ אֲנִי וְעַמָּךְ מִכָּל־הָעָם אֲשֶׁר עַל־פְּנֵי הָאֲדָמָה:

פ

(יז) וַיֹּאמֶר יְקֹזֶק אֶל־מֹשֶׁה גַם אֶת־הַדָּבָר הַזֶּה אֲשֶׁר דִּבַּרְתָּ אֶעֱשֶׂה כִי־מִצָּאתָ חֵן בְּעֵינִי וְאִדְעֶךָ בְּשֵׁם:

(יח) וַיֹּאמֶר הִרְאֵנִי נָא אֶת־כְּבוֹדְךָ: (יט) וַיֹּאמֶר אֲנִי אֶעְבִּיר כָּל־טוֹבִי עַל־פְּנֶיךָ וְקִרְאתִי בְּשֵׁם יְקֹזֶק לְפָנֶיךָ וְחִנַּתִּי אֶת־אֲשֶׁר אֵלַי וְרַחֲמִתִּי אֶת־אֲשֶׁר אֲרַחֵם:

<p>Cause us to discern, YHVH our G-d, to know Your ways. - B Berakhot 29a</p>	<p>תלמוד בבלי מסכת ברכות דף כט עמוד א הבינו ה' אלקינו לדעת דרכיך</p>
<p>G-d heard their cried, and G-d remembered His covenant with Avraham, Yitzhak and Yaakov. G-d saw the children of Israel and G-d knew. - Exodus 2:24-25</p>	<p>שמות פרק ב (כד) וַיִּשְׁמַע אֱלֹקִים אֶת־נַאֲקָתָם וַיִּזְכֹּר אֱלֹהִים אֶת־בְּרִיתוֹ אֶת־אַבְרָהָם אֶת־ יִצְחָק וְאֶת־יַעֲקֹב: (כה) וַיֵּרָא אֱלֹקִים אֶת־בְּנֵי יִשְׂרָאֵל וַיֵּדַע אֱלֹהִים:</p>
<p>Do not oppress the stranger. You know the stranger for you were strangers in the land of Egypt. - Exodus 23:9</p>	<p>שמות פרק כג (ט) וְגֵר לֹא תִלְחָץ וְאַתֶּם יָדַעְתֶּם אֶת־נַפְשׁ הַגֵּר כִּי־גֵרִים הָיִיתֶם בְּאֶרֶץ מִצְרָיִם:</p>

Talmud Bavli Shabbat 75a

Rabbi Shimon ben Pazi said that Rabbi Yehoshua ben Levi said in the name of bar Kappara: Anyone who knows how to calculate astronomical seasons and the movement of constellations and does not do so, the verse says about him: “They do not take notice of the work of God, and they do not see His handiwork” (Isaiah 5:12). And Rabbi Shmuel bar Nahmani said that Rabbi Yohanan said: From where is it derived that there is a mitzva incumbent upon a person to calculate astronomical seasons and the movement of constellations? As it was stated: “And you shall guard and perform, for it is your wisdom and understanding in the eyes of the nations” (Deuteronomy 4:6). What wisdom and understanding is there in the Torah that is in the eyes of the nations, i.e., appreciated and recognized by all? You must say: This is the calculation of astronomical seasons and the movement of constellations, as the calculation of experts is witnessed by all.