

ד. שלילת שיטת ההתפתחות

מכתב מפורט ומלא הגהות לדר. האוורד גאלדשטיין, בהמשך לשאלותיו במ"ש כ"ק אדמו"ר במכתבו הידוע מי"ח טבת תשכ"ב בשלילת שיטת ההתפתחות. המכתב נדפס בספר "Mind Over Matter" (ע' 37 ואילך) ומתפרסם כאן לראשונה עם כל הגהותיו. הפענוח מופיע לאחר המכתב בשני טורים: הא' – הפענוח של המכתב המקורי, והב' – הפענוח של המכתב עם ההגהות

B.H.
17th of Cheshvan, 5723
Brooklyn, N.Y.

Dr. H. Goldstein
1721 Grand Avenue
New York 53, N.Y.

Greeting and Blessing:

My secretary, Dr. Nissan Mindel, has brought your letter of October 23 to my attention. I am pleased to note that you took time out to review my letter of the 18th of Teveth, 5722, and to put down in writing your observations thereon. Many thanks.

In reply, I can either follow the order of my letter ~~point~~ by point in the light of your remarks, or take up your remarks as they appear in your letter. I will choose the latter method. In any case, I trust that our views will be reconciled, since, as you indicate in the introductory paragraph of your letter, you are in full sympathy with the aims of my said letter, namely, ~~to reinforce the position of traditional Yiddishkeit.~~ I am sure that both of us will agree with the Rambam that misconceptions are sometimes even more harmful than ~~misdeeds.~~

I must begin with two prefatory remarks:

(a) It should be self-evident that my letter did not imply a repudiation of the validity of science or the scientific method. In fact, I stated so explicitly towards the end of my said letter. ~~I do not believe that I can be suspected of trying to belittle the accomplishments of science.~~ Moreover, in certain areas the Torah view accords to science even more credit than science itself claims; hence many laws in Halachah are geared to scientific conclusions (as e.g. in medicine), assuming them to correspond to objective reality.

(b) A remark has been attributed to you to the effect that just as Rabbinic problems should be dealt with by Rabbis so should scientific problems be left to scientists. I do not know how accurate this report is, but I feel I should not ignore it nevertheless. ~~My qualifications for the said letter are based on my studies of science on the university level for a number of years, to wit, from 1928 to 1932 in Berlin, and from 1934 to 1938 in Paris, and my effort to keep reasonably abreast of scientific developments ever since.~~

Now to your letter.

(1) I quite agree, of course, that scientific theories

to resolve...
Torah

negation or
refutation

I hope that
I will not

Especially
as

by someone
who studied
Rabbinics

Those who
studied science

פירוק
הוא
הוא

הוא
הוא
הוא

only
years in terms
of theories

(now) X
and will
always be
and
probably
better than
I
and our
knowledge
of it = science

of a least *- implies*

[illegible]

~~In my desire to "judge all men in the scale of merit," I~~

at least -3-
not all of
Trait
did not want to accuse them of anti-religious bias, but attempted to explain their attitude by a common human weakness, the quest for distinction and accomplishment. Incidentally, this natural trait has its positive aspects, and is also basic in our religion, since without the incentive of accomplishment nothing would be accomplished.

(4) Regarding the par. in my letter which begins "Basically the problem..." through page 2, which appears not fully clear, I can only say that perhaps a little more careful study of these paragraphs is indicated. They have to do with the causality theory. The classical idea of causality led to the well-known conclusion that if at any time the exact measurements of positions and velocities of objects were known, including knowledge of the forces acting on the particles, it would be possible in theory at least to predict any future state of things in the universe. Aside from the fact that modern science no longer subscribes to such determinism, this theory could be applied only to future predictions, but not to the past, since one and the same effect might be produced by different sets of causes. This, in substance, is the gist of that section of the letter, which was intended to point out one of the basic difficulties of all theories dealing with the origin of the universe or of our planet earth.

Your remark about the misuse of the terms "fission" and "fusion" in relation to chemical reactions is, of course, valid and well taken. I trust, however, that the meaning was not unduly affected thereby. Undoubtedly the terms "composition" and "decomposition," or simply "combination reactions" and "decomposition reactions," ~~could have been better~~. Actually, I believe, the different usage of the terms in nuclear and chemical reactions is more conventional than basic. Nevertheless, I should have been mindful of the semantics. ~~Standard terminology.~~

Here a word of explanation regarding the terminology of my letter is in order. If the terms or expressions used are not always the conventional or technical ones, this is due (a) the fact that I usually dictate my letters in Hebrew or Yiddish, which is then translated; and (b) the fact that I received my scientific training, as already mentioned in German and French, and previously in Russian, which may also account for some of the variations.

(6) You refer to my statement that scientists know very little about the interactions of isolated atoms or subatomic particles, and question its relevance to the theories about the dating of the World. The relevance is this. The evolutionary theory as it applies to the origin of our solar system and planet Earth, from which the dating is inferred in astronomical figures, presumes (at least in the case of some hypotheses) that matter as we know it now evolved from atoms and subatomic particles in some pristine or gaseous state, which then condensed, etc. Since very little can be known of the interaction of atoms and particles in that presupposed state, the whole evolutionary theory is obviously purely conjectural.

By Dr Muller of Penn State University

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from the
had atomic
particles

But as
late as
1931

only protons
and electrons
were
known

and "exploded"
The bubble
chamber

on invented
only in 1952.

and a
field ion
microscope

reaching
the
reaching
into the

realm of the
atom and
sub-atom
particles

only
si/ 1962.

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I am aware of the fact that the major part of physics research in this century has been concerned with interactions of individual units ranging from atoms to the most elementary particles now known. This is precisely the point I make. Consider how comparatively new, and limited, the science of nucleonics is: The theory of relativity and the Rutherford researches were introduced only in 1905; the contribution of Niels Bohr to the understanding of the structure of the atom came only in 1913, while the mesons were only discovered in 1936 (I believe), etc. Each discovery advanced nucleonics by gigantic steps (while partly modifying previous concepts). It is safe to assume that all we have learned in the field of nucleonics in the last few decades is relatively very little by comparison with what we can confidently expect to learn in the next few decades, especially with the continued advancement and perfection of scientific tools and technology. But no matter how much we are destined to learn about the structure and behavior of nuclei in the future, we can never know with any degree of certainty how the universe came about, if scientific knowledge is to be the only source of our knowledge.

As a matter of fact, the evolutionary hypotheses are, with minor modifications, still rooted in 19th century science, before Lavoisier exploded the phlogiston theory, and before there was any idea that the atom could be split. And this is not to say that science is "bad," but merely to point out the almost insurmountable difficulties with which science is faced in this particular area of cosmogony and geochronology.

(7) You object to my statement that conditions of pressure, temperature, radioactivity, etc. must have been "totally different" in the early stages supposed by some evolutionists from those existing today, and you assert that those environmental conditions have for the most part either been duplicated in the laboratory or observed in natural phenomena.

Here, with all due respect, I beg to differ. Since we do not know what actually took place in those supposed early stages, we cannot very well duplicate unknown qualities and factors, etc. As for observable natural phenomena, solar, nebular or galactic, telescopic observations can hardly serve as certain deductions on which to build anything more than pure hypothesis.

(8) You state that there is no evidence that any radioactive element produces cataclysmic changes. This is surprising, in view of the nuclear experiments in Brookhaven and elsewhere, and the effects of even a single nuclear explosion. At a time when the whole universe is supposed to have been in a state of violent atomic instability, with worlds in collision, etc., cataclysmic changes cannot be ruled out. must take place

(9) My use of such terms as "colligation" and "conglomeration" in connection with nuclear reactions which are not standard scientific terms, has already been covered earlier (5). But I should have thought that you would be able to identify them with fusional and other transformations of atomic nuclei which have to

will confirm my observation

in their present

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 evolution ענין זה אינו כולו חדש. זה תורה הידועה הייתה
 עולם וזהו הענין של מה שאתה אומר. זהו
 do with the formation and transmutation of the elements, processes -
 which must be given a central place in the evolutionary hypotheses
 of the origin of the universe.

(10) Your observation about a lack of a clear distinction
 in my letter between cosmology and geochronology, is correct, but
 no such distinction was intended. ① In evaluating the evolutionary
 theory of the universe, as of our planet Earth, I have in mind
 that the strength of a chain is measured by its weakest link, and
 in my letter I attempted to point out some of the weakest links
 in both areas of cosmology and geochronology, which, in the final
 analysis, are not independent. You know, of course, that the
 Torah certainly makes no distinction between the two, since, accord-
 ing to the Torah the whole universe, including our earth, was
 created simultaneously ex nihilo.

(11) You state, finally, that the crucial point to con-
 sider in regard to geochronology is the existence of objects
 and geological formations in and on the crust of the Earth which
 serve as physically observable clocks, etc. But I have already
 pointed out in my said letter that such criteria are valid only
 as of now and for the future, but cannot be applied either
 scientifically or logically to a primordial state. ③ See also p. 5
 of my letter, par. beg. "The theory of evolution...."

Although I am sure both of us are quite busy, I consider
 the subject important enough to warrant further discussion if it
 can serve a useful purpose to ourselves and others. Hence if
 you feel like returning to the subject, do not hesitate to write
 to me again.

With blessing,

find and

P.S. I have just been able to borrow your book The Attenu-
 ation of Gamma Rays and Neutrons in Reactor Shields, which im-
 pressed me considerably. Incidentally I noted in it your observ-
 ations about the discrepancies between theory and experiment
 which I found more than once in your work, including those on
 p. 16. Such a statement as "Not only is the simplest organism
 an incredibly complicated entity whose chemistry and physics
 are barely glimpsed at, but the classical scientific pattern of
 experimentation is necessarily not available in studying radiation
 effects" is very significant and has a direct bearing on the
 theory of evolution which involves an age of unimaginable radio-
 activity both in the universe and on our planet Earth.

③ תורה, illustration: איך אבדו איזה objects כוונתו. זה קדוש הול והשאלות
 שנתתי, דעה 1943 radiocarbon dating (הוא חסן אקום ע"ס) ④. זהו כן
 צורה א' ואתן פונקט שיהיה זהו shielding power of these (density etc) atmosphere constant
 בורסת שהיו דעה שיהיה תפוס

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