

HAVE ATOMS SOULS?

BY THE EDITOR.

OUR readers may remember an editorial article published in *The Open Court* of December, 1907, on "Goethe's Soul-Conception" which contains a number of quotations from the great German poet on the subject of immortality.

He speaks of the soul as an entelechy or monad and apparently seeks the mystery of its persistence in the infinitesimal realm of molecules or atoms. So far as we can see this idea is untenable but it appears that it suggests itself to a thoughtful man when he dimly feels the truth of the preservation of man's life after death in some form or other. Mr. J. Barandun, the editor of the German Milwaukee periodical, the *Freidenker*, without any apparent acquaintance with these little-known passages of his great countryman, proposes in his "Excursion Into the Infinitely Small" a theory which in its essentials bears a close similarity to Goethe's monadology of the soul. Mr. Barandun also believes that the problem of the soul must somehow be sought in the infinitely small, the molecule or atom, and takes pains to make it plausible that a molecule can be possessed of concepts. In the beginning of the article he speaks of "those mysterious depths whither chemical investigation has never penetrated" and grants that his theory may be a mere dream, to be sure the dream of a thinker, of a man who forms a definite theory, and we will here make a few comments which in our opinion will shatter that beautiful dream but will place the underlying hope of man's life after death on a sounder and more scientific foundation.

The German freethinkers are frequently assumed to be materialists pure and simple, but here we learn that they are not indifferent to the deeper problems of life, and the editor of the *Freidenker* himself attempts the investigation of the nature of the soul in a new line. If we can not agree with Mr. Barandun, we must yet grant that we read his expressions with much interest, and believe at the

same time that his theories appear at first sight sufficiently plausible to be worth while investigating and—refuting.

First we will grant that molecular and atomic life is still to us a book with seven seals. We have not the slightest conception of the mechanical interaction of the atoms which combine into the higher units of a molecule. Still less do we know anything about the form of the atoms. We are justified in assuming that the atoms of all the several chemical elements are different configurations made up of the same uniform material called by physicists the ether, and not without reason identified with the luminiferous ether, that mysterious medium of light in empty space. Theories have been advanced as to the mathematical shape of atoms conceived as whorls, but all the propositions made in this line are still lacking corroboration by experiment and are at best probable hypotheses. If they are true, however,—and I deem them a step in the right direction,—they go far to upset both Mr. Barandun's and Goethe's idea of soul-atoms, for how can these whorls whose form is determined by mechanical impulse contain pictures of things outside, while no things are as yet in existence? Otherwise it stands to reason that one atom is exactly like another. For details as to the different shapes of the atoms of the several elements the reader may consult Prof. Ferdinand Lindemann's article "On the Form and Spectrum of Atoms" in *The Monist* for January, 1906.

The currents in these infinitesimally small whorls would sweep away any formation of images and leave no possibility for concepts of a definite kind. There are other reasons which make it improbable that atoms or even the components of atoms, the original ether elements, contain any thought or mental activity, for all that exists manifests its existence according to its nature, and we see that the physical world is governed by physical laws while in the world of the soul the dominant factor is mentality. If a man makes up his mind to do a certain thing, if the farmer hitches his horses and plows his fields, his action is explained by the idea of attending to his business, and this idea acts as a stimulant in definite nerve centers to which definite muscular motions respond. The play of all motions is mechanical, including here chemical and other physical processes under the wider term, molecular mechanics; but the response in the nerve centers is not explicable without giving consideration to the meaning of certain psychical commotions taking place in the brain. This feature, the typical characteristic of mental life, is absolutely absent in physical and mechanical phenomena, which are governed exclusively by physical and mechanical laws. For certain reasons

we must assume that all life is endowed with a potentiality of feeling; or in other words, objective existence as we see it, which is matter in motion, possesses an aspect analogous to what we call sentiment, sensation, feeling, awareness, soul, or in one word subjectivity. But if this subjectivity in the domain of physics possesses any feeling or sentiency, we may be sure it is infinitely less than any feeling we know of, for its presence does not enter into the effect, and when formulating the laws of the behavior of atoms the physicist may without fear of making an error dismiss it and ignore its presence.

The subjectivity of the purely physical world gains significance only in definite combinations of high complexity which we call organizations. And here only in the domain of organized life sentiency first rises into existence; sentiency changes into sensation, sensation in a highly complicated mental state develops awareness, and finally awareness of sensations of a definite kind when repeated is recognized to be the same and stands for the cause which elicits it. Thus it acquires meaning, and so sentiency changes into mentality. This is the process which we can trace and I make bold to say that the way in which matter changes into mind is no longer an unsolved problem.¹

In a certain sense we can say that atoms have souls. We know that all objectivity has a subjective aspect. It contains the potentiality of developing feeling, and if we understand by soul the subjective aspect of an objective unit of reality, we would be compelled to confess that the whole world is aglow with that something from which in a higher evolution the human soul develops. On the other hand if by soul we understand mentality, being the psychological organism capable of changing mechanical impacts into sensations, of forming ideas from sense material and reacting with purpose upon surrounding conditions, involving an adjustment according to ideas formed;—if in a word soul means anything like the human soul even though we may grant on a smaller scale, we must positively deny that there is anything of that nature present in the atom, and we must reject the idea as fantastical, or as Mr. Barandun says, a dream.

If the solution here briefly outlined is true, Goethe's assumption of monad souls and Mr. Barandun's concept-endowed atoms would

¹For details in which this subject has been discussed see the writer's *Soul of Man*; also *Fundamental Problems*, "Is Nature Alive," pp. 110-133; and in *The Monist*, "Fechner's View of Life After Death," XVI, 84, "The Soul in Science and Religion," *ibid.*, p. 219, and "Psychology a Domain of Its Own," XIX, 387. A brief synopsis of this view is made in *Philosophy as a Science*, pp. 12-20.

have to be changed into the doctrine that all existence is alive in the sense that under definite conditions it can be changed into organized life, and organized life in its turn develops mind. The problem of the soul does not lie in the infinitesimal but can be traced from the very facts of psychical experience. At the same time the dim feelings we have concerning the truth of immortality are justified by the persistence of ideas which as it were lead a superpersonal life. Man's soul consists of motor thoughts. Certain mental dispositions are transferred by heredity from parents to children, but definite thought-forms are impressed by example and education from generation to generation, and every notion, every bit of knowledge, has an idea of its own. These thought-forms migrate from individual to individual. They take possession of souls and use the individuals as instruments, and when a man dies the real significance of his life does not die with him. In the measure that he has impressed the type of his thought on his surroundings during his lifetime he will continue to live a kind of super-individual life as an indelible factor in the future of the race. The importance of this truth which the average man dimly feels has assumed the shape of myth and allegory in different immortality-conceptions, and every one feels instinctively that life does not end with death, but that his higher self will outlive his term of individual existence. In this sense Goethe scorned the idea of regarding death as a finality, saying:

“Naught of transiency
Howe'er it appear!
Ourselves to immortalize,
For that are we here.”