MAN is not an accidental mixture of Oxygen, Hydrogen, Carbon, Azote, and the ten other simple elements which comprise the totality of his material organization. This much is earth, but somewhere and somehow these have come into combinations and relations after a uniform method, and whether by the resultant of varying motions of different degrees of rapidity, known in the unorganized world as light and heat, or by the addition of a new mode of motion, or a new “principle” of attraction, or a new substance which has not existed in unvitalized matter, he has come to be an organized being like the plants and animals, but with higher “functions,” whether these are called modes of motion, substances, or correspondences.

This much is certain,—he is different, and the query is, what the operation was when man, scattered about in minute molecules of phosphorus, carbon, etc., was gathered into his present form and started in his present practice of exhausting and renewing these molecules by selecting what will produce certain forms and substances, and rejecting the remainder, employing the selected molecules to produce certain results exterior to itself, and supplying and selecting again in larger quantities to renew in larger proportions.

This process or act is represented in the Hebrew by the verb שָׁמַע, which we translate “breathe in,” and the substance, mode of motion or what not imparted is נַפְשָׁה הָדוֹרָה שָׁמַע, breath of life, and the result is a נַפֶּשׁ לֶדֶם, or living soul.

That it is a process rather than an act may perhaps be inferred from the ו with the imperfect, representing ingressive action. This continuation of the creating now begins. This suggests that continuous impartation by the Spirit of God in the regeneration, through which the lost image of God is gradually restored by a

---

1 Read in December, 1885.
growing into the likeness of that second true image of God in material substance.

Without stopping to consider at what point in the upward scale of complexity in organized life the operation took place, whether it made him directly from the elements or through plant and animal life, and without asserting whether this which came to be at this time was simple organized life or animal life or spiritual life or all together, the object of this paper is to examine what may have been the nature of the operation which we most familiarly and suggestively call the breathing in of the breath of life.

יָסָר is an onomatopoetic root akin to יָשָּׁר and יָשָׂר, with the general signification of breathing or blowing.

But this is no mere symbolical expression as if in some indefinite, mystical way, He breathed upon the dust, and at the same time in some other way started in motion a machine whose most evident function he thus mystically anticipates. The process was before there were men to observe the expanding and contracting of the lungs inhaling and expelling, and to call this breathing or blowing.

However that may be, the act was the bringing of the oxygen of the air in contact with the blood by starting the operation of the lungs. This may be a figure taken from the animal life of man to represent also the simultaneous impartation of the spiritual; but leaving this, we try to find what the process in the יָסָר was.

The word breathe, even in English, can be analyzed into more fundamental ideas, e.g., the appropriation of oxygen by the blood, its various combinations and the phenomenon connected therewith, and the carrying off of carbonic acid gas and moisture. There was surely the same analysis, the same ideas, the same facts, in the original idea. If so, they may be expected to be most nearly preserved in the Hebrew as an early if not the primitive language, and an analysis of ideas in the Hebrew ought to find correspondence of language, and the first step is to see if the unit of ideas was the word or the simple letter, as the growth of language seems to hint.

If there are fundamental ideas in the letters or their combinations, they will naturally predominate in words when they are joined only with the weak letters or occur in the simplest combinations.

It is noticeable, in the first place, that the letter of life, י, occurs in the breathing, and that the result—the living soul—includes both the breathing and the thing breathed, except the letter ב.

Taking the י, it is found in י, life; ינָס is the exclamation alas! a sigh, a great pot in which fire is burning, a brother: ינָס, a repe-
tion of the exclamation, means longing, also heat or burning. These seem to give a suggestion of heat, or joining, or both. In the same way in suggests addition, increase. It is found in = nose, = mouth, and various words meaning to blow, and = to grow luxuriantly. These suggest increase, or blowing.

Taking, now, the idea of heat, and collecting the words which contain it, an examination of the ideas of heat, hot, flame, burn, warm, boil, and fire gives a large number of words containing, especially in combination with and, and many with and, so that the fundamental idea of warmth seems to revolve around these letters and the ideas, so that all the letters connected with the inbreathing of life are repeated and combined in these, and these are almost the only letters appearing in ideas of warmth excepting , which appears also in connection with in the , which was on the face of the waters, and , of which more later.

Thus we have in simple forms , , , , , and, in combination, , , , , , , , ( = heat of sun), , , , , , , .

 in composition gives, with the idea of , be fruitful, increase; , fruit; , to bear; , a bull; = break forth, sprout; , break.

Of the two other letters which occur in the breathing in of life, is, e.g., in , fire, , man, , behold, and ; is seen in , waters, , the sea, , mother.

The suggestion of fire in the breath of life indicates at once the internal combustion which is the breathing in its result. Breathing is a burning literally. This leads again to the biological statement that all vital activity is possible only through certain limits of temperature; that "organic heat . . . is the result of life itself," and is the cause of all its activities. Following the thought of biological experiment a little further, we notice that the chemical constituents of the protoplasm contain invariably carbon, oxygen, hydrogen, nitrogen, protein, and a very large proportion of water, that the chief phenomena of life are the universal disintegration by oxidation and the accompanying restoration by nutriment, so that it depends for all its activities upon moisture and heat, and that in a true sense "life is a two-fold movement of simultaneous and continual composition and decomposition" within the plasmatic substances. We notice, too, that the result says that "every organized body, especially every animal, is a fireplace where diverse substances, mostly ternary and
quarternary, burn slowly, developing heat, which in its turn provokes or forms the exchanges, the chemical metamorphoses necessary to life." — Letourneau, p. 455.

Most of the heat is from oxidization. The small remainder is formed in the union of water with some other substance, or the removal of water from its combination with other substances (hydration and dehydration of the albuminoids), from the compounds with water (hydrates), such as sugar, and finally, from the fats by simple union with water (hydration). This leads back again to the ideas of warmth and burning, and to the added idea of moisture in it.

Now if our method has been correct, and we have not been led astray in the process, whatever else may be in the conception of life, these late results of physical science are there, and God imparted to matter the principle of warmth in the uniting of oxygen and moisture to the molecules of "dust."

If the method has been correct and the result true, we may expect that the facts will prove themselves in other relations which indicate the production of organized life.

Taking the first act in the process of creation, we have the waters (אֲמִץ) and the מֵרֶד brooding or moving upon them; מֶרֶד containing the principles of warmth and increase (?), as in מֵרֶד, but with the מ which occurs in the מֵרֶד, and also, as we have noticed, frequently in words denoting warmth and light.

A little further, the production of plant life, put forth = נָשַׁד, the idea of warmth with מ, of which more later, and the fruit is מָרִים. Later still of living things it is the waters which swarm (נָשַׁד); living souls (נָשַׁד נִּבְּשׁ) and the moving predicated of them is נָשַׁד, and the command to be fruitful is מָרִים, while the multiply contains still the מ with another idea, which idea is also in the מְרֶד, so that beast is מְרֶד, cattle מְרֶד, and the creeping thing מְרֶד. Again, the reason no plant life had started was because God had not caused it to rain, מַמְסָר.

Notice, too, that the name which Adam gives the beasts is מָשָׁד. To take one more passage: in the fourteenth chapter of Job we find descriptions of the process of growth in a plant. We shall expect to find the letters there where we remember the idea is found, and turning note that the word for root is מָשָׁד. Though this grows dry and the stock dies, through the scent of water it will bud (מָרִים מָשָׁד יְפָר).
This process may be repeated through all similar accounts, and related ideas be found to have related letters.

To try another line of proof: in searching for primitive and fundamental ideas we may expect that this idea of fire in connection with life will have its traces in mythology and comparative religion, and remember at once Prometheus stealing fire from Heaven and the almost universal fire worship.

We find a universal prevalence of the myth of heaven-stolen fire, accompanied usually by the idea of the fire-bringer being a serpent or dragon killer (serpent = מִשְׁמַע). Prometheus animated clay into man by fire.

Fire was worshipped, was considered identical with the soul, and so kept burning as the household Lares, as among the Chinese and certain religious denominations to-day.

The mythological idea was that “primary fire ignited primary water.” Man was “a fire, hidden in clay, diluted with water,” and so on. So, too, the reproduction of life was connected with this, and the passing of children through the fire, and again the Phallic worship, of which the “asherah” (אַשֶּרֶה), or “pillars,” and the druidical pillars, of which the modern may-pole is the relic, are examples.

Fire in the Bible and mythology is the purifier. The sacrifices were consummated by being burned up. The dross is burned away with fire, and Ezekiel (22:21) uses one word, לֶבֶן, breathe upon with fire, in just this sense.

For another line of proof go back to our biology, and, if our result is true, we shall find that other biological facts will find their expression in the letters connected with life in the Hebrew.

We find attention called to the “remarkable proportion” of chlorure of sodium in the body, but its office given up as unexplainable. It is remarked that Livingstone, abstaining from animal food, felt a great longing for salt. We are reminded of the annual visitations of the deer to the salt-licks, the feeding of salt to cattle, the unpalatableness of food without salt, the thirstiness which salt produces, the use of salt with oblations in the Jewish ceremony, the salting with fire, of which Christ speaks, and turning to the Hebrew we expect to see these ideas expressed by these letters, and find appropriately there ideas which we have called warmth and moisture together with another in ל (לֶבֶן).

Turning again to our sources of heat, one of the subordinate sources was the union of the fats with water. We shall expect to
find the ideas of heat in "fat," and turning to ideas of this we find the simplest form, fat or marrow, and n校长 = be fat, combines both water and warmth, also combined in 交易 and 交易, and the other words revolve about these and 交易, which we have had before, and 交易, of which more later.

And now, again, let us take some Scripture statements. A man's life is in his blood. Biology reaches the same result. The nephesh is in the dam (.stem). It "is a medium from which all the anatomical elements of the organization derive the material needful to their life." What, then, does it consist of? "Finally, on the other hand, the blood yields to the anatomical elements the three orders of immediate principles indispensable to their conservation, the oxygen which burns and vivifies, the water which soaks them, divers mineral salts, hydro-carbonic ternary substances, new proteic matters which in each anatomical element replace, molecule by molecule, the exhausted materials."

The blood, then, contains at least the principles of burning and of moisture and the dust. Does it contain more? Let us try it on the intellectual side. Life is knowledge. Eternal life is to know God. The reproduction of life — man's causing life to exist, is a knowing and a conceiving — Adam knew Eve (stem). Analyzing, through the ideas of knowing and thinking, the first word we meet is 交易, to be like, to recognize, likeness, to think, and there is suggested the late result of psychological analysis in Bain's resolution of all the operations of the mind into determinations of likeness and unlikeness, and retentiveness. Here, too, 交易 is reproduced. Knowing or thought in this aspect is thus the recognition of likeness, in its last analysis, of likeness to God's idea — the Truth, whether in the flower or in man. Remembering that the image about which the natural body is formed is the nucleus of the individual cell, and that it is the actual union and blending of two cells which makes new life, suggests the search as to the original idea of the union of life which is found in 交易, to join, and illustrated in Gen. 2: 24, where man and wife are to be 交易, which symbolizes what we call vital union with Christ. And this is the idea of the universally extended practice of blood-covenant, so fully elaborated by Dr. Trumbull — the real union of spiritual life in friendship, symbolized, if nothing more, by the blending of the animal life. Here we have the entrance of the 交易 for which we have been looking.

These are only a few of the ways in which I have crossed and
crisscrossed the matter for verification, until it seems quite clear that this much is true: —

1. That the individual letters have distinct ideas which a careful analysis will reveal.

2. That the letters associated with the production of life have a distinct and clear correspondence with the facts of biological experiment, so that, at the least, there was breathed into man at the beginning the principles of warmth and moisture, which are now recognized as the chief conditions of life.

Other interesting lines are found in mental physiology and the origin of language as noticed in the first articulations of the child, "Coo," "Ma ma," "Ta ta," "Ah! Ah!"

The analysis reached, of these particular letters, is, I am sure, not the final. If heat and light are modes of motion, we shall expect to find a step still farther back in the resolution of complex "ideas," or totals of resemblances, into their simple elements.