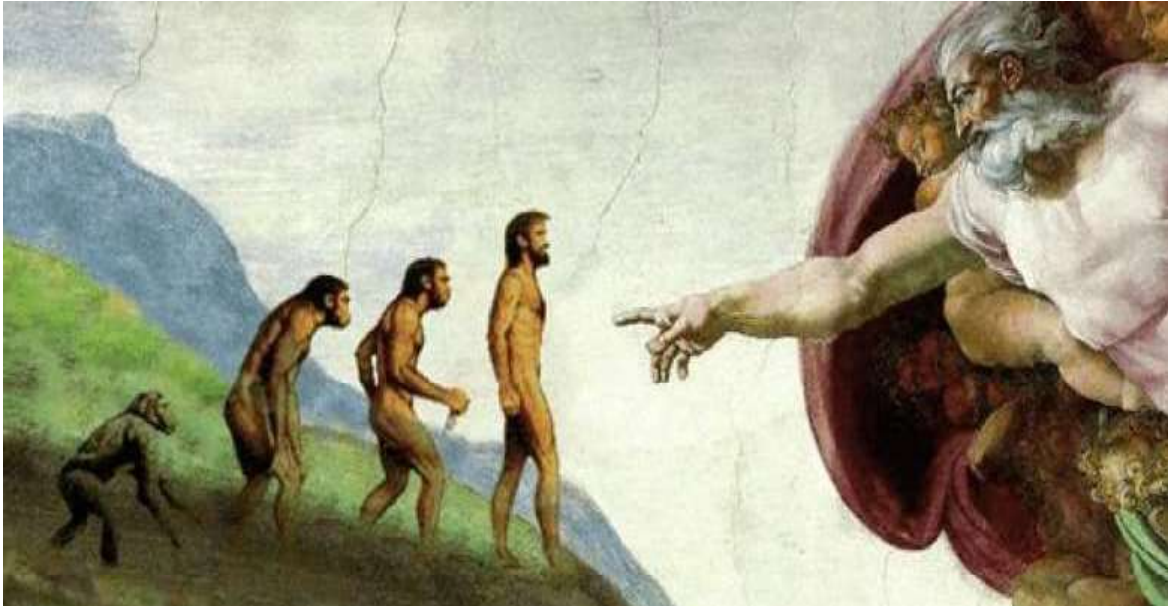


Angels & Demons

Scientific Progress in Jewish Thought

בס"ד



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כִּי לֹא־נִחַשׁ בְּיַעֲקֹב וְלֹא־קָסַם בְּיִשְׂרָאֵל כְּעַת יֵאמָר לְיַעֲקֹב
וּלְיִשְׂרָאֵל מִה־פָּעַל אֱלֹ: (במדבר כג, כג)

**For there is no divination in Jacob and no soothsaying in Israel.
In time it will be said to Jacob and Israel, 'What has God
wrought'? (Numbers 23:23)**

* * * * *

"[These words inaugurated and sanctified] the American Telegraph with the name of its author... No words could have been selected more expressive of the disposition of my own mind at that time, to ascribe all the honor to Him to whom it truly belongs."

- Samuel F. B. Morse



"עתידה בת קול להיות מפוצצת על ראשי ההרים, ואומרת, מה פעל אל, כל מי שפעל [עם אל] יבוא ויטול שכרו. ורוח הקדש אומרת, מי הקדימני ואשלם, מי קלס לפני עד שלא נתתי בו נשמה" (פסיקטא דרב כהנא ט)

In the future a heavenly voice will spread across the mountaintops saying "What hath God wrought? All who have worked with God should come and take their reward!" And the heavenly spirit says, "Who can precede me and I will pay them? Who can praise me before I have given them a soul?"

- Pesikta DeRav Kahana

I - The Mandate of Scientific Progress

1. Pirkei Avos 3:14 – פרקי אבות ג:יד

הוא היה אומר, חביב אדם שנברא בצלם. חבה יתרה נודעת לו שנברא בצלם, שנאמר (בראשית ט) כי בצלם אלהים עשה את האדם. חביבין ישראל שנקראו בנים למקום. חבה יתרה נודעת להם שנקראו בנים למקום, שנאמר (דברים יד) בנים אתם לה' אלהיכם. חביבין ישראל שנתן להם כלי חמדה. חבה יתרה נודעת להם שנתן להם כלי חמדה שבו נברא העולם, שנאמר (משלי ד) כי לקח טוב נתתי לכם, תורתי אל תעזבו :



Rabbi Yisrael Lifschitz (1782-1860) Altona

He used to say: Beloved is man for he was created in the

image [of God]. Especially beloved is he for it was made

known to him that he had been created in the image [of

God], as it is said: “for in the image of God He made man”

(Genesis 9:6). Beloved are Israel in that they were called

children to Hashem. Especially beloved are they for it was made known to them that they are

called children of the Hashem, as it is said: “you are children to Hashem your God” (Deuteronomy

14:1). Beloved are Israel in that a precious vessel was given to them. Especially beloved are they

for it was made known to them that the desirable instrument, with which the world had been

created, was given to them, as it is said: “for I give you good instruction; forsake not my Torah”

(Proverbs 4:2).

2. Tiferes Yisrael: Yachin on Pirkei Avos 3 - תפארת ישראל: יכין מסכת אבות פרק ג

(פח) חביב אדם. נ"ל שהאדם גרסינן דהיינו אפילו עכ"ם [כתוס' יבמות, דס"א א'], דהרי מדסיים בסיפא חביבין ישראל ש"מ דרישא בכל מין האדם מיירי, ור"ל אפילו בעכו"ם, וכן הראיה דמייתי תנא מקרא דעשה את האדם, הרי בעכו"ם נמי מיירי, דלבני נח נאמר [וכמ"ש התוי"ט], וגם מלך עי והחמשה מלכים שתלה יהושע, הורידם קודם הערב, ש"מ שגם לעכו"ם יש צלם אלהים (א)

It appears to me that the correct version is “the [species] man” which comes to include gentiles.

For since the statement concludes “Beloved are Israel,” it implies that we are speaking about the

entire human species including gentiles. Another proof to this idea is that the Tanna brings

[support] for this from the verse “made man” which also refers to gentiles. [Indeed,] regarding

descendants of Noach it says, “and also the King of Ai and the five kings which Yehoshua slew

were brought down before evening.” We learn from here that even gentiles have *tzelem elokim*.

3. Tiferes Yisrael: Boaz on Pirkei Avos 3 - תפארת ישראל: בועז מסכת אבות פרק ג

(א) אמר המפרש ואגב דאתא לידן, נימא בה מלתא שמצוה לפרסמו... ואנחנו רואים כמה מחסידיהן שמלבד שמכירין יוצר בראשית, ומאמינין בתה"ק שהיא אלהית, ועושינן ג"ח גם לישראל, וכמה מהן שהיטיבו ביותר לכל באי עולם, כהחסיד יענער שהמציא האפאקקענאימפפונג, שעל ידה ניצולים כמה רבבות בני אדם מחולי וממיתה וממומין, ודראקא שהביא הקארטאפפעל לאיראפא, שמעכב כמה פעמים הרעב. וגוטענבערג שהמציא את הדפוס. וכמה מהן שלא נשתלמו כלל בעה"ז...



"I am not surprised that men are not grateful to me; but I wonder that they are not grateful to God for the good which He has made me the instrument of conveying to my fellow creatures."

- Dr. Edward Jenner (1749-1823)

And once we have reached this topic, I will say something that must be publicized... We have seen many righteous gentiles that aside from the fact that they recognize the Creator of the World (Hashem) and believe in the divinity of the Torah, they are kind to the Jews and many have done so much good for all of humanity like the pious [Edward] Jenner who invented the smallpox vaccine which saved tens of thousands of people from sickness, death, and deformities. [Similarly, Sir Francis] Drake who brought the potato to Europe that prevented many famines and [Johannes] Guttenberg who invented the printing press. And many of these have not been rewarded in this world...

4. בראשית א – Genesis 1

<p>26 And God said, "Let us make man in our image, after our likeness, and they shall rule over the fish of the sea and over the fowl of the heaven and over the animals and over all the earth and over all the creeping things that creep upon the earth."</p>	<p>כו וַיֹּאמֶר אֱלֹקִים נַעֲשֶׂה אָדָם בְּצַלְמֵנוּ כְּדִמוֹתֵנוּ וַיְרֹדוּ בְדִגְתַּי הַיָּם וּבְעוֹף הַשָּׁמַיִם וּבַבְּהֵמָה וּבְכָל הָאָרֶץ וּבְכָל הָרֶמֶשׂ הַרֹמֵשׂ עַל הָאָרֶץ</p>
<p>27 And God created man in His image; in the image of God He created him; male and female He created them.</p>	<p>כז וַיִּבְרָא אֱלֹקִים אֶת־הָאָדָם בְּצַלְמוֹ בְּצַלְמֵ אֱלֹהִים בָּרָא אֹתוֹ זָכָר וּנְקֵבָה בָּרָא אֹתָם</p>
<p>28 And God blessed them, and God said to them, "Be fruitful and multiply and fill the earth and subdue it, and rule over the fish of the sea and over the fowl of the sky and over all the beasts that tread upon the earth."</p>	<p>כח וַיְבָרֶךְ אֹתָם אֱלֹקִים וַיֹּאמֶר לָהֶם אֱלֹקִים פְּרוּ וּרְבוּ וּמְלאוּ אֶת הָאָרֶץ וּכְבֹשׁוּהָ וּרְדוּ בְּדִגְתַּי הַיָּם וּבְעוֹף הַשָּׁמַיִם וּבְכָל־חַיַּי הָרֹמֵשׂ עַל־הָאָרֶץ:</p>
<p>29 And God said, "Behold, I have given you every seed-bearing herb, which is upon the surface of the entire earth, and every tree that has seed bearing fruit; it will be yours for food.</p>	<p>כט וַיֹּאמֶר אֱלֹקִים הִנֵּה נָתַתִּי לָכֶם אֶת־פְּלִיעֵשׂב אֲשֶׁר עַל־הָאָרֶץ וְאֶת־פְּלִיעֵץ אֲשֶׁר־בְּנֵי הָאָרֶץ וְאֶת־כָּל־עֵץ אֲשֶׁר־בְּפְרִיעֵץ זֶרַע זֶרַע לָכֶם יְהִי לְאֹכְלָה:</p>

5. רש"י בראשית ב, ה – Rashi Genesis 2:5

כי לא המטיר. ומ"ט לא המטיר? לפי שאדם אין לעבד את האדמה, ואין מכיר בטובתם של גשמים, וכשבא אדם וידע שהם צריך לעולם, התפלל עליהם וירדו וצמחו האילנות והדשאים:

Because God had not brought rain — And what is the reason that God had not caused it to rain? “because there was no man to till the ground” and there was, therefore, no one to recognize the good (utility) of rain. When Adam came (was created), however, and he realized that it was necessary for the world, he prayed for it and it fell, so that trees and verdure sprang forth.

6. Genesis 2 – בראשית ב

<p>5 Now no tree of the field was yet on the earth, neither did any herb of the field yet grow, because the Lord God had not brought rain upon the earth, and there was no man to work the soil.</p>	<p>ה וְכֹל אֲשֶׁר הִשָּׂדֶה טָרָם יִהְיֶה בְּאֶרֶץ וְכֹל עֵשֶׂב הַשָּׂדֶה טָרָם יִצְמַח כִּי לֹא הִמְטִיר הוֹיָה אֱלֹקִים עַל־הָאָרֶץ וְאָדָם אִין לַעֲבֹד אֶת־הָאֲדָמָה:</p>
<p>6 And a mist ascended from the earth and watered the entire surface of the ground.</p>	<p>ו וְאֵד יָעָלָה מִמִּזְהָרֶיץ וְהִשְׁקָה אֶת־כָּל־פְּנֵי הָאֲדָמָה:</p>
<p>7 And the Lord God formed man of dust from the ground, and He breathed into his nostrils the soul of life, and man became a living soul.</p>	<p>ז וַיִּצְרֵף הוֹיָה אֱלֹקִים אֶת־הָאָדָם עִפְרָ מִן־הָאֲדָמָה וַיִּפַּח בְּאַפָּיו נְשִׁמַת חַיִּים וַיְהִי הָאָדָם לְנֶפֶשׁ חַיָּה:</p>
<p>8 And the Lord God planted a garden in Eden from the east, and He placed there the man whom He had formed.</p>	<p>ח וַיִּטֵּעַ הוֹיָה אֱלֹקִים גִּן־בְּעֵדֵן מִקְדָּם וַיִּשֶׂם שָׁם אֶת־הָאָדָם אֲשֶׁר יָצָר:</p>
<p>15 Now the Lord God took the man, and He placed him in the Garden of Eden to work it and to guard it.</p>	<p>טו וַיִּקַּח הוֹיָה אֱלֹקִים אֶת־הָאָדָם וַיִּנְחֵהוּ בְּגִן־עֵדֶן לַעֲבֹדָה וּלְשִׁמְרָה:</p>
<p>16 And the Lord God commanded man, saying, "Of every tree of the garden you may freely eat.</p>	<p>טז וַיִּצְוֶה הוֹיָה אֱלֹקִים עַל־הָאָדָם לֵאמֹר מִכָּל עֵץ־הַגָּן אֲכָל תֹּאכַל:</p>
<p>17 But of the Tree of Knowledge of good and evil you shall not eat of it, for on the day that you eat thereof, you shall surely die."</p>	<p>יז וּמֵעֵץ הַדַּעַת טוֹב וְרָע לֹא תֹאכַל מִמֶּנּוּ כִּי בַיּוֹם אֲכָלְךָ מִמֶּנּוּ מוֹת תָּמוּת:</p>
<p>18 And the Lord God said, "It is not good that man is alone; I shall make him a helpmate opposite him."</p>	<p>יח וַיֹּאמֶר יְהוָה אֱלֹהִים לֹא־טוֹב הִיּוֹת הָאָדָם לְבֶדּוֹ אֶעֱשֶׂה־לּוֹ עֵזֶר כְּנֶגְדּוֹ:</p>
<p>22 And the Lord God built the side that He had taken from man into a woman, and He brought her to man.</p>	<p>כב וַיִּבֶן הוֹיָה אֱלֹקִים אֶת־הַצֶּלַע אֲשֶׁר־לָקַח מִמֶּנּוּ וַיִּבְרָא אֶת־הָאִשָּׁה וַיְבִיאָהּ אֵלֶי־הָאָדָם:</p>
<p>23 And man said, "This time, it is bone of my bones and flesh of my flesh. This one shall be called <i>ishah</i> (woman) because this one was taken from <i>ish</i> (man)."</p>	<p>כג וַיֹּאמֶר הָאָדָם זֹאת הִפְעַם עֵצָם מֵעֲצָמֵי וּבִשָּׂר מִבִּשְׂרִי לְזֹאת יִקְרָא אִשָּׁה כִּי מֵאִישׁ לָקַחְתִּיזֹאת:</p>

7. Yad Hamelech: Foundations of Torah 4 - פרק ד

בזוהר פרשת בראשית נאמר ויפח באפיו נשמת חיים מאן דנפח מתוכו נפח.

The Zohar says “And He blew into his nostrils” – One who exhales, exhales from one’s essence.

8. Aderes Eliyahu Genesis 2:15 – טו – אדרת אליהו ב, טו

לעבדה הוא עבודת האדמה וההשקאה והשמירה שלא יעלה בה פריץ חיות. וכן חלקי המצות הם שנים עשה ול"ת. עשה הם בגדר העבודה. ול"ת בגדר השמירה

"To work" refers to working the ground and irrigating it. "To guard it" refers to guarding it to prevent animals breaking in and destroying it. So too are the *mitzvos* divided into two groups – positive and negative. Positive commandments constitute the "work" and negative commandments constitute the "guarding."



9. Yevamos 63a – יבמות סג. – יבמות סג.

וא"ר אלעזר מאי דכתיב זאת הפעם עצם מעצמי ובשר מבשרי מלמד שבא אדם על כל בהמה וחיה ולא נתקררה דעתו עד שבא על חוה

"Why does it say This is the time, bone of my bone, flesh of my flesh'? It teaches that Adam was intimate with every animal, but his mind was not at ease until he was intimate with Eve

10. Rashi Genesis 1:27 – רש"י בראשית א, כז

זכר ונקבה ברא אותם. ולהלן הוא אומר ויקח אחת מצלעותיו וגו' מדרש אגדה שבראו שני פרצופים בבריאה ראשונה, ואחר כך חלקו.

"Male and Female He created them." But later the Torah says "And He took one of [Adam's] ribs?" There is a midrash that He initially created Adam with two faces and subsequently divided them.

Differences	Genesis 1	Genesis 2
Name of God	אלקים	הויה אלקים
Creation	Image of God	Soul
Charge/Eating	Rule	Custodial/mitzvos
Creation of Eve	Together	Separate and later met

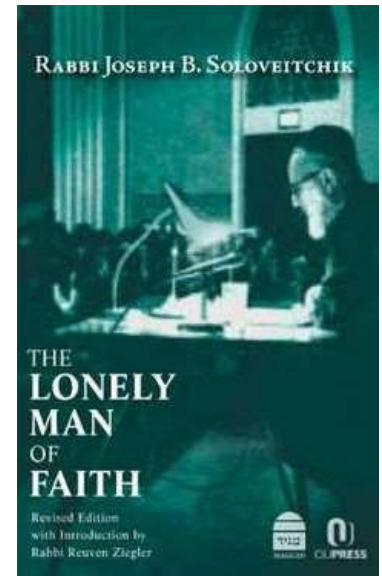
11. The Lonely Man of Faith Chapter 1 (excerpts)

There is no doubt that the term "image of God" in the first account refers to man's inner charismatic endowment as a creative being. Man's likeness to God expresses itself in man's striving and ability to become a creator. . .

God, in imparting the blessing to Adam the First and giving him the man-date to subdue nature, directed Adam's attention to the functional and practical aspects of his intellect through which man is able to gain control of nature... Adam the First is overwhelmed by one quest, namely, to harness and dominate the elemental natural forces and to put them at his disposal...

What is Adam the first out to achieve? What is the objective toward which he incessantly drives himself with enormous speed? The objective, it is self-evident, can be only one, namely, that which God put up before him: to be "man," to be himself. Man is an honorable being. In other words, man is a dignified being and to be human means to live with dignity... "Thou hast made him to have dominion over the works of Thy hands. Thou hast put all things under his feet." In other words, dignity was equated by the Psalmist with man's capability of dominating his environment and exercising control over it. Man acquires dignity through glory, through his majestic posture vis-a-vis his environment.

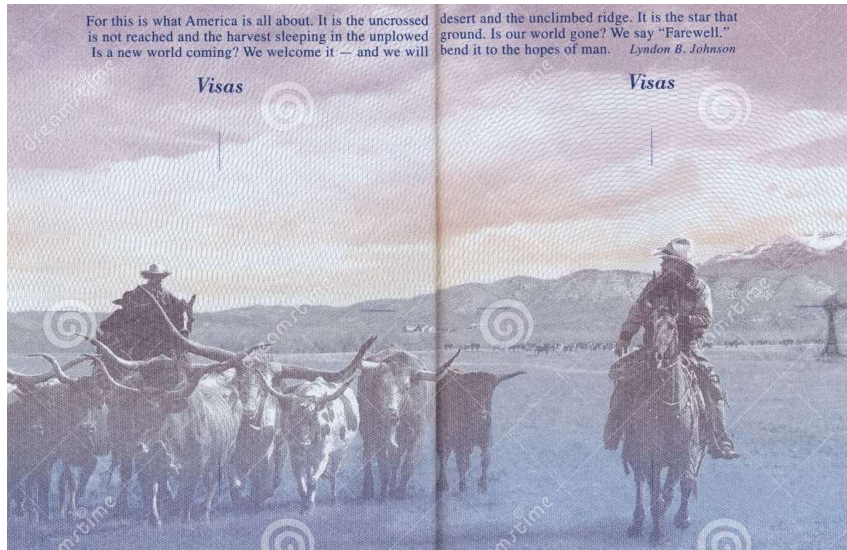
Hence, dignity is unobtainable as long as man has not reclaimed himself from coexistence with nature and has not risen from a non-reflective, degradingly helpless instinctive life to an intelligent, planned, and majestic one... Life in bondage to insensate elemental forces is... an undignified affair.



Man of old who could not fight disease and succumbed in multitudes to yellow fever or any other plague with degrading helplessness could not lay claim to dignity. Only the man who builds hospitals, discovers therapeutic techniques, and saves lives is blessed with dignity... Civilized man has gained limited control of nature and has become, in certain respects, her master, and with his mastery he has attained dignity as well.

Hence, Adam the First is aggressive, bold, and victory-minded. His motto is success, triumph over the cosmic forces. He engages in creative work, trying to imitate his Maker (imitatio Dei)...

In doing all this, Adam the First is trying to carry out the mandate entrusted to him by his Maker who, at dawn of the sixth mysterious day of creation, addressed Himself to man and summoned him to "fill the earth and subdue it." It is God who decreed that the story of Adam the first be the great saga of freedom of man-slave who gradually transforms himself into man-master. While pursuing this goal, driven by an urge which he cannot but obey, Adam the first transcends the limits of the reason-able and probable and ventures into the open spaces of a boundless universe. Even this longing for vastness, no matter how adventurous and fantastic, is legitimate. Man reaching for the distant stars is acting in harmony with his nature which was created, willed, and directed by his Maker. It is a manifestation of obedience to rather than rebellion against God.



“For this is what America is all about. It is the uncrossed desert and the unclimbed ridge. It is the star that is not reached and the harvest sleeping in the unplowed ground. Is our world gone? We say “Farewell.” Is a new world coming? We welcome it--and we will bend it to the hopes of man.”

- Lyndon B. Johnson
1965 Inaugural
Address

12. Lonely Man of Faith Ch. 1-2 (excerpts)

Modern science has emerged victorious from its encounter with nature because it has sacrificed qualitative-metaphysical speculation for the sake of a functional duplication of reality

... [Adam 1] is not fascinated by the question, "Why does the cosmos function at all? nor is he interested in the question, ""What is its essence?" He is only curious to know how it works... nurtured by the selfish desire on the part of Adam to better his own position in relation to his environment...

He [Adam 2] looks for the image of God not in the mathematical formula or the natural relational law but in every beam of light, in every bud and blossom, in the morning breeze and the stillness of a starlit evening. In a word, Adam the second explores not the scientific abstract universe but the irresistibly fascinating qualitative world where he establishes an intimate relation with God.... Adam the second lives in close union with God. His existential "I" experience is interwoven in the awareness of communing with the Great Self whose footprints he discovers along the many tortuous paths of creation.