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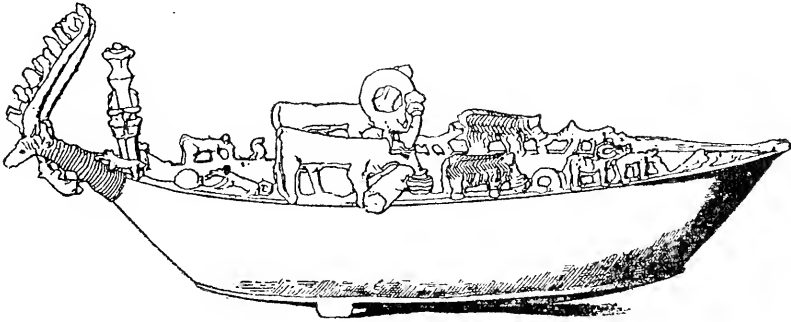
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The Open Court

A MONTHLY MAGAZINE

Devoted to the Science of Religion, the Religion of Science, and the
Extension of the Religious Parliament Idea

Founded by EDWARD C. HEGELER



A PAGAN "NOAH'S ARK" OF PREHISTORIC ORIGIN, DISCOVERED IN A
TOMB OF ANCIENT VETULONIA, ETRURIA.

(See page 88.)

The Open Court Publishing Company

CHICAGO

LONDON: Kegan Paul, Trench, Trübner & Co., Ltd.

Per copy, 10 cents (sixpence). Yearly, \$1.00 (in the U.P.U., 1s. 6d.).

Entered as Second-Class Matter March 26, 1897, at the Post Office at Chicago, Ill. under Act of March 3, 1879.
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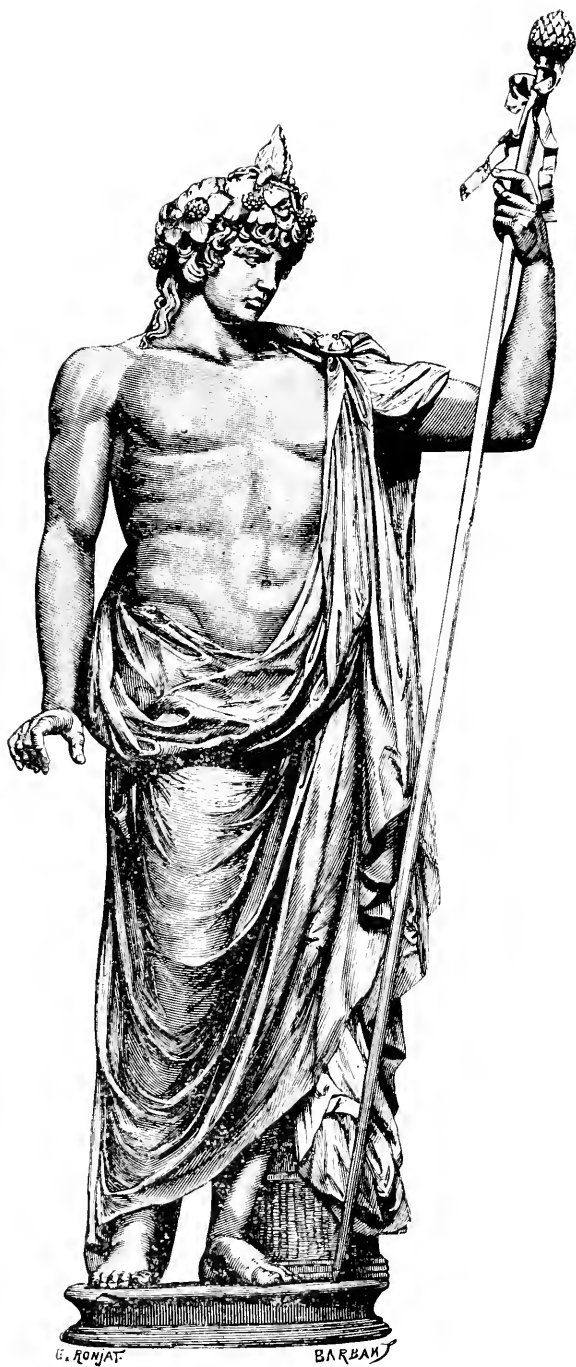
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THE OPEN COURT PUBLISHING CO.

378-388 Wabash Avenue, CHICAGO

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ANTINOUS, WHO DIED AS A VICARIOUS SACRIFICE FOR EMPEROR
HADRIAN.

Frontispiece to The Open Court.

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VOL. XXV. (No. 2.)

FEBRUARY, 1911.

NO. 657

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ON THE FOUNDATION AND TECHNIC OF ARITHMETIC.

BY GEORGE BRUCE HALSTED.

INTRODUCTION.

IN the French Revolution, when called before the tribunal and asked what useful thing he could do to deserve life, Lagrange answered: "I will teach arithmetic."

Almost invariably now arithmetic is taught by those whose knowledge of mathematics is most meager. No wonder it and the children suffer. In this day of the arithmetization of mathematics and later its logicization, are the beauty, the elegance of arithmetical procedures to still remain unexplained? Is the singular, the lonely precision of this science and art to remain unheralded, unexpounded?

In arithmetic a child may taste the joy of the genius, the joy of creative activity.

Arithmetic is for man an integrant part of his world construction. Thus do his fellows make their world, and so must he. Now this is not by passive apprehension of something presenting itself, but by permeating vitalization spreading life and its substance through what the ignorant teacher would present as the dead mechanism of mechanical computation.

More than in any other science, there has been in mathematics an outburst of most unexpected, most deep-reaching progress. Its results, if made available for the teacher, will revivify this first, most precious of educational organisms; the more so since mathematics is seen to possess of all things the most essential, most fundamental objective reality.

THE PREHUMAN CONTRIBUTIONS TO ARITHMETIC.

Properly to understand or to teach arithmetic, one should have a glimpse of its origin, foundation, meaning, aim.

Arithmetic is the science of number, but for the ordinary school-teacher it is to be chiefly the doctrine of primary natural number, the decimal and later the fraction, and the art of reckoning with them.

Numbers are of human make, creations of man's mind; but they are first created upon and influenced by a basis which comes from the prehuman.

The Natural Individual.

Before our ancestors were men, they represented to themselves, as do some animals now, the world as consisting of or containing individuals, definite objects of thought, things. They exercised an individuating creative power. In now understanding by *thing* a definite object of thought, conceived as individual, we are using a method of world presentation which served animals before there were any men to serve.

The child's consciousness certainly begins with a sense-blur into which specification is only gradually introduced. At what stage of animal development the vague and fluctuating fusion, which was the world, begins to be broken up into persistently separate entities would be an interesting comparative biologicopsychologic investigation. However that might turn out, yet things, separate objective things, are a gift to man from the prehuman. Yet simple multiplicity of objects present to perception or even to consciousness does not give number. The duck does not count its young. The crow, wise old bird, has no real counting power to help its cunning. The animals' senses may be keener than ours, yet they never give number.

A babe sees nothing numeric. Even an older child may attend to diverse objects with no suggestion from them of number. Sense-perception may be said to have to do with natural individuals, but never, unaided by other mind-act, does it give number.

The Artificial Individual.

To the animal habit of postulating entities as separate must be added, before cardinal number comes, the human unification of certain of them into one whole, one totality, one assemblage or group or set, one discrete aggregate or artificial individual man-made.

This artificial whole, this discrete aggregate it is to which cardinal number pertains. Thus number rests upon a prehuman basis, yet is not number itself prehuman. Cardinal number involves more than the animal or natural individuals or things. It comes only with a human creation, the creation of artificial individuals, discrete aggregates taken each as an individual, an individual of human make, fleeting perhaps as our thought, transient, yet the necessary substratum for cardinal number. Unification is necessary. The mind must make of the distinct things a whole, a totality. Else no cardinal number.

Now to an educated man a number concept is suggested when a specific simple aggregate of objects is attended to. Not so to any animal, though just the same individual objects be recognized and attended to. The animal has the unity of the natural object or individual, but that unity is not enough. There is needed the new, the artificial, the man-made individuality of the total aggregate. To this artificial individual it is that cardinal number pertains. There is thus a unity, man-made, of the aggregate of natural individuals, of the set of constituent units. To this unity made of units cardinal number belongs.

Going for quite different articles, or to accomplish entirely different things, may we not help and check memory by fixing in our mind that we are to get *three* things, or that we are to do three things? How man-made, arbitrary, and artificial, this conjoining of acts most diverse into a fleeting unified whole!

Each finger of the left hand is different. A dog might be taught to recognize each as a separate and distinct individual. Only a man can make of all at once an individual which, conceived as a whole is yet multiple, multiplex, a manifold, fivefold, a five of fingers, a product of rational creation beyond the dog.

Primary Number.

A primary cardinal number is a character or attribute of an artificial unit made of natural units. It needs this single individuality and this multiplicity of individuals. The fingered hand has five-ness only if taken as an individual made of individuals.

Number is a quality of a construct. If three things are completely amalgamated, emulsified, like the components of bronze or the ingredients of a cake, there remains no threeness. If some things are in no way taken together the number concept is still inapplicable, we do not see them as a trio.

The animally originated primitive individuals, however com-

plete in their distinctness, have no numeric suggestion. The creative synthesis of a manifold must precede the conscious perception of its numeric quality. It is only to man-made conceptual unities that the numeric quality pertains. This "number of natural individuals" in an artificial individual is called its *cardinal number* or *cardinal*.

Primary number would seem in some sense a normal creation of man's mind. No primitive language has ever been investigated without therein finding records of the number idea, unmistakable though perhaps slight, limited, meager, it may be not going beyond our baby stage, one, two, many.

There is a baby stage when no *many* is specialized but *two*. One, two, many, then baby waits how long before that many called *three* is specialized? Numeric *one* as cardinal only comes into existence in contrast with *many*. Number comes when we make a vague *many* specific.

The number of a particular totality represents the particular multiplicity of its individual elements and nothing more. So far as represented in a number, each natural individual loses everything but its distinctness; all are alike, indistinguishably equivalent. The idea of unity is doubly involved in number, which applies to a unity of a plurality of units. The units are arithmetically identical; not so the complex unities man-made out of collections of the units. To these pertain the differing cardinal numbers.

Our Base Ten.

In our developed number systems certain *manys* take on a peculiar prominence, are of basal character. Of these ten has now permanently the upper hand.

What is the origin of this preeminence?

Its origin is prehuman. Our system is decimal, not because ten is scientifically, arithmetically a good base, a superior number, but solely because our prehuman ancestors gave us five fingers on each of two hands.

THE GENESIS OF NUMBER.

Cardinals.

In nature, distinct things are made and perceived as individual. Each distinct thing is a whole by itself, a qualitative whole. The individual thing is the only whole or distinct object in nature. But the human mind takes individuals together and makes of them a single whole of a new kind, and names it. Thus we have made

the concept a flock, a herd, a bevy, a covey, a genus, a species, a bunch, a gang, a host, a class, a family, a group, an array, a crowd, a party, an assemblage, an aggregate, a throw, a set, etc. These are artificial units, discrete magnitudes; the unity is wholly in the concept, not in nature; it is artificial. We constitute of certain things an artificial individual when we distinguish them collectively from the rest of the world, making out of subsidiary individuals a single thing. From the contemplation of the natural individual or element in relation to the artificial individual, the group, spring the related ideas "many" and "one." We must have numeric many before we can have cardinal one. A natural qualitative unit thought of in contrast to "many" as *not-many* gives the idea "one" as cardinal. A unity, a "many" composed of "one" and another "one" is characterized as *two*.

The unity, the "many" composed of "one" and the special many "two" is characterized as *three*.

Among the primitive ideas of cardinal number, the idea of "two" is the first to be formed definitely. There are ever present things which can be grasped in pairs. This two is the very simplest many. It is incalculably simpler than three, as witness whole savage tribes whose spoken number system is "one, two, many"; as witness the mind-wasting primitive stupidities of the dual number in Greek grammar.

The special many, a one made of three, a trinity, a trio, triplets, here is an advance. When to the grasp of the pair, the dominance over the trio is added, when the three is created, then after-progress is rapid.

With a couple of pairs goes four; with a couple of threes, six. A hand represents five coming in between four and six. A pair of hands says ten. A pair of tens is twenty, a score. A pair of fours is eight. A trio of threes is nine. A pair of sixes or a trio of fours is twelve, a dozen.

Arithmetic flowers like a rocket. That seven is left out, is missed, makes it the sacred, the mystic number of superstition. To numbers, however complicated their genesis, is finally ascribed a certain objective reality. In our mind the number concepts finally become simple things, objectively real.

COUNTING AND NUMERALS.

Correlation.

The ability of mind to relate things to things, to correlate, to represent something by something else, to make or perceive a cor-

respondence between things or thought creations is fundamental, essential, necessary.

The operation of establishing such a correspondence between two sets that every thing or element of each set is mated with, paired with, just one particular thing or element of the other, is called establishing a one-to-one correspondence between the sets. Two sets which can be so mated are said to be *equivalent*, or to have the same *potency*. Two sets equivalent to the same are equivalent to each other, their elements correlated to the same element being thereby mated.

A set's cardinal number is what is common to the set and every equivalent set. Thus a set's cardinal is independent of every characteristic or quality of any element beyond its distinctness. To find the cardinal of a set, we count the set.

Counting is the establishing of a one-to-one correspondence of two aggregates, one of which belongs to a well-known series of aggregates. If a group of things have this correspondence with this standard group, then those properties of this standard group which are carried over by the correspondence will belong to the new group. They are the properties of the group's cardinal number.

To Count.

To count an aggregate, an artificial individual, is to identify it as to numeric quality with a familiar assemblage by setting up a one-to-one correspondence between the elements of the two groups. Thus counting consists in assigning to each natural individual of an aggregate one distinct individual in a familiar set, originally a group of fingers, now usually a set of words or marks. So counting is essentially the numeric identification, by setting up a one-to-one correspondence, of an unfamiliar with a familiar group. Thus it ascertains, it fixes the nature of the less familiar through the preceding knowledge of the more familiar.

The Primitive Standard Sets.

Primitively the known groups were the groups of fingers. The fingers gave the first set of standard groups and formed the original apparatus for counting, and served for the symbolic transmission of the concepts, the number ideas generated. More than that, this finger counting gave the names of the numbers, the numeric words so helpful in the further development of numeric creation. The name of a number, when referring to an artificial unit, as of sheep, denoted that a certain group of fingers would touch successively the

natural units in the discrete magnitude indicated, or a certain finger would stand as a symbol for the numerical characteristic of that group of natural units.

Our word "five" is cognate with the Latin *quinque*, Greek *pentē*, Sanskrit *pañcan*, Persian *penđji*; now in Persian *penjeh* or *pentcha* means an outspread hand.

In Eskimo "hand me" is *tannuche*; "shake hands" is *tallaluc*; "bracelet" is *talegoavruk*; "five" is *talema*.

In the language of the Tamanoes of the Orinoco, five means "whole hand"; six is "one of the other hand"; and so on up to ten or "both hands."

Philology confirms that the original counting series or outfit was the series of sets of fingers, and this primitive method preceded the formation of numeral words. In very many languages the counting words come directly and recognizably from the finger procedure.

But of the fingers there are only a few distinct aggregates, only ten. Developing man needs more, needs to enlarge and extend his standards.

The Abacus.

The Chinese, even at the present day, extend the series of primary groups, the finger-groups, by substituting groups of counters movably strung on rods fixed in an oblong frame. With this *abacus* they count and perform their arithmetical calculations.

The Word-Numeral System.

In many languages there are not even words for the first ten groups. Higher races have not only named these groups, but have extended indefinitely this system of names. They no longer count directly with their fingers, but use a series of names, so that the operation of counting an assemblage of things consists in assigning to each of them one of these numeral words, the words being always taken in order, and none skipped, each word being thus capable of representing not merely the individual with which it is associated, but the entire named group of which this individual is the last named.

In making this series of word numerals, there is evidently need for a system of periodic repetition. The prehuman fixes five, ten, or twenty as the number after which repetition begins. Of these, ten has become predominant. Thus come our word-numerals, each applicable to just one of a counted set and to the aggregate ending with this one. This dekadic word-system makes easy, with a simple,

a light notational equipment, the perfectly definite expression of any number, however advanced.

So for us to count is to assign the numerals one, two, three, etc., successively and in order, to all the individual objects of a collection, one to each. The collection is said to be given in number, the number of things in it, by the cardinal number signified by the numeral assigned to the last natural unit or component of the collection in the operation of counting it. Numerals are also called numbers. The numeral and a word specifying the kind of objects counted make what is called a concrete number. In distinction from this, a number is called an abstract number.

When children are to count, the things should be sufficiently distinct to be clearly and easily recognizable as individual, yet not so disparate as to hinder the human power to make from them an artificial individual. The objects should not be such as to individually distract the attention from the assemblage of them.

A Partitioned Unit.

In counting, an artificial individual may take the place of a natural individual. Children enjoy counting by fives. Inversely, a unit may be thought of as an artificial individual, composed of subsidiary individuals, as a dollar of 100 cents.

Recognition of Number Without Counting.

An interesting exercise is the instantaneous recognition of the cardinal, the particular numeric quality of the collection, its specification without counting. But this power to picture all the separate individuals and to recognize the specific given picture is very limited. If it be attempted to facilitate this recognition by arrangement, the recognition may easily become that of form instead of number. It is then simply recognizing a shape which we know should have just so many elements.

Decimal Word-Numerals.

In the making of numeral words it is necessary to fix upon one after which repetition is to begin. Otherwise there would be no end to the number of different words required. We have noted that the prehuman has narrowed the choice, by the fiveness of the extremities of mammalian limbs, to five, ten, or twenty. The majority of races, especially the higher, in prehistoric time chose ten, the number of our fingers. Then was developed a system to express by a few number-names a vast series of numbers. If we interpret

eleven as "one and ten" and twelve as "two and ten," *teen* as "and ten," *ty* as "tens," then English, until it took "million," ("great thousand," Latin *mille*, a thousand), bodily from the Italian, used only a dozen words in naming numbers, in making a series of word-numerals with fixed order.

The systematic formation of numerical words is called *numeration*.

Invariance of the Cardinal Number.

The cardinal number of any finite set of things is the same in whatever order we count them.

This is so fundamental a theorem of arithmetic, it may be well to make its realization more intuitive.

That the number of any finite group of distinct things is independent of the order in which they are taken, that beginning with the little finger of the left hand and going from left to right, a group of distinct things comes ultimately to the same finger in whatever order they are counted, follows simply from the hypothesis that they are distinct things. If a group of distinct things comes to, say, five when counted in a certain order, it will come to five when counted in any other order.

For a general proof of this, take as objects the letters in the word "triangle," and assign to each a finger, beginning with the little finger of the left hand and ending with the middle finger of the right hand. Each of these fingers has its own letter, and the group of fingers thus exactly adequate is always necessary and sufficient for counting this group of letters in this order.

That the same fingers are exactly adequate to touch this same group of letters in any other order, say the alphabetical, follows because, being distinct, any pair attached to two of my fingers in a certain order can also be attached to the same two fingers in the other order.

In the new order I want *a* to be first. Now the letters *t* and *a* are by hypothesis distinct. I can therefore interchange the fingers to which they are assigned, so that each finger goes to the object previously touched by the other, without using any new fingers or setting free any previously employed. The same is true of *r* and *c*, of *i* and *g*, etc.

As I go to each one, I can substitute by this process the new one which is wanted in its stead in such a way that the required new order shall hold good behind me, and since the group is finite, I can go on in this way until I come to the end, without changing the

group of fingers used in counting, that is without altering the cardinal number, in this case 8.

The group of fingers exactly adequate to touch a group of objects in any one definite order is thus exactly adequate for every order. But when touching in one definite order each finger has its own particular object and each object its own particular finger, so that the group of fingers exactly adequate for one peculiar order is always necessary and sufficient for that one order. But we have shown it then exactly adequate for every order; therefore it is necessary and sufficient for every order.

GENESIS OF OUR NUMBER NOTATION.

Positional System of Counting.

The systematic decimal system in accordance with which, even in the times of our prehistoric ancestors, a few number names were used to build all numeral words, is paralleled by the procedure, even at the present day, of those Africans who in counting use a row of men as follows: The first begins with the little finger of the left hand, and indicates, by raising it and pointing or touching, the assignment of this finger as representative of a certain individual from the group to be counted; his next finger he assigns to another individual; and so on until all his fingers are raised. And now the second man raises the little finger of his left hand as representative of this whole ten, and the first man, thus relieved, closes his fingers and begins over again. When this has been repeated ten times, the second man has all his fingers up, and is then relieved by one finger of the third man, which finger therefore represents a hundred; and so on to a finger of the fourth man, which represents a thousand, and to a finger of the fifth man, which represents a myriad (ten thousand).

The Abacus.

An advance on this actual use of fingers with a positional value depending only on the man's place in the row, is seen in the widely occurring *abacus*, a rough instance of which is just a row of grooves in which pebbles can slide. With most races, as with the Egyptians, Greeks, Japanese, the grooves or columns are vertical, like a row of men. The counters in the right-most column correspond to the fingers of the man who actually touches or checks off the individuals counted; it is the units column.

But in the abacus a simplification occurs. One finger of the second man is raised to picture the whole ten fingers of the first

man, so that he may lower them and begin again to use them in representing individuals. Thus there are two designations for ten, either all the fingers of the first man or one finger of the second man. The abacus omits the first of these equivalents, and so each column contains only nine counters.

Recorded Symbols.

For purposes of counting, a group of objects can be represented by a graphic picture so simple that it can be produced whenever wanted by just making a mark for each distinct object. Thus the marks I, II, III, IIII, picture the simplest groups with a permanence beyond gesture or word; and for many important purposes, one of these stroke-diagrams, though composed of individuals all alike, is an absolutely perfect picture, as accurate as the latest photograph, of any group of real things no matter how unlike.

The ancient Egyptians denoted all numbers under ten by the corresponding number of strokes; but with ten a new symbol was introduced. The Romans regularly used strokes for numbers under five, using V for five. The ancient Greeks and Romans both however indicated numbers by simple strokes as high as ten. The Aztecs carried this system as high as twenty, but they used a small circle in place of the straight stroke. I have seen the same thing done in Japan.

Each stroke of such a picture-group may be called a unit. Each group of such units will correspond always to the same group of fingers, to the same numeral word.

The Hindu Numerals.

Though to this primitive graphic system of number-pictures there is no limit, yet it soon becomes cumbrous. Abbreviations naturally arise. Those the world now uses, the Hindu numerals, have been traced back to inscriptions in India probably dating from the early part of the third century B. C.

The Zero.

But a whole millennium was yet to pass before the creation of the most useful symbol in the world, the naught, the zero, a sign for nothing, a mark for the absence of quantity, the cypher, whose first known use in a document is in 738 A. D. This little ellipse, picture for airy nothing, is an indispensable corner-stone of modern civilization. It is an Ariel lending magic powers of computation, pro-

moting our kindergarten babies at once to an equality with Cæsar, Plato or Paul in matters arithmetical.

The user of an abacus might instead rule columns on paper and write in them the number of pebbles or counters. But zero, 0, shows an empty column and so at once relieves us of the need of ruling the columns, or using the abacus. Modern arithmetic comes from ancient counting on the columns of the abacus, immeasurably improved by the creation of a symbol for an empty column.

The importance of the creation of the zero mark can never be exaggerated. This giving to airy nothing not merely a local habitation and a name, but a picture, a symbol, is characteristic of the Hindu race whence it sprang. It is like coining the Nirvana into dynamos. No single mathematical creation has been more potent for the general on-go of intelligence and power. From the second half of the eighth century Hindu writings were current at Bagdad. After that the Arabs knew positional numeration. They called the zero *çifr*. The Arab word, a substantive use of the adjective *çifr* ("empty"), was simply a translation of the Sanskrit name *śūnya*, literally "empty." It gave birth to the low-Latin *schirum* (used by Leonard of Pisa), whence the Italian form *scifiro*, contracted to *scifro* then *zero*, whose introduction goes back to the 15th century.

In the oldest known French treatise on algorithm (author unknown, of the thirteenth century) we read, "iussa le darraine ki est appellee *cifre* 0." In the thirteenth century in Latin the word *cifra* for "naught" is met in Jordan Nemorarius and in Sacrobosco who wrote at Paris about 1240. Maximus Planudes (14th century) uses *tsiphra*. Euler used (1783) in Latin the word *cyphra*. We still say "cipher" or "cypher." In German *Ziffer* has taken a more general meaning, as has the equivalent French word *chiffre*, the most important numeral coming to mean any. The oldest coin positionally dated is of 1458.

Zero may be looked upon as indicating that a class is void, containing no object whatever. But though it is thus one of the answers to the question, "How many?" it is not given a place in the series of natural numbers, though chief in the series of algebraic numbers. Only after the seventeenth century does naught appear as common symbol for all differences in which minuend and subtrahend are equal.

So to-day we use nine digits and have no digit corresponding to the Roman X, for X is all the fingers of the first man, while we, like the abacus, use 10, which is one finger of the second man. Thus

the ten, hundred, thousand are only expressed by the position of the number which multiplies them.

In the written numeral 4444, we still see in the symbol the units of which the fourfold unit four is composed. Later abbreviation veils the constituent units, but their independence and all-alike-ness remain fundamental, giving to cardinal number its independence of the order in which the things are enumerated.

Our Present Notation.

The use of the digits (Latin, *digitus*, "a finger"), the substitution of a single symbol for each of the first nine picture-groups, and that splendid creation of the Hindus, the zero, 0, nought, cypher, made possible our present notation for number. This still has a bad base, ten, in which the sins of our fathers, the mammals, are visited on their children. Its perfection is in its use of position, a positional notation for number, which the decimal point (or unital point) empowers to run down below the units, giving the indispensable *decimals*.

Calculus, (Latin, "a pebble"), cyphering, which thus by the aid of zero attains an ease and facility which would have astounded the antique world, consists in combining given numbers according to fixed laws to find certain resulting numbers.

Teaching is to enable the ordinary child to do what the genius has done untaught.

A Hindu genius created the zero. The common, even the stupid, child is now to be taught to understand and use this wonderful creation just as it is taught to use the telephone. So the teacher incites, provokes the self-activity of the child's mind and guides it and confirms it, stopping this kaleidoscope at a certain turn, when the evershifting picture is near enough for life to the picture in the teacher's mind.

Without theory, no practice, yet need not the theory be conscious. There is a logic of it, yet the child need not necessarily know, had perhaps better not know, that logic. The teacher should know, the child practise.

Though language so long precedes writing, nevertheless it is striking to realize the centuries that passed after the present system of number-naming, numeration, had been developed, before it had analogous, adequate symbolization, adequate written notation.

As compared with their number-names, how bungling the Greek and Roman numerals, how arithmetically helpless the men of classic antiquity for lack of just one written symbol, the Hindu naught,

giving us a written system which, except for its bad base ten, seems to be final and for all time. That prehuman parasite, the ten, is fixed on us like an Old Man of the Sea, else we could take the easily superior system with base twelve.

In each case the prebasal figures, by help of the zero, always express as written in succession to left or to right of the units place (fixed by the unital point) ascending and descending powers of the base. But while the two and six of twelve are like the two and five of ten, yet twelve has three and four besides as divisors, as sub-multiples, for which tremendous advantage ten offers no equivalent whatsoever. The prehuman imposition of ten as base, disbarring twelve, is thus a permanent clog on human arithmetic.

The mere numerals, 1, 2, 3,—or the numeral words “one,” “two,” “three,”—are signs for what are called “natural numbers,” or positive integers. Integer with us shall always mean positive integer. If pure numbers, integers, have an intrinsic order, so do these, their symbols.

The unending series, 1, 2, 3, 4, 5, . . . or one, two, three, four, five, . . . is called the “natural scale,” or the scale of the natural numbers, or the number series. Each symbol in it, besides its ordinal, positional significance in the sequence of symbols, is used also to indicate the cardinal number of the symbols in the piece of the scale it ends, and so of any group correlated to that piece.

[TO BE CONTINUED.]

ANIMAL SYMBOLISM.

BY THE EDITOR.

COMPARATIVE theology has collected many strange facts concerning the religious development of mankind. We are confronted in Egypt with a religion that worships animals or gods with animal heads. In India Ganesha, the god of wisdom, has an elephant's head and trunk, and Vishnu in his successive avatars passed through the forms of a fish, a tortoise, a boar and a lion before he became human, and then in the fifth he became only a dwarf. In the sixth avatar he was incorporated in Rama with the battle-ax, and in the seventh he appeared as Rama Chandra, the hero of the Mahabharata epic; then follow the avatars as Krishna, as Buddha and finally the avatar to come is the white horse, the tenth and last. The key to many of these strange notions we have found in the religion of the American Indians which preserves a most important stage of arrested development and proves that these animal avatars as well as animal symbols of the deity are remnants of a most primitive age when the world was mirrored strangely in the mind of man.

We know that primitive man was by no means conscious from the start of his superiority over the animal world. He entered life on this planet rather timidly, because in the days of savagery lower animals seemed to him his own superiors in many respects. Bears and other wild animals were of greater strength, wolves and foxes more nimble, the wild cat could better climb the trees and hide in ambush, the wild ass was swifter, the birds could fly and the fishes swim. His own superiority on account of his intellect dawned on man only gradually and very slowly with the acquisition of civilization. For this reason it was natural that he ordinarily thought of his brute fellow creatures as something more than his equals, and when he formed the idea of spiritual presences, of invisible superior beings that influenced his fate, either attacking or protecting him, either promoting his life or injuring his health and his prop-

erty, he naturally pictured them in the shape of animals. The animals uppermost in his mind were those that were most important factors of his destiny at certain periods of his development, partly by furnishing him with food, partly as being his most dangerous enemies, and perhaps for some other reasons.

We can trace a certain succession in this development through three periods: first, the period of wild animals, the age of savagery; then the period of flocks, the age of nomad life; and finally the period of domesticated animals, the age of agriculture. The first is represented by such creatures as the bear, the wolf, the dog, the snake, the mouse, birds, and fish. A transition to the second period is constituted by the boar and the wild ass; and then came the camel, the goat and the sheep, and finally the cow. In the stage of agriculture, the gods assume human form and only domesticated animals are offered as sacrifices, especially sheep, goats, bullocks and heifers.

The fish belongs to the first class. It is one of the oldest emblems, if not the very oldest, of a divine power regarded with awe by primitive man.

When mankind progressed from the savage state to the civilization of the nomad, and from the nomad state to agriculture, the older forms of religion were sometimes scorned and abandoned with ostentation, but sometimes the old ideas continued to slumber and occasionally broke out with renewed force. For in truth the old way of thinking is never absolutely abandoned but only superseded (in the literal sense of the word) by a new mode of worship. New ideas are grafted upon the old ones. The old ideas lie dormant; they remain in a latent condition and when the new ideas weaken or lose their hold on the people in times of trouble, the old religious ritual breaks forth with renewed vigor.

Instances of this kind are preserved in the Old Testament in writings dating from the time of the Exile when the reform ritual which had supplanted the older and more savage mode of sacrifice, had become weakened. Then the old worship came to the front again. The national misfortune may have aroused the conscience of that part of the population which had its misgivings concerning the innovations of the reform ritual, and now they abandoned the new sacrifices of goats, heifers and other domesticated animals, and fell back upon the ancient customs sanctified by hoary traditions, offering dogs, creeping things, swine, mice and other vermin, which the prophets with disgust call "abominations." In this sense we must read Ezek. viii. 10-12: "So I went in and saw; and behold

every form of creeping things. and abominable beasts, and all the idols of the house of Israel, pourtrayed upon the wall round about. Then there stood before them seventy men of the ancients of the house of Israel, and in the midst of them stood Jaazaniah the son of Shaphan, with every man his censer in his hand; and a thick cloud of incense went up. Then said he unto me, Son of man, hast thou seen what the ancients of the house of Israel do in the dark, every man in the chambers of his imagery? for they say, The Lord seeth us not; the Lord hath forsaken the earth." The same religious reaction is described in Is. lxxv. 3-5: "A people that provoketh me to anger continually to my face; that sacrificeth in gardens, and burneth incense upon altars of brick; which remain among the graves, and lodge in the monuments, which eat swine's flesh, and broth of abominable things is in their vessels; which say, Stand by thyself, come not near to me; for I am holier than thou. These are a smoke in my nose, a fire that burneth all the day." The same practice is referred to in Isaiah lxxvi. 17:¹ "They that sanctify themselves, and purify themselves in the gardens behind one tree in the midst, eating swine's flesh, and the abominations, and the mouse, shall be consumed together, saith the Lord."

Sometimes old ideas reappear with new force and remain victorious without being mere recapitulations of former ages. Though they are symptoms of a reactionary spirit, they may finally lead to a religious progress. This has been the case with several Christian institutions and dogmas, among them the reverence for the fish which by its very nature could not become an object of sacrifice. The religious notions attached to the fish were more spiritual and consisted more in interpretations involving perhaps also a reminiscence of sacrificial meals.

It is strange that Christianity, though upon the whole a progress, falls back upon many notions which were thought to have been absolutely abandoned. We have in it a revival of the primitive custom of the god-eating, of the need of human sacrifice, and the belief in the dying god who rises from the tomb to new life. These beliefs had been done away in the circles of philosophers and among the educated classes of the people, but large multitudes still clung to these ideas as can be proved by the occurrence of the sacrificial death of Antinous who offered his life as a vicarious victim for the preservation of the emperor. His act was taken seriously, was praised as a great and noble deed and was generally regarded as

¹ Compare also in the same chapter verse 3 which is too corrupt however to make good sense.



A SARCOPILAGUS FROM MILETUS.
After Reinach.

efficacious. The many statues erected in his honor bear testimony to the prevalence of these beliefs paving the way for the spread of Christianity. We must remember that during the civil wars the higher culture of classical antiquity broke down and so the beliefs of the older and lower strata made their reappearance.

We know that during the classical period of ancient Greece the fish did not hold a significant place in the established religion, and as a sacred symbol it is conspicuously absent in the several centers of Greek civilization, especially in Athens. This is not so in the pre-Hellenic civilization of antiquity, and we may boldly state that fish totemism was not unknown to the Achæans.

In both Thessaly and the island of Crete, Itonia was worshiped as the great goddess, identified either with Athena or Artemis or Demeter. The center of her cult seems to have been Larissa, but Homer (*Iliad*, II, 696) mentions her temple in Phylake, the city of Protesilaos. The Achæans of Thessaly named the month "Itonios" after Itonia, and gave her the cognomen "mother of apples."² Her Palladium, an ancient Bethel or monolith, was said to have fallen from heaven, but the main thing about her of interest to us in this connection is the fact that her emblem was the fish. Her cult differed from the pantheon of classical Greece as we know it from Homer and Hesiod, and was older. So we need not be surprised to find the older forms of worship preserved here, especially the stone pillar and the totemism of the fish. According to A. J. Reinach the fish cult was combined with a cult of the two-lobed shield and we here reproduce from his article, "Les survivances du fétichisme dans les cultes populaires de la Grèce ancienne,"³ an ancient sarcophagus found in Miletus which shows a winged divinity with a two-lobed shield and a fish.

While the fish disappeared from the official worship of ancient Greece it is found again in the new movement of the Greek mysteries in which Dionysus, Orpheus and other divinities of a mystic character played a prominent part. These mysteries, we must remember, were introduced into Hellas from the East, and the burden of their message was communicated through dramatic performances representing the fate of the dying and risen God. It prescribed ablutions, fasts and vows and enjoined a pure life in return for which it promised happiness here and hereafter by the assurance of a resurrection of the dead, or of the continued life of the soul in Elysian fields, or some other hope of immortality. The initiates were told

² "Ιτωνα μητέρα μήλων.

³ *Revue de l'hist. des rel.*, Vol. LX, No. 2, p. 180.

that death did not end all. The god who brought this message came as the Saviour, the liberator or the healer. Some intoxicating drink, the soma in India, the haoma in Iran, and wine in Greece represent the enthusiasm, the bliss and spirituality of his worshipers. These mysteries continued into the beginning of the Christian era, and in the catacombs Christ was still identified with Orpheus.

The mysteries were originally no part of the official state ritual,

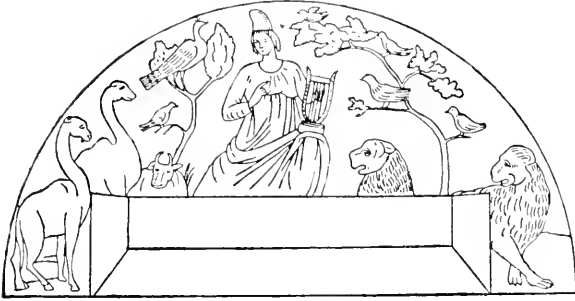


CHRIST AS ORPHEUS IN THE CATACOMBS.

but the new movement soon entered into an alliance with the old established institutions and even the thinkers of the age speak with great respect of the deep thoughts incorporated in these mysteries with their imposing processions and weird symbols.

It is characteristic of the development of religious symbols that the fish plays a prominent part in this movement. Dionysus rides on the fish, sometimes on a ship. Eros, too, the god of love, crosses the sea on a dolphin or on a fish, and Apollo himself seated on his tripod

takes wing and crosses the ocean accompanied by dolphins and fishes. A very beautiful piece of sculpture of modern workmanship repre-



FURTHER REPRESENTATIONS OF CHRIST AS ORPHEUS.
In the Catacombs.

senting Eros setting sail for a new country has been erected on the Campo Santo in Genoa. It is well known as one of the most artistic

monuments of any cemetery and a photograph of it was reproduced as a frontispiece to *The Open Court* for April, 1907.

Marduk in ancient Babylonia and Dionysus in Athens enter in festive procession in a ship called the "ship of plenty," and even to-day its modern successor Prince Carnival sits on a float in the carnival parade. We have evidence that even the established cult of Zeus in primitive Greece was once connected with the same notions of crossing the ocean either on a fish or in an ark or ship. The Greek Noah, called Deucalion, is no one else than a specialized figure of Zeus or rather Dzeus,⁴ for the name Deucalion, as Usener has pointed out, means simply "the little Zeus" or "Zeus the child." The god is starting out after death on a new career in the same way as the



THE ENTRY OF DIONYSUS ON A SHIP IN FESTIVE PROCESSION.

sun is reborn with every new year, yea every new morning. Man follows the sun in his career and from the analogy of the rebirth of the sun he takes assurance that he too will come to life again.

Among the Teutonic nations it was customary during certain periods to bury the dead in a hollow tree like that in use for navigating the rivers. That this is the oldest form of sailing the water among the Germans is testified to by the name they give to a ship, *Schiff*, which is derived from a root meaning to "shove" or "push," German *schieben*. The Aryan nations of southern Europe named a ship *navis* or *naus* which means "the swimmer" and suggests the theory that their ships were first launched on the sea and served

⁴ The Greek *Zeūs* is *dzeus*; its genitive is *Διός* and its Latin equivalent is *deus*, preserved also in the first syllable of Jupiter, which means *Diu-pater*.

the purpose of crossing from island to island. Burials in hollow trees indicate the belief that the dead had to cross some body of water, either the river Styx, or the western ocean. In southern countries, the tombs contain funeral ships.



DIONYSUS RIDING ON A FISH.



COIN OF APAMEIA-KIBOTOS,
PHRYGIA.

With pictures of the deluge in relief.



TYRIAN COIN, MELKARTH
ON THE SEAHORSE.

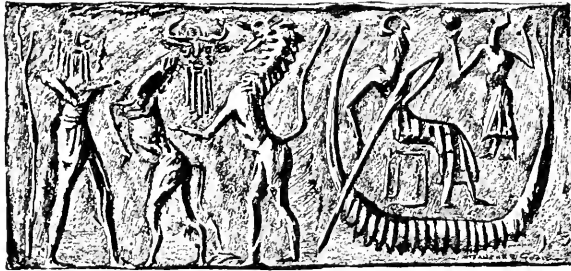
Below the waves a dolphin.



EROS ON THE DOLPHIN.
Relief of a Tarentine Coin.

The same idea was also known to the Phœnicians, as is proved by the existence of a Tyrian coin on which the lord of the city of Tyre, the god Melkarth, sometimes called the Phœnician Heracles, is represented as riding on a seahorse.

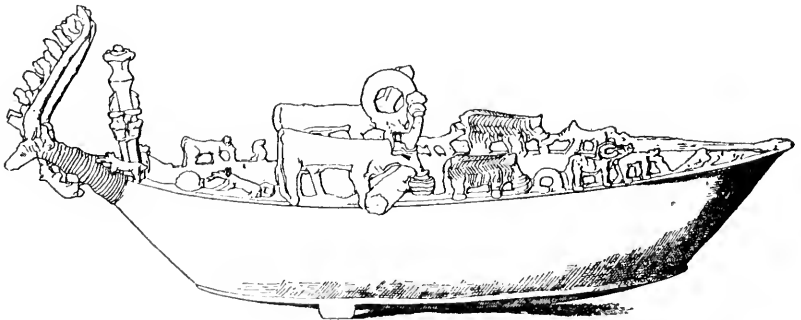
We read in the Babylonian epic that Gilgamesh is ferried over by Arad-Ea to the Isles of the Blest, and this scene is portrayed on an ancient cylinder. The ferryman who carries souls from this world to the next is called Charon by the Greeks, a name which Wiedemann compares to the Egyptian word *kare*, meaning driver or ferryman. (See Budge, *Mummy*, p. 155, footnote.)



GILGAMESH AND ARAD-EA.

From a Babylonian cylinder.

The story of Noah, Deucalion, Paranapistin, Manu, or whatever name the hero of the deluge may have had, must have been much more common in primitive times than we might think, judging from its obliteration in Greek literature and its disappearance in Italy.



BRONZE SHIP OF VETULONIA.

We have good evidence that the story of the Etruscan Noah had some reference to the idea of the soul's migration after death into another country.

A prehistoric bronze ship found in a grave of Vetulonia, in Etruria, proves that the story was known to the primitive Etruscans,

and there we find even the animals on board ship and we may be assured that the presence of this funeral ship in a grave indicates



EROS AND THE FISH.

Mosaic recently discovered in Aquileia.

also that in primitive times the meaning of the legend was well understood to be a promise of immortality.

That the story of Noah was well known in Asia Minor is evidenced by the fact that Kelainai, a city of Phrygia, was supposed to be the place where the ark touched land when the waters subsided. In the days of Augustus this city was called Kibotos, which means "ark," and coins were struck in the times of Septimus Severus and other Roman emperors exhibiting on their reverse a memorial of the deluge. In these cases the hero of the flood is not called Deu-



APOLLO FLYING OVER THE OCEAN.

calion but Noë, and it is not impossible that this same name was current among other Semites besides the Jews. In Palestine an absolutely unwarranted tradition localizes the place where Noah died, and his tomb can be seen there even to this day.

* * *

When paganism broke down and Christianity spread rapidly over the Mediterranean countries the ancient beliefs had become untenable; but the ideas underlying them, and the customs, especially

funerary rites, continued. So we need not be surprised when we find the old symbols reappearing imbued with new meaning. Here again the fish and the dove play the most prominent part, and if the fish is interpreted to be Christ himself the popular interpretation of the



NOAH'S TOMB.

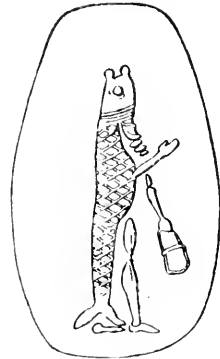
Reproduced from Ebers, *Palästina*.

symbol has certainly not missed the mark, for in pagan times the fish conveyed a similar idea and represented to primitive mankind that divinity which comes to him as the Saviour and promises him life everlasting.

Fish deities were certainly worshiped in Palestine and Phoenicia,



FISH-GOD ON GEMS



ASSYRIAN FISH PRIEST.

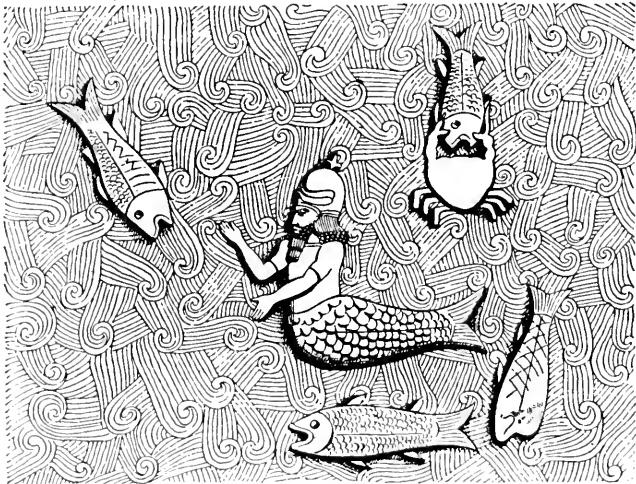
for Lucian saw with his own eyes a Syrian goddess whom he calls Derketo, and he tells us that her image ended in a fish's tail. Her temple near Ascalon was provided with a sacred pond like that of the temple of the Assyrian Juno at Hierapolis, and in the pond were kept sacred fishes.

Whether Derketo is the feminine counterpart of the ancient Semitic god Dagon is more doubtful than it would appear at first sight. The name Dagon is commonly derived from the Hebrew



ASSYRIAN FISH DEITIES.

dag which means "fish," and if that derivation were assured we might safely infer that the traditional view is correct. But accord-



A BABYLONIAN FISH GOD.
Wrongly identified with Dagon.

ing to Professors A. H. Sayce and G. F. Moore, the name *Dagon* ought to be derived from the ancient Canaanitic word *dagan*, "wheat," in which case *Dagon* would be the deity of agriculture

worshiped by the Philistines, the Aryan colonists who had settled as farmers among the nomadic Semites of Palestine.⁵

Whether or not Dagon was a fish deity, we may be sure that fish deities were known and worshiped both in Phoenicia and Palestine. In fact the main deity of Hither Asia is the fish god whom Berosus calls Oannes.

The classical passage to which we owe our information on this



A FISH DEITY.

subject and which is preserved by Eusebius who quotes Berosus, reads as follows:

"In the first year (of the world) there appeared, rising up from the Persian Gulf, a being endowed with reason whose name was Oannes. The body of this monster was that of a fish, but below the fish's head was a second head which was that of a man, together with the feet of a man which issued from his tail, and with the voice

⁵ For details see the author's *Story of Samson*, Chicago: Open Court Publishing Co., 1907.

of a man; an image of him is preserved to this day. This being passed the day among men, but without taking any food, teaching them letters, sciences, and the first principles of every art, how to found cities, to construct temples, to measure and assign limits to land, how to sow and reap; in short everything that can soften manners and constitute civilization, so that from that time forward no one has invented anything new. Then at sunset this monster Oannes descended again into the sea and spent the night among the waves, for he was amphibious. Afterwards there appeared several other similar creatures. . . . Oannes wrote a book on the origin of things and the rules of civilization, which he delivered to mankind."

Oannes is a Sumerian deity, and the Sumerians are the oldest civilized people we know of. They were not of Semitic blood, nor were they Aryans, but they belonged to the large Turanian family whose kin are the Turks, the Magyars, the Mongols, the Manchus, the Tartars and the Chinese. They came down to the Gulf of Persia at the mouth of the Tigris from the mountains of Elam, and their first settlement was the city of Eridu. They brought with them a certain amount of civilization and even the beginning of writing. Some of the most common characters indicate that the inventors of Sumerian script were inhabitants of a mountainous region; for instance, land is characterized by three mountains, the same sign which in Chinese means hills.

The Sumerians were comparatively a small nation. When they dwelt at the mouth of the Tigris and Euphrates they seem to have lived mainly on fishing. One of their oldest legends speaks of the first man as having acquired mortality, and calls him Adapa, a reading which according to Professor Sayce is now discredited and ought to be replaced by Adama or Adamu, practically the same word as the Hebrew Adam. The story of Adapa or Adama bears a great resemblance to the story of Adam and Eve in Paradise, because it too describes how man fell from his immortal state and became subject to death. The Sumerian legend tells the story as follows:

Adapa, the son of Ea, was fishing and the South Wind came and upset his boat. Then Adapa broke the wings of the South Wind and the South Wind could no longer blow. When Anu in heaven noticed that the South Wind no longer blew he inquired into the cause, and when he learned what had happened he summoned Adapa before his tribunal. Adapa was warned by his father Ea that when he came up to Anu he should not eat the food offered to him nor drink of the cup handed him because he would be given food and drink of death. He further enjoined him to arouse the compassion

of Ann by putting on garments of mourning. Adapa did as required and Ann so took compassion on him that instead of offering him the food and drink of death he offered him food and drink of life, which Adapa, mindful of his father's warning, refused, thus forfeiting his immortality and becoming henceforth a mortal.

This ancient myth accounting for the mortality of man, describes him as a fisherman, and we may very well look upon the legend as a genuine reminiscence of primitive mankind, for the first settlements, so far as anthropology has investigated, are the so-called culinary deposits or kitchen remains which have been found on the shores of the Baltic and along the rivers of northern Europe. It appears that the Sumerians also started civilized life with fishing, and thus the god of civilization who brought to them all the treasures of their intellectual accomplishments, writing, and the arts and sciences, was supposed to have had the shape of a fish. Yea, we may assume that the sun himself was conceived to have been a fish rising from the ocean and staying with mankind during the day to return to the ocean and remain in the deep over night emerging therefrom the next morning.

As devotees dress themselves in the shape of their god, so it appears that the priests of the mythical Oannes donned fish skins, for we see frequent representations of fish-clad priests on the ancient Babylonian monuments, especially in the ritual of conjuration which was supposed in ancient times to be the quintessence of all science, the purpose and aim of all knowledge, and its occult significance.

RELIGIOUS SACRIFICES.

BY JAMES B. SMILEY.

IN primitive minds the belief developed that after death the human spirit had all the needs of the physical body before that change. A similar belief has been found in recent times among many savages. Thus we are told that the Araucanians think "the soul, when separated from the body, exercises in another life the same functions it performed in this, with no other difference except that they are unaccompanied with fatigue or satiety."¹ It has been a wide-spread belief that after death the spirit, instead of floating away to some distant place—a heaven or hell—continued to reside in the body. Hence arose the desire to mummify the corpse, so that it might long continue to serve as a home for the spirit. If the body was destroyed it was imagined that the spirit would be homeless and suffer.

Many savages have believed that it was necessary after the death of their relatives to supply the wants of their spirits in order to enable them to live happily, and also to avoid incurring their displeasure. The Arru Islanders, after a man dies, try to make him eat, "and when they find that he does not partake of it, the mouth is filled with eatables, siri and arrack." And among the Tahitians, "if the deceased was a chief of rank or fame, a priest or other person was appointed to attend the corpse, and present food to its mouth at different periods during the day."² Similar customs have been found elsewhere. In other cases food would be placed near the body for the spirit to eat, as among the Karens, by whom "meat is set before the body for food" before burial,³ and certain Brazilians put the dead man in "the hammock he used to lie in, and during the first days bring him

¹ Spencer, *Sociology*, Vol. I, p. 171.

² *Ibid.*, p. 155.

³ *Ibid.*

meat, thinking he lies in bed,"⁴ and that he will need food the same as before death.

In some regions, where the bodies were exposed or buried, food was placed near them, or on or in the grave. Thus it is said that the "Tahitians and Sandwich Islanders, who expose their dead on stages, place fruits and water beside them; and the New Zealanders, who similarly furnish provisions, aver that 'at night the spirit comes and feasts out of the sacred calabashes.'... The Sherbro people, in Africa, 'are in the habit of carrying rice and other eatables to the graves of their departed friends;' the Loango people deposit provisions at the tomb; and the Island Negroes put food and wine on the graves." The Caribs, in America, "put the corpse in a cavern or sepulcher, with water and eatables,"⁵ for the spirit to consume.

In many parts of the world holes have been left in coffins and graves to enable spirits to pass in and out, and through which they might be fed. Thus we are told that in America "the Ohio tribes bored holes in the coffin to let the spirit pass in and out,"⁶ and the Iroquois left small holes in the grave for the same purpose. "In upper Egypt at present a hole is left at the top of the tomb chamber; and I have seen a woman remove the covering of the hole, and talk down to her deceased husband. . . Also funeral offerings of food and drink, and even beds, are still placed in the tombs. A similar feeling . . . doubtless prompted the earlier forms of provision for the dead."⁷ Here the spirit was thought to reside in the dead body in the tomb or grave, and it was provided with food, drink, etc.

"In Bonny the dead are buried under the doorstep, a funnel communicates with the mouth of the deceased, and libations of blood are poured down the funnel by the negro every time he leaves the house. . . . In the Tenger Mountains [in Java] a hollow bamboo is inserted in the grave at burial, in order that offerings of drink and food may be poured down it. . . . In ancient Mycenæ an altar over one of the shaft-graves has been discovered, with a tube leading into the grave," through which food could be poured to reach the spirit. In Peru "the relatives of the deceased used to pour some of the liquor named *chicha* into the grave, of which a portion was conveyed by some hollow canes into the mouth of the dead person."⁸ Among some African tribes fowls and other victims offered in sacri-

⁴ *Ibid.*, p. 156.

⁵ *Ibid.* See also many other examples there given.

⁶ Dorman, *Primitive Superstitions*, p. 20.

⁷ W. M. F. Petrie, *Religion of Ancient Egypt*, p. 12.

⁸ Jevons, *Introduction to the History of Religion*, pp. 51, 52.

fice are "so killed that the blood shall trickle into the grave. At the offering the dead are called by name to come and partake."⁹ In the above cases food was fed to the buried spirit, residing underground, where the body had been placed. Similar customs were practiced by the Timmanis and other tribes of Africa,¹⁰ by the ancient Babylonians,¹¹ and Greeks,¹² and they have been found in other parts of the world. "Amongst savages generally the belief is that the dead stand in actual need of the food that is offered them."¹³

As burials increased there would in time be many spirits, thus living with the bodies underground. Thus would arise the belief that the home of the spirits was underground, where bodies had been placed. And so gradually an *underworld* would develop, the home of the spirits of the dead. It was probably in this way that the belief in an "underworld" arose among the Greeks and in other parts of the world, for this belief has been wide-spread. It is often mentioned in ancient literature. This home of the spirits was at times called the "lower regions" and the "region below," i. e., below the ground. So, also, in time, stories would spring up, giving imaginary tales about what the spirits did in this underworld where they had gone to live, for regarding this unknown region the imagination could have free play.

The need of the spirits for food, drink, etc., would continue indefinitely, and to supply their wants festivals and ceremonies would develop. The following examples, which are a few selected from many, are intended to show how common and wide-spread these customs have been, in both ancient and modern times. In ancient Babylonia it is said that "animal sacrifices at the grave appear to be very old. Offerings of food and water were made to the dead not only at the time of the burial, but afterwards by surviving relatives."¹⁴ The ancient Egyptian belief was that "the dead lived, therefore they must of necessity eat and drink, for without these processes the continuation of life was inconceivable; if the dead were without food they would be starved. The inscription of the sepulchral pyramid of Unas, an Egyptian king of the fifth dynasty, gives expression to this fear. 'Evil is it for Unas,' says the text, 'to be hungry and have nothing to eat; evil is it for Unas to be thirsty and

⁹ Keane, *Man Past and Present*, p. 96.

¹⁰ Letourneau, *Sociology*, p. 224; Kingsley, *West African Studies*, p. 506.

¹¹ Jastrow, *Religion of Babylonia and Assyria*, p. 605.

¹² Alger, *History of the Doctrine of a Future Life*, p. 76.

¹³ Jevons, *Introduction to the History of Religion*, p. 56.

¹⁴ Jastrow, *Religion of Babylonia and Assyria*, p. 599.

have nothing to drink.'"¹⁵ Although this inscription was written on the tomb of king Unas over 5000 years ago (B. C. 3300) it is almost identical with the belief found among savages in modern times. In ancient Egypt "the rich founded endowments whose revenues were to be expended to all time in providing their *Kas* [spirits] with food offerings, and bequeathed certain sums for the maintenance of priests to attend to this; large staffs of officials were kept up to provide the necessities of life for the personalities [i. e., spirits] of the dead."¹⁶

In ancient India "the Hindu believed that at the moment when he offered his funeral repast, the *manes* [spirits] of his ancestors came to seat themselves beside him and took the nourishment which was offered them. He also believed that this repast afforded the dead great enjoyment. . . . The Hindu, like the Greek, regarded the dead as divine beings, who enjoyed a happy existence; but their happiness depended on the condition that the offerings [sacrifices] made by the living should be carried to them regularly."¹⁷ The Hindu desire was, "May there be successively born of our line sons who, in all coming time, may offer us rice, boiled in milk, honey, and clarified butter,"¹⁸ [i. e., as sacrifices to feed their spirits].

"The [ancient] Greeks and Romans had exactly the same belief. If the funeral repast ceased to be offered to the dead, they immediately left their tombs, and became wandering shades, that were heard in the silence of the night. They reproached the living with their neglect; or they sought to punish them by afflicting them with diseases, or cursing their soil with sterility. In a word, they left the living no rest till the funeral feasts were re-established. The sacrifice, the offering of nourishment, and the libation, restored them to the tomb, and gave them back their rest and their divine attributes. Man was then at peace with them."¹⁹

Acosta, a Spanish writer who visited America 1571 to 1586, said that in the New World it was general "to set meate and drinke upon the grave of the dead, imagining they did feede thereon," while another writer found that a similar custom was observed in the West

¹⁵ Wiedemann, *Ancient Egyptian Doctrine of the Immortality of the Soul*, p. 60.

¹⁶ *Ibid.*, p. 20. Similarly the Incas of Peru left all their "treasure and revenues" at death to provide for supplying the desires of their spirits. Acosta, p. 312.

¹⁷ Coulanges, *The Ancient City*, p. 26.

¹⁸ *Ibid.*, p. 43.

¹⁹ *Ibid.*, p. 27.

Indies,²⁰ and we are told that by the savages of Africa food was "occasionally taken to the place of burial for months or years afterwards,"²¹ i. e., for the spirit to eat.

"The Esquimaux of St. Michael and the lower Yukon River hold a festival of the dead every year at the end of November or the beginning of December. . . . On these occasions food, drink and clothes are provided for the returning ghosts in the *Kashim* or clubhouse of the village, which is illuminated with lamps. . . . When all is ready, the ghosts gather in the fire-pit under the clubhouse, and ascending through the floor at the proper moment, take possession of the bodies of their namesakes, to whom the offerings of food, drink and clothes are made for the benefit of the dead. Thus each shade obtains the supplies he needs for the other world. The dead who have none to make offerings to them are believed to suffer great destitution. Hence the Esquimaux fear to die without leaving behind some one who will sacrifice to their spirits, and childless people generally adopt children lest their shades should be forgotten at the festivals." "The Miztics of Mexico believed that the souls of the dead came back in the twelfth month of every year, which corresponds to our November. . . . Jars of food and drink were set on a table in the principal room, and the family went out with torches to meet the ghosts and invite them to enter. Then returning themselves to the house they knelt around the table, and with eyes bent on the ground prayed the souls to accept the offerings and to procure the blessings of the gods upon the family."²²

Thus far I have principally described methods employed for supplying the needs of the spirits of the dead. But the *gods* were also believed to have desires similar to those of men, and in order to retain their good will it was necessary to keep these wants well supplied. Thus we are told that "the gods were also supposed to share in a life like that of men, not only in Egypt but in most ancient lands. Offerings of food and drink were constantly supplied to them, in Egypt laid upon the altars, in other lands burnt for a sweet savor."²³ Another writer says that in ancient Egypt the "gods enjoyed a precarious immortality, for they were liable to destruction and dependent on necessities. According to a very primitive concep-

²⁰ Acosta, Hakluyt Society Edition, p. 314; Hakluyt's *Historic of the West Indies*, VIII, ch. 10.

²¹ Wilson, *West Africa*, p. 231.

²² Frazer, *Adonis, Attis and Osiris*, pp. 242-244. See pages 242 to 252 for a large number of similar instances. It is needless to quote more here.

²³ W. F. M. Petrie, *Religion of Ancient Egypt*, p. 2.

tion that always remained alive, they had to be fed, clothed and refreshed every day or else perish," while Professor Wiedemann says that they "required bodily sustenance, and were sorely put to it if offerings failed them and their food and drink were unsupplied."²⁴ In the Iliad it is stated that the reason why Zeus favored Troy was because there "never did mine altar lack the seemly feast, even drink offering and burnt offering, the worship that is our due,"²⁵ i. e., the worship consisted in keeping the god well supplied with food and drink.

Similarly it is said that in ancient Babylonia "the blood was regarded at all times as the special property of the gods, and was poured on the altar. The two kinds of sacrifice—animal and vegetable—date from the earliest period of Babylonian religion of which we have any knowledge."²⁶ The Chinese worship "their ancestors and the spirits of the departed great. . . . The departed are supposed to be able to help the living. They are prayed and sacrificed to as spiritual powers, from whom protection and favors may be obtained."²⁷ "The public services of religion in China are principally sacrifices,"²⁸ i. e., of food, etc., to supply the wants of the spirits. By the Taoists in China, after death, "offerings must be presented at the grave, before the spirit tablet [i. e., a tablet in which a spirit was believed to dwell] and in the temple of the tutelary deity of the city."²⁹

The Japanese also worship ancestral spirits. In worshipping their clan-gods, "the offerings submitted on the occasion of festivals consisted usually of food, drink and clothing."³⁰ Another writer says that in Japan "the original and most important form of offering [sacrifice] was food and drink of various kinds."³¹ In Japan the Buddhist "offerings usually consist of tea, rice, fruits, cakes and flowers, either artificial or natural, the most usual being the lotus."³² The Buddhists offer no meat in their sacrifices. Sacrificial offerings have been found in all parts of the world, and everywhere the object

²⁴ Cumont, "The Religion of Egypt," in *The Open Court*, Vol. XXIV, 568; Wiedemann, *Egyptian Doctrine of the Immortality of the Soul*, p. 19.

²⁵ Iliad, Lang, Book V, p. 65.

²⁶ Jastrow, *Religion of Babylonia and Assyria*, p. 60.

²⁷ Legge, *Notions of the Chinese Concerning God and Spirits*, p. 54.

²⁸ *Ibid.*, p. 24.

²⁹ *Ibid.*, p. 200.

³⁰ Hozumi, *Ancestor Worship*, p. 24.

³¹ Ashton, *Shinto*, p. 60.

³² Hozumi, *Ancestor Worship*, p. 30.

of the sacrifice was the same. It was intended to supply the wants of the spirits or gods. "To the ancients, as to the aboriginal Americans, a religion without sacrifice appeared to involve a contradiction of terms, and to be in substance mere atheism."³³

But how were the spirits believed to consume the offerings made to them? In various ways. The ancient Peruvians worshiped the sun. To it offerings of the drink *chicha* were made. "When such offerings had been visibly diminished by evaporation, it was said that the sun had drunk of them."³⁴ In Madagascar it was believed that the Angatra [spirit] drinks "of the arrack left for him in the leaf-cup. Do they not see it diminish day by day?" [i. e., evaporate].³⁵ "In the . . . Odyssey the ghosts drink greedily of the sacrificial blood, and libations of gore form a special feature in Greek offerings to heroes. Among the Arabs, too, the dead are thirsty rather than hungry; water and wine are poured upon the graves."³⁶ Knowing nothing of the laws of evaporation, when any liquid was offered to a spirit and then vanished primitive men would naturally think the spirit had drunk it. This was the readiest way for them to account for its disappearance. Here the belief was an outgrowth of and was based on a misunderstanding of natural phenomena.

"In North America, Algonquin Indians considered that the shadow-like souls of the dead can still eat and drink, often even telling Father Le Jeune that they had found in the morning meat knawed in the night by the souls. More recently we read that some Potawatomis will leave off providing the supply of food at the grave if it lies long untouched, it being concluded that the dead no longer wants it, but has found a rich hunting ground in the other world. In Africa, again, Father Cavazzi records of the Congo people furnishing their dead with supplies of provisions, that they could not be persuaded that souls did not consume material food. In Europe the Esths, offering food for the dead on All Souls', are said to have rejoiced if they found in the morning that any of it was gone."

"A less gross conception is that the soul consumes the steam or savor of the food, or its essence or spirit. . . . This idea is well displayed in Mexican districts, where the souls who come to the annual feasts are described as hovering over and smelling the food set out for them, or sucking out its nutritive quality. The Hindu entreats the *manes* to quaff the sweet essence of the offered food. . . .

³³ Payne, *New World*, p. xii.

³⁴ *Ibid.*, p. 570.

³⁵ Ellis, *Madagascar*, I, p. 421.

³⁶ Smith, *Religion of the Semites*, p. 217.

At the old Slavonic meals for the dead, we read of the survivors sitting in silence and throwing morsels under the table, fancying they could hear the spirits rustle, and see them feed on the smell and steam of the viands. . . . Many travelers have described the imagination with which the Chinese make such offerings. It is said that the spirits of the dead consume the impalpable essence of the food, leaving behind its coarse material substance."³⁷

The Hindus made an intoxicating beverage from the juice of the soma plant which they both drank themselves and offered to their gods. Thus it is said, "not only the rishis are inspired by Soma, but also their deities. 'The gods drink the offered beverage' and are 'thrown into joyous intoxication.' Indra 'performs his great deeds under its influence.'"³⁸

An ancient Peruvian legend represents Marco Capac "ordering the sacrifice of the most beautiful of his sons, cutting off his head, and sprinkling the blood over the fire, that the smoke might reach the maker of heaven and earth. . . . In Chinese sacrifice to sun and moon and stars and constellations. . . . beasts and even silks and precious stones are burned, that their vapor may ascend to the heavenly spirits. No less significant. . . . is the Siamese offering to the household deity, incense and arrack and rice steaming hot; he does not eat it all. . . . it is the fragrant steam which he loves to inhale."³⁹ The Greeks in Porphyry's time (about 233-306 A. D.) knew "how the demons who desire to be gods rejoice in the libations and fumes of sacrifice, whereby their spiritual and bodily substance fattens, for this lives on the steam and vapors and is strengthened by the fumes of the blood and flesh."⁴⁰ Similarly the burning of the sacrifices common among the early Hebrews, and often mentioned in the Old Testament, will occur to the reader. They believed the god they worshiped could thus absorb the vapor and fumes. In general it may be said that libations poured on the ground, or offerings inserted below the surface, were intended for spirits in the underworld, while the fumes and vapors of burnt offerings, which probably were a later development, were believed to reach spirits in the upper air.

Among some of the lower races the belief arose that inanimate objects of all kinds, as well as men and animals, have souls. Thus among the Ojibwa Indians "Keating noticed the opinion that not only men and beasts have souls, but inorganic things, such as kettles,

³⁷ Tylor, *Primitive Culture*, II, pp. 39, 40. He also gives other examples.

³⁸ Spencer, *Sociology*, I, p. 348.

³⁹ Tylor, *Primitive Culture*, II, p. 385.

⁴⁰ *Ibid.*, p. 386. See also Smith, *Religion of the Semites*, pp. 217, 218.

etc., have in them a similar essence. In the same district Father Le Jeune had described, in the seventeenth century, the belief that the souls, not only of men and animals, but of hatchets, and kettles, had to cross the water to the Great Village, out where the sun sets."⁴¹ So, also, Im Thum says the Indians he met believed "animals other than men, and even inanimate objects have spirits which differ not at all in kind from those of men."⁴²

A further development of thought would apportion the souls of objects to the service of the gods. Some African tribes believe that "in the spirit world they require the same food as when on earth, but consume only the essence, the visible substance remains,"⁴³ and in New Zealand "spirits and gods are supposed to require food as well as man, but they only consume the spirit or essence of it, the gross substance being left for the priests,"⁴⁴ while the Malay "deity is not supposed to touch the solid or material part of the offering, but only the essential part, whether it be life, savor, essence, quality or even the soul."⁴⁵ In India "the Karen demon devours not the body but the *la*, spirit or vital principle," and among the Polynesians "the spiritual part of the sacrifice is eaten by the spirit of the idol" (i. e., the deity dwelling in the idol) "before whom it is presented." Of the Fijians "it is observed that of the great offerings of food native belief apportions merely the soul to the gods, who are described as great eaters."⁴⁶ So also in West Africa an offering was made to a fetish of "daily bread kneaded with palm-oil of which, as of all gifts of this kind, the *wong* [spirit] eats the invisible soul."⁴⁷

As ghosts were believed to retain in the spirit world all the bodily wants they had before death, they would not only desire food, clothes, etc., but they would also want wives, servants and slaves. And this would lead to human sacrifice. Thus it is stated that in Africa "human sacrifices to provide attendants for the dead, take place at the decease of kings or chiefs, or whenever their living descendants think it desirable to increase their retinues, or to inform them of some occurrence which seems important. Sacrifices made with these motives are the direct outcome of the 'continuance' theory, for a man who has been accustomed to be served by a number of

⁴¹ *Ibid.*, p. 386.

⁴² Im Thum, *Indians of Guiana*, p. 350.

⁴³ Nassau, *Fetichism in West Africa*, p. 56.

⁴⁴ Taylor, *New Zealand and Its Inhabitants*, p. 104.

⁴⁵ W. W. S. Keat, *Malay Magic*, p. 73.

⁴⁶ Tylor, *Primitive Culture*, II, p. 389.

⁴⁷ *Ibid.*, p. 392.

followers and wives in this world, will equally require such attendance to enable him to support his position in Dead-land."⁴⁸ Regarding human sacrifice in Africa Miss Kingsley says: "In West Africa a human sacrifice is the most persuasive one to the fetishes. It is just with them as with a chief, and if you wish to get some favor from him you must give him a present. A fowl or a goat or a basket of vegetables, or any thing like that, is quite enough for most favors, but if you want a big thing and want it badly, you had better give him a slave, because a slave is alike more intrinsically valuable and also more useful. So far as I know all human sacrifices pass into the service of the fetish [spirit] they are sacrificed to. They are not merely killed that he may have their blood, but that he may have their assistance,"⁴⁹ i. e., that their spirits may serve him. Of this custom Wilson says: "At the time of the death of a king a number of his principal wives and favorite slaves are put to death, not so much, however, as sacrifices to appease his wrath, as to be companions and attendants in another world."⁵⁰

Of such sacrifices to the *gods* in Africa Ellis says: "Human sacrifices to the gods are ordinarily only made in times of war, pestilence or great calamity; in fact when the emergency for the need of divine assistance prompts the worshipers to offer the highest form of offering."⁵¹ As this custom of human sacrifice has been worldwide, a few examples may be given. In Melanesia, Bera, a local chief, had a grandson, Kikolo, who was very sick. "Finding that every thing they had done was of no avail, the last dread experiment was tried—a human sacrifice."⁵² But in spite of the sacrifice the child died. "A New Zealand mother whose child had been drowned, insisted that a female slave should be put to death, so that she might accompany and take care of her little one, on his voyage to the country beyond the grave."⁵³ It is said that all the great Khans and Princes of the blood of Zingis were carried to the mountain of Altai to be buried. Those who carried the corpse to the burial place killed all with whom they met, commanding them to go and serve the king in another life. When the body of one of the great Khans was carried to the mountain ten thousand people were slain by the

⁴⁸ Ellis, *Ewe-speaking People*, p. 118.

⁴⁹ Kingsley, *West African Studies*, p. 176.

⁵⁰ Wilson, *West Africa*, p. 219.

⁵¹ Ellis, *Ewe-speaking People*, p. 117.

⁵² Penny, *Ten Years in Melanesia*, pp. 66, 67.

⁵³ Letourneau, *Sociology*, p. 231.

soldiers on the occasion, to furnish the king an army in the other world.⁵⁴

In India human sacrifice "has always been common... as a last resort for appeasing divine wrath, when manifested in a strange and inexplicable way."⁵⁵ It is said that "the Tipperahs of Bengal are supposed to have sacrificed as many as a thousand human beings a year"⁵⁶ to Siva. In India for thousands of years a wife was burnt on the funeral pile with her husband's body, in order that her spirit might accompany him to the other world. A woman thus burnt was called *sati*, or good woman, and this word was corrupted by the English to *Suttee*. This was the origin of that ceremony. "When the rite was suppressed under modern British rule, the priesthood resisted to the uttermost, appealing to the Veda as sanctioning the ordinance."⁵⁷

"The Phœnicians sacrificed the dearest children to propitiate the angry gods; they enhanced their value by choosing those of noble families."⁵⁸ For the Biblical story of the Moabite king thus sacrificing his son in time of great distress, see 2 Kings, iii. 26, 27. In ancient Peru when the Inca died "they did put to death the woman he had loved best, his servants and officers, that they might serve him in the other life. When Huayna Capac died... they put to death about a thousand persons of all ages and conditions for his service to accompany him in the other life." The Carthaginians erected monuments and offered human sacrifices in various places to their general Hamilkar. A monument was erected to him on the battle-field of Himera. "On that monument, seventy years afterwards, his victorious grandson, fresh from the plunder of this same city of Himera, offered the bloody sacrifice of 3000 Grecian prisoners."⁵⁹ One of the most horrible sacrificial ceremonies on record

⁵⁴ Mallet, *Northern Antiquities*, Bohn Ed., p. 448.

⁵⁵ Lyall, *Asiatic Studies*, p. 19.

⁵⁶ Recluse, *Primitive Folk*, p. 318.

⁵⁷ Tylor, *Primitive Culture*, I, p. 465. For the custom in ancient Peru see Rivero, *Peruvian Antiquities*, p. 186. So, also, in China sutteeism was practiced for centuries, even until modern times, and met with public applause. See De Groot, *Religious System of China*, Vol. II, Book I, 748; J. Ball, *Things Chinese*, p. 565. In some regions where burial was practiced a man's wives and slaves, often shrieking with terror, were buried alive in his grave, so that their spirits might accompany him. For an example see H. Ward, *A Voice from the Congo*, pp. 59-65, and his *Five Years with Congo Cannibalism*, p. 302.

⁵⁸ *Ibid.*, II, p. 398.

⁵⁹ Acosta, Hakluyt Soc. Ed., p. 313. Grote, *History of Greece*, V, 298. Spencer, *Sociology*, Vol. I, Secs. 104 and 141, gives many examples of human sacrifices. Westermarck, *The Origin and Development of the Moral Ideas*, pp. 435-476, gives a large number of examples.

took place at Anahuac, in Mexico, in 1486 or 1487, when Ahuizotl was crowned and the grand temple of Huitzilopochtli was dedicated. Vast numbers of people viewed the ceremonies, and "the chief feature of the exercises was the sacrifice of the captives, of whom from seventy to eighty thousand perished on the altar. The victims were arranged in two lines, stretching from the temple far out on the causeways; the kings began the bloody work with their own hands, and the priests followed, each continuing the slaughter until exhausted, when another took his place. This was the most extensive sacrifice that ever took place in Anahuac, and it was followed by others on a somewhat smaller scale in the lesser cities."⁶⁰

The cannibalistic desire to give the gods human flesh to eat also appears at times. Thus the Iroquois Indians would sacrifice an enemy, and dance around him, crying: "To thee, Areskoui, great spirit, we slay this victim, that thou mayest eat his flesh and be moved thereby to give us henceforth luck and victory over our foes."⁶¹ A Nicaragua Indian said: "When we make war we do so in order to give them [the gods] to eat of the blood of those Indians whom we kill or take prisoners. This blood we sprinkle on every side, that the gods may eat: for we do not know on what side they may be." Another Indian said: "I have heard my fathers say that the gods eat the blood and the hearts of men, and of certain birds."⁶² In ancient Mexico wars were carried on to get victims to sacrifice for this reason.

The two principal reasons for human sacrifices appear to have been the cannibalistic desire to give spirits and gods human flesh to eat and human blood to drink, and to furnish them with wives, servants, slaves and attendants. But on the whole the latter motive probably caused by far the greater number of deaths.

The practice of head-hunting has existed in various parts of the world. "The Dyaks firmly believe that such decapitations represent the acquisition of a slave in the life to come. They wear mourning for one of their deceased relatives until they have succeeded in procuring a man's head: that is to say sending a slave to the de-

⁶⁰ Bancroft, *Native Races*, V, p. 440. In a footnote Bancroft says that "considering the number of victims sacrificed, it is probably more correct to suppose that several sacrificers were occupied at the same time." The sacrifices may also have continued for several days. People went from "all parts of the country" to witness the ceremonies.

⁶¹ Baring-Gould, *Origin and Development of Religious Belief*, Vol. I, p. 380. For a large number of examples of human sacrifice see also pp. 374-383.

⁶² Payne, *History of America*, Vol. I, p. 581. See also Bancroft, *Native Races*, II, pp. 304-341; V. 394, 414, etc.

parted.”⁶³ Here we find a great underlying motive for this horrible custom. The head of the victim served as a trophy to show that a slave had been sent to serve the spirit in Dead-land. Many heads meant many slaves, presented to the spirit.

In order that an earthly king, or a wealthy man having a large retinue, might keep up his establishment great quantities of commodities were needed. So, also, in Dead-land, a noble, king or god with a large retinue would require a great quantity of supplies to meet their requirements. The vast amount of the sacrifices sometimes offered is surprising, and they were probably made to supply this want. This and the desire to win the good will of the spirits by a profusion of gifts are the probable reasons for large offerings.

The power of a belief to control the conduct, or even to take the life, of men, is well known. The fact that men willingly lay down their lives for a belief is no evidence whatever of its truth. It makes no difference whether it is true or false. Its power rests solely on the sincerity with which it is entertained. This is well illustrated in the case of the Thracians. Herodotus says that “those above the Crestoneans do as follows: each man has several wives; when, therefore, any of them dies, a great contest arises among the wives, and violent disputes among their friends, on this point, which of them was most loved by the husband. She who is adjudged to have been so, and is so honored, having been extolled both by men and women, is slain on the tomb by her own nearest relatives, and when slain is buried with her husband; the others deem this a great misfortune, for this is the utmost disgrace to them.”⁶⁴ A similar belief existed in Peru, where in the worship of the sun women were sacrificed to serve as wives to this god. Many often chose to die in this way. “Sometimes these voluntary candidates for sacrifice were rejected on account of some physical defect: a woman who had been thus rejected as a victim to the sun was living near La Paz in 1611. She was known as *la desdichada*, or the unfortunate one, because the happiness of dying as a wife of the sun had been denied her.”⁶⁵

In some parts of the world a custom arose of sending messages to the dead or to the gods. Thus we are told that in West Africa “it is a common thing for the living to send messages to the spirits of their deceased friends by some one who is on the point of dying,

⁶³ Letourneau, *Sociology*, p. 238.

⁶⁴ Herodotus, Bk. V, 5.

⁶⁵ Payne, *History of the New World*, I, p. 565. For many other examples of willingness to die see Spencer, *Sociology*, Vol. I, Sec. 104. See also, Rivero, *Peruvian Antiquities*, pp. 186, 201.

informing them of their circumstances in life, and asking their advice and assistance in certain emergencies."⁶⁶ In the case of kings this custom led to great sacrifice of life. Thus it is stated that in Dahomey, "whatever action, however trivial, is performed by the king it must be dutifully reported to his sire in the shadowy realm. A victim, almost always a war-captive, is chosen: the message is delivered to him, an intoxicating draught of rum follows it, and he is dispatched to Hades in the best of humors."⁶⁷ As this custom is very ancient it appears to have been quite an early form of "wireless message." Mr. Ellis says that in one region alone of Africa it has "been estimated that five hundred persons are slain in ordinary years to carry messages to the dead. The number seems enormous, but it has become the custom to report the most trivial occurrences, such as a change of residence from one place to another, and the estimate is probably within the mark."⁶⁸ On one occasion an antelope and a monkey were also killed to carry messages to spirit antelopes and monkeys in Dead-land.⁶⁹ In ancient Mexico men were similarly killed to carry messages to their gods.⁷⁰

As human sacrifice has existed in all parts of the world, and for unknown thousands of years, probably hundreds of millions of human beings have been killed as sacrifices to the spirits or gods, and the loss of life thus caused has been absolutely appalling, but cannot be estimated in figures.

The early Hebrew sacrifices do not appear to have differed essentially from those found in other parts of the world. "All sacrifices laid upon the altars were taken by the ancients as being literally the food of the gods. . . . Among the Hebrews the conception that Jehovah eats the flesh of bulls and drinks the blood of goats, against which the author of Psalm I. protests so strongly, was never eliminated from the ancient technical language of the priestly ritual, in which the sacrifices are called. . . . 'the food of the deity.'" ⁷¹ Among these people, as elsewhere in early times, "all worship took the form of sacrifice."

"Though the ritual of Jerusalem as described in the Book of

⁶⁶ Wilson, *West Africa*, pp. 220, 394, 395. See also Nassau, *Fetichism in West Africa*, pp. 161, 181.

⁶⁷ Tylor, *Primitive Culture*, I, p. 462. See also Westermarck, *Origin and Development of Moral Ideas*, Vol. I, pp. 444, 465, 466.

⁶⁸ Ellis, *Exc-speaking People*, p. 137.

⁶⁹ *Ibid.*, p. 138.

⁷⁰ Payne, *History of America*, 583, 584, 596.

⁷¹ Smith, *Religion of the Semites*, p. 207.

Leviticus is undoubtedly based on very ancient tradition, going back to a time when there was no substantial difference, in point of form, between Hebrew sacrifices and those of the surrounding nations, the system as we have it dates from a time when sacrifice was no longer the sum and substance of worship. In the long years of Babylonian exile the Israelites who remained true to the faith of Jehovah had learned to draw nigh to their God without the aid of sacrifice and offering, and, when they returned to Canaan, they did not return to the old type of religion. They built an altar indeed, and restored the ritual on the lines of old tradition, so far as these could be reconciled with the teaching of the prophets and the Deuteronomic law—especially with the principle that there was but one sanctuary at which sacrifice could be acceptably offered. But this principle itself was entirely destructive of the old importance of sacrifice as the stated means of converse between God and man. In the old time every town had its altar, and a visit to the local sanctuary was the easy and obvious way of consecrating every important act of life.”⁷²

Professor Smith also says that the Semitic word “Baal is primarily the title of a god as inhabitant or owner of a place.”⁷³ A Semitic “Baal was specially connected with subterranean waters.”⁷⁴ “When we find that in later times all Semitic deities were usually conceived as heavenly or astral, we must conclude that the connection of the Baalim with underground waters dates from an earlier stage of religion.”⁷⁵ “That the Baalim, as gods of the subterranean waters from which springs are fed, have a certain chthonic [i. e., underground or subterranean] character, appears also from the frequent occurrence, especially beside sacred streams, of tombs of the god; for a buried god is one who has his seat underground. On the whole, therefore, I am inclined to conjecture that caverns and clefts in the earth may not seldom have been. . . . chosen as places of worship because through them the god ascended and descended to and from the outer world, and through them the gifts of the worshiper could be brought nearer his subterranean abode.”⁷⁶

“All over the Semitic world caves and pits are the primitive storehouses, and we know that in Arabia a pit called the *ghabghab*, in which the sacred treasure was stored, was a usual adjunct to

⁷² *Ibid.*, pp. 198, 199.

⁷³ *Ibid.*, p. 94.

⁷⁴ *Ibid.*, p. 182.

⁷⁵ *Ibid.*, p. 97.

⁷⁶ *Ibid.*, p. 182.

sanctuaries. . . . In other parts of the world, as for example in Greece, there are many examples of caves associated with the worship of chthonic deities, and also with the oracles of gods like Apollo, who are not usually looked upon as chthonic or subterranean. . . . In Arabia the *ghabghab* is not merely a treasure house; a victim [for sacrifice] is said to be brought to the *ghabghab*, and the word is explained as the name of a place of sacrifice, or the place where the blood was poured out. The blood, therefore, was allowed to flow into the pit, just as the annual human sacrifice at Dumætha (Duma) was buried under the altar that served as an idol. . . . Among the northern Semites there is at least one case where the sacred pit in the sanctuary was supposed to be inhabited by a subterranean deity."⁷⁷ Blood flowing into the pit was believed to reach and feed the spirit residing underground.

"In all Arabian sacrifices except the holocaust. . . the godward side of the ritual is summed up in the shedding of the victim's blood, so that it flows over the sacred symbol, or gathers in a pit (*ghabghab*) at the foot of the altar idol. . . . What enters the *ghabghab* [pit] is held to be conveyed to the deity; thus at certain Arabian shrines the pit under the altar was the place where votive treasures were deposited. A pit to receive the blood also existed at Jerusalem, under the altar of burnt-offering, and similarly in certain Syrian sacrifices the blood was collected in a hollow, which apparently bore the name of *mashkam*, and thus was designated as the habitation of the god-head."⁷⁸ "When gifts of food—whether animal or cereal—were first presented at the shrines of the gods, the belief was that they were actually consumed by the deity."⁷⁹ Thus it seems probable that the original altar at Jerusalem was erected over a grave, and that blood was conveyed from the sacrifice into a pit under the altar to feed the spirit that was then believed to dwell there, and to whom the sacrifices were offered. Instances from various parts of the world of attempts to feed spirits residing underground, have been given above.

⁷⁷ *Ibid.*, p. 181. See also p. 211. Sacred caves probably date back to the time when men inhabited caves and buried the dead there. Then the belief would arise that the dead man's spirit inhabited the cave, and it would be regarded as sacred. For effect of cave burial see Spencer, *Sociology*, Vol. I. Sec. III, 112.

⁷⁸ *Ibid.*, p. 321. So, also, in ancient Peru an offering of chicha was poured into an urn. "The urn had a hole made in such a way that the chicha would enter a pipe or sewer passing underground to the houses of the Sun, Thunder and the Creator," thus reaching the underground abode of the gods. Markham, *Incas*, Vol. 2, pp. 26, 27.

⁷⁹ *Ibid.*, p. 211.

The Hebrew word *she'ôl* means literally "a hollow, subterranean place, a cave." In the Old Testament the word occurs 65 times, and is variously translated as "grave" (31 times), "hell" (31 times) and "pit" (3 times). The word "pit" thus used may refer to the ancient pit graves. "Hell," if used in its modern signification of a place of torment, does not correctly interpret the Hebrew word. The meaning of the word *she'ôl* indicates its origin. When in early times men were buried in caves or graves the Hebrews, like some other primitive people, believed that the spirit dwelt where the body had been left. Their belief in an underworld resembled that of other nations, and there as elsewhere it probably grew out of burial of the dead. *She'ôl* was, "as originally conceived, a vast subterranean tomb, with the barred and bolted gates common to Hebrew tombs, in which the ghosts (*rephaim* = feeble ones) did not even flit about, but lay like corpses in a sepulcher. No thought of retribution was connected with this deep and gloomy underworld. It was the common receptacle of all. The distinctions there were social and national, not moral."⁸⁰ All spirits went there alike, whether good or bad. The belief in a lower region as a place of punishment and torment where the wicked went—the modern "hell"—was a development of the morbid imagination of men in later centuries.

Like the Phœnicians, the Carthaginians, the Moabites and other branches of the Semitic race, the early Hebrews also offered human sacrifices. "The most various nations of antiquity practiced the horrible rite, still found here and there amongst uncivilized tribes, of sacrificing human beings. . . . in honor of the deities. It is undeniable that this was the case with Israel also."⁸¹ The stories of Abraham preparing to offer Isaac (Gen. xxii. 1-14), Jephtha sacrificing his daughter (Judges xi. 30-40), Ahaz (2 Kings xvi. 3) and Manasseh (2 Kings xxi. 6) offering their first born sons, give us glimpses of the early custom. Ezekiel several times refers to the practice (Ezek. xvi. 20, 21; xx. 31; xxiii. 39) and denounces it. Micah, writing in the eighth century B. C., when there was a growing sentiment against it, says, "Shall I give my first-born for my transgression, the fruit of my body for the sin of my soul?" (Micah vi. 7). As the nation advanced the custom declined, as it did in many other developing civilizations. The early Hebrew conceptions of God were very low, but in later centuries they were gradually replaced by more exalted views.

It has been commonly believed by undeveloped races that spirits

⁸⁰ *Encyclopædia Britannica*, art. "Eschatology."

⁸¹ *Bible for Learners*, I, pp. 146, 147.

and gods could enter and reside in various objects, such as idols, animals, trees, rivers, the ocean, mountains, stars, the sky, etc., and these spirits had appetites and desires which could be gratified by sacrifices. Thus it is said that in savage Africa "monkeys that gather on the trees in the vicinity of a graveyard are supposed to be possessed by the spirits of those buried there," and a man "whose plantation was being devastated by an elephant. . . . did not dare to shoot it because the spirit of his lately deceased father had passed into it."⁸² We are told that in ancient Egypt "the crocodile, ibis, dog-headed ape, and fish of various kinds were venerated; . . . they were not, however, venerated in dynastic times as *animals*, but as *the abodes of gods*."⁸³ The sacrifices offered to these animals were intended for the *gods* believed to reside in them, and *not* for the animals.

It is said that in Africa an idol "is believed for the time to be the residence of a spirit which is to be placated by offerings of some kind of food."⁸⁴ The "Oystyaks would pour broth daily into the dish at the image's mouth," and "the Aztecs would pour the blood and put the heart of the slaughtered human victim into the . . . idol's mouth," and "in each case the deity was somehow considered to devour the meal."⁸⁵ It has been generally believed that sacrifices were commonly made to images of wood and stone. This is an error. The sacrifice was offered to the spirit or god that had taken up its residence in the idol, and not to the wooden or stone image. As this has been the underlying belief in all parts of the world, many other examples could be given if necessary. This appears to have been the real basis for all of the idolatry of the world.

It is said that the American Indians believed that in "any great river, or lake, or cascade, there dwell . . . spirits, looked upon as mighty manitus [gods]. Thus Carver mentions the habit of the Red Indians, when they reached the shores of Lake Superior or the banks of the Mississippi, or any other great body of water, to present to the spirit who resides there some kind of offering."⁸⁶ "In Bohemia fishermen are afraid of assisting a drowning man, thinking the Vodyany [water-spirit] will be offended, and will drive

⁸² Nassau, *Fetichism in West Africa*, pp. 58, 89. See also p. 60 for spirits in trees, rocks, caverns, etc.

⁸³ E. A. W. Budge, *The Gods of the Egyptians*, p. 2.

⁸⁴ Nassau, *Fetichism in West Africa*, p. 92.

⁸⁵ Tylor, *Primitive Culture*, II, p. 380.

⁸⁶ *Ibid.*, p. 210.

away the fish from their nets,"⁸⁷ and it was an ancient German saying, when a man was drowned, that "the river-spirit claims his yearly sacrifice."⁸⁸ A similar belief has been found in New Zealand and elsewhere. In many places it has been believed that to save a drowning man brought bad luck, as it excited the anger of the water-spirit who was thus robbed of his victim. Many people have been allowed to drown without receiving any assistance because of this belief.

In Japan "the very ancient folk-lore shows that beautiful maidens were demanded by the sea-gods,"⁸⁹ and to these sea-gods the Japanese sailors still pray. "There are traditions in Japanese legend of human sacrifices to rivers," and it is stated that "river-gods, especially, were propitiated by human victims."⁹⁰ The victims were thrown into the water in order that the spirit dwelling there might thus obtain them. In China every fifth year the Emperor Shun made a tour of inspection through his kingdom, and offered a sacrifice, "'presenting,' as it is expressed, 'burnt offering to heaven, and sacrificing in order to the hills and rivers,'"⁹¹ i. e., to the spirits dwelling in these places. "The Greeks, especially in older times, buried the sacrifices devoted to the gods of the underworld, and threw into the water gifts destined for the gods of seas and rivers."⁹² In modern Russia a custom was found of casting a "horse with head smeared with honey and mane decked with ribbons. . . . into the river with two millstones tied to its neck to appease the water-spirit, the Vodyany, at his spiteful flood-time in early spring."⁹³

In the Tonga Islands, in Africa and in many other parts of the world, sacrifices have been offered to spirits believed to dwell in trees. Thus a negro, on making an offering to a tree, said, "The tree is not fetish, the fetish is a spirit and invisible, but he has descended into the tree. Certainly he cannot devour our bodily food, but he enjoys its spiritual part and leaves behind the bodily which we see."⁹⁴ At Dodona, in ancient Greece, offerings of food were made to the spirit (Zeus) which dwelt in the sacred oak, when the advice of the oracle

⁸⁷ Ralston, *Songs of the Russian People*, p. 152.

⁸⁸ Tylor, *Prim. Cult.*, Vol. I, pp. 109, 110.

⁸⁹ Griffin, *Religion of Japan*, p. 75.

⁹⁰ Ashton, *Shinto*, pp. 42, 60.

⁹¹ Legge, *The Religion of China*, p. 25.

⁹² Smith, *Religion of the Semites*, p. 107.

⁹³ Tylor, *Primitive Culture*, II, p. 407.

⁹⁴ *Ibid.*, p. 216. For many other examples of spirits in trees see pp. 215-224.

was sought. The tree worship of the world seems to have been based on this belief that spirits entered and dwelt in trees.

"In Borneo, Mr. St. John visited the heaven of the Idaau race, on the summit of Kina Balu, and the native guides, who feared to pass the night in this abode of spirits, showed the traveler the moss on which souls of their ancestors fed."⁹⁵ "The Nicaraguans offered human sacrifices to Masaya or Popogatepec (Smoking Mountain) by throwing the bodies into the crater. It seems as though it were a controlling deity, not the mountain itself, that they worshipped,"⁹⁶ i. e., a "controlling deity" that resided in the mountain. It is said that in India "the worship of the Great Mountain is essentially a worship of blood. . . . When the English first obtained possession of the Beerbhoom Mountains, human sacrifices were common, and a regular trade was carried on to supply the victims."⁹⁷

Whatever may be said about the origin of the belief in nature spirits, and this question has been much discussed, they were in early ages imagined to have human appetites and passions, and these wants could be satisfied by sacrifices. Hence to them the same kind of offerings were made as to ghosts, or the spirits of ancestors.

The lives of whole races of men appear to have been for ages dominated by the fear of spirits. It was believed that these imaginary beings teemed everywhere, caused all the phenomena of nature, shaped the destiny of all men, and were the active causes of everything that happened. The sciences had not been developed, the laws of nature were unknown, and natural causes for phenomena were unthought of. To mollify the anger and win the good will of the spirits was considered the most urgent duty of life. Besides this everything else was deemed of secondary importance, for on this the welfare of every human being was believed to depend. Hence the necessity of sacrifices to propitiate the spirits, and thus sacrificial rites seem to have been the earliest form of religious worship. The ethical, theological and mystical phases of religion appear to have developed later.

As time went by and civilization developed, the old sacrificial systems declined, and in many cases a process of substitution took place. In some cases men began to revolt at the horrors of human sacrifice, and animals and other articles were substituted for the human victims. In other cases the great expense of the sacrifices became burdensome, and so cheaper substitutes were offered. Thus

⁹⁵ *Ibid.*, p. 60.

⁹⁶ *Ibid.*, p. 207.

⁹⁷ Hunter, *Rural Bengal*, p. 188.

it is said that in China "within historical times, it was common for valuables to be buried with the dead or destroyed in their honor at the funeral, and it was only after such expenditure had become so burdensome as to be restrained by law, that the quaint economy of burning paper representatives of money and other valuables came into use."⁹⁸ The Malay decline was marked by the "use of 'substitutes' and of the sacrifice of a part or parts for the whole. Thus we even find the dough model of a human being actually called 'the substitute' (*tukar gauti*), and offered up to the spirits upon the sacrificial tray. In the same sense are the significant directions of a magician, that 'if the spirit craves a human victim, a cock may be substituted;' and the custom of hunters who, when they have killed a deer, leave behind them in the forest small portions of each of the more important members of the deer's anatomy, as representative of the entire carcass. . . . The original valuable offering is compounded for a smaller tribute or a cheaper substitute, dwindling at last to a mere trifling token or symbol."⁹⁹

In India, when the British government had forbidden human sacrifices, "the Khond theologians made the opportune discovery that Tari [the goddess] had recommended, but by no means commanded, that human victims should be brought to her, and that other offerings, apes, monkeys or wild pigs, would suit her almost as well."¹⁰⁰ A Japanese modification of the early funeral sacrifices of attendants to serve in the spirit world, "is to substitute for real men and animals images of stone, or wood or clay, placed by the side of the corpse."¹⁰¹ Marco Polo says that in the city of Sachion, one of the provinces of the Great Khan, after a man died and his body was ready for burial, "when they come to the place where the body is to be buried, they diligently and curiously paint upon paper made of the bark of trees the images of men and women, horses, camels, money and garments. . . . which are burned together with the body; for they say, the dead man shall have so many man-servants and maid-servants, and cattle, and money, in another life, as pictures of them were burned with him, and shall perpetually live in that honor and riches."¹⁰² This is a clear case of substitution. I have previously shown how the original sacrifices were made in this region.

This process of substitution went on in ancient as well as in

⁹⁸ Simcox, *Primitive Civilization*, p. 153.

⁹⁹ Skeat, *Malay Magic*, pp. 72, 73.

¹⁰⁰ Recluse, *Primitive Folk*, p. 329.

¹⁰¹ Tylor, *Primitive Culture*, I, p. 463.

¹⁰² *Voyages of Marco Polo*, chap. XI.

modern times. Thus it is said that the old Etruscan god Mania, "was a fearful personage frequently propitiated with human sacrifices. Macrobius says boys were offered up at her annual festival for a long time, till the heads of onions and poppies were substituted."¹⁰³ Ancient Egyptians of wealth and standing sacrificed their servants at the tomb, so that they might follow their masters and serve them in the spirit world. In later times small wooden figures were placed in the mummy cases, which took the place of the early human sacrifices.¹⁰⁴ In ancient Babylonia a similar change took place, and "in later times, it would appear, the custom of placing food and drink with the dead fell into disuse. We may perhaps find that, as was the case in Egypt, symbolical representatives of food—clay plates with the food modeled in clay—took the place of the old custom." Plutarch gives an instance where a Greek maiden was demanded in sacrifice, and a colt was killed in her stead; and Suidas tells about a Greek father who sacrificed a goat in place of his daughter.¹⁰⁵ So also the story given in the Bible of Abraham preparing to offer Isaac in sacrifice, and then substituting a ram, (Gen. xxii. 1-14) is probably a relic of the time when the Hebrews were substituting animals for the early human sacrifices. As this process of substitution has been world-wide a great many other examples could be given if needed. The general use of substitutes is a stage in the decline of this ceremony.

Many Greeks perceived that sacrifices were gifts to the gods designed to win their favor, and a proverb became current that "presents win the gods as well as kings." With the development of philosophy the incongruity of trying to buy with sacrifices the favor of the spiritual beings who were believed to control the destiny of men, became evident to many minds, and Lucian turned his satire on the custom, saying: "The gods do nothing gratis. The good things they make over to man are wares for which they expect a solid equivalent in return; health is to be purchased for a bull-calf, wealth for four oxen, a kingdom for a hecatomb, and there are things to be had in their market, it seems, for a fowl, for a garland of flowers, and for only a couple of grains of incense too."¹⁰⁶ When men welcome such irony of a custom as this it is clearly losing its hold on their minds.

¹⁰³ *Saturnal*, lib. 2, cap. 7.

¹⁰⁴ Wiedemann, *Religion of the Ancient Egyptians*, pp. 254, 255.

¹⁰⁵ Jastrow, *Religion of Babylonia and Assyria*, p. 600. Harrison, *Prolegomena to the Study of Greek Religion*, p. 72.

¹⁰⁶ Lucian, *De Sacrifice*, c. 2.

As religion developed, the simple primitive customs grew into elaborate rituals. Sacrificial ceremonies became formulated and their minutest details were prescribed, but we are now merely inquiring into the origin and meaning of the ceremonies, and we cannot here attempt to trace the growth of rituals.

Summary.—In primitive times the belief prevailed that death made no change in the needs or desires of men. Hence after death, the same as before, their spirits would require food, clothing, wives, servants, etc.

To satisfy these cravings of the ghosts, food, drink, etc., was in many cases placed near the corpse, so that the spirit could readily get them. After burial these supplies were sometimes placed on or in the grave, or, as in Egypt, placed near the mummified body, in which the spirit was believed to still reside.

Many primitive peoples believed that spirits might enter and dwell in various objects, like idols, animals, trees, etc., and for these the offerings (sacrifices) would be placed near such objects. For those residing in rivers, lakes or the ocean, sacrifices were often cast into these bodies of water, and for those dwelling underground, they were sometimes buried, or inserted through tubes, etc.

Many beliefs have prevailed in regard to the way in which spirits acquired the offerings. In some cases, when liquids evaporated spirits were supposed to have drunk them, for primitive man knew nothing about the laws or causes of evaporation. If an offering shrunk the spirit was supposed to have sucked out what it needed, leaving the balance. In other cases offerings were burnt in order that the spirit might absorb the fumes or vapors. When these went into the air and disappeared the spirits were supposed to have absorbed them. Burning in some instances was believed to send the soul of the object (for in some regions inanimate objects, as well as men, were believed to have souls) to the spirit world, and thus it could be utilized there. In some cases the spirits were believed to absorb merely the essence or soul of the sacrifice, leaving the material substance unaltered.

To supply spirits with wives and attendants, or to send messages to them unnumbered millions of human beings have been murdered in times past. The great number of victims killed on some occasions is astonishing. The slaughter has been appalling. And it went on for ages. But it is to be noticed that while numberless women were killed to serve male ghosts, few men were slain to serve female spirits in the other world. As a survival of early cannibalism human beings were in some cases sacrificed to furnish spirits with human

flesh to eat and blood to drink, but, regarded as a whole, this probably caused the lesser number of deaths. The dominant reason probably was, as stated above, to furnish spirits with wives and attendants.

As the *gods* were believed to possess all the human appetites and passions, offerings were made to them similar in every way to those made to the spirits of the dead, or ancestors.

The early belief in the importance of omens probably grew out of the conviction that the gods would indicate in some way whether a sacrifice was acceptable or not. "That the god is habitually willing to partake of the banquet offered to him is taken for granted; but, if anything has occurred to alienate his favor, he will show it by his conduct at the feast, by certain signs known to experts, that indicate his refusal of the offered gift. Hence the custom of inspecting the *exta* of the victim, watching the behavior of the sacrificial flame, or otherwise seeking an omen which proves that the sacrifice is accepted, and so that the deity may be expected to favor the requests with which the gift is associated."¹⁰⁷

Sacrifices were prompted by various motives. In some instances they were inspired by love, as in the case of the woman, mentioned above, who wanted a servant killed so that her spirit might go to the other world and minister to the wants of the dead child's spirit. In other instances people would seek to supply the wants of the spirits of loved relatives or friends. Here love was the dominating incentive. In other, and probably the majority of cases, fear was the strongest motive, for if the wants of a spirit or god were unsupplied it would wreak vengeance on the living by sending some dire calamity or misfortune. The many disasters of life were commonly attributed to the anger of the spirits and gods, thus visited on men. This, in early ages, appeared to be a sufficient cause to account for all the disasters of life. To avert this wrath of the spirits it was believed that sacrifices must be regularly kept up, or immediately supplied if they had been neglected.¹⁰⁸

In cases of difficulty and distress men sometimes besought the aid of a spirit or god, and made a pledge or vow that in case help was granted a sacrifice would be offered in return for the aid received. Thus Jephthah made a vow to give a burnt-offering, which led to the sacrifice of his daughter (Judges xi. 30, 31). Vows to the gods were common in Central American states, and often a sick

¹⁰⁷ *Encyclopædia Britannica*, art. "Sacrifice," p. 134.

¹⁰⁸ For a typical example: in ancient Peru whenever a man became sick the wizard told him "to give food to the dead, placing it on their tombs. . . . for the wizard gives the patient to understand that he is visited with this sickness because the dead are starving." Markham, *Incas*, Vol. 2, pp. 63, 64.

man "would even vow to sacrifice a son or daughter in the event of his recovery. . . . and it is said, moreover, that they were inexorable as Jephthah in the performance of such vows, for it was held to be a great sin to be false to a bargain with the gods."^{108a} Vows to win the favor and secure the help of the gods were quite common in ancient times, in various parts of the world.

As the race developed, and the primitive beliefs were modified, substitutions gradually took place. Animals were in some cases sacrificed in place of human beings. Images of wax, dough, paper or other materials were substituted for various objects previously sacrificed. This process of substitution has been world-wide, and it marks a stage in the decline of the ceremony.

The value of the sacrifice would also be considered. Men believed that the more valuable it was the more the god would be pleased. Hence a very valuable gift, which greatly delighted the god, would be more likely to induce him to grant the suppliant's requests or prayers. Thus in dire distress one might even kill his own son in order that his spirit might become the servant or slave of the god (see 2 Kings iii. 26, 27). When rituals developed and sacrifices became stereotyped into official forms, which all were required to observe, some regard was necessarily paid to the financial condition of the people. Thus a poor man might be required to offer a dove, and a richer man a cow, and various gradations would be made. The belief would also arise that only the choicest fruits, animals, etc., (those "without blemish") should be offered to the gods. Clearly no spirit or god would be pleased with an inferior gift.

The idea of the value of self-denial would naturally develop. Men would sacrifice things they loved, or highly valued, or even greatly needed, as this would be likely to please the gods and win their good will. The superior value of sacrifices involving much self-denial would, therefore, be highly esteemed.

As the ideas of men developed and they formed less gross and more ethereal conceptions of spirits and gods, and these beings were imagined as freed from the wants of the flesh, so that they no longer needed food, clothes, wives, slaves, etc., such sacrifices would no longer be offered to them, and the old sacrificial ceremonies would gradually fall into disuse, as we can now see took place in various parts of the world.

All of the evidence thus far gathered regarding religious sacrifices seems to indicate that primitive men conjectured spirits and

^{108a} Bancroft, *Native Races*, II, p. 796.

gods to exist having human desires and needs, and these wants they tried to supply by sacrifices. They imagined these beings to live in the spirit world much as men did on earth. This belief has been world-wide, and it seems to have been a natural deduction by the savage or primitive mind from phenomena which were misunderstood. But like other mistakes of ignorant men—for ignorance is now, and has always been, the greatest calamity of the race—it imposed a heavy burden on society, as, entertained for ages, the belief caused the murder of uncounted millions of human beings and the destruction of vast amounts of useful commodities, often direly needed by the living, as sacrifices to the spirits.¹⁰⁹ No evidence seems to have yet been discovered, however, that, regarding these subjects, any voice has ever come from the world beyond the grave, telling about the condition of spirits there, and their needs. Beliefs regarding the character of spirits, and their desires, and the world they were supposed to inhabit, have changed as conditions on earth have changed, and as intelligence has increased, and not because of any communications received from the realm of the dead. From there, unbroken silence appears to have reigned on this question. This seems to be the inevitable deduction from the accumulated mass of facts now available regarding religious sacrifices, and the changes of belief regarding them, typical examples of which have been given above.

For, if it were possible for the dead to communicate with the living, why was there not a chorus of voices from the spirit world notifying the living that spirits did not need wives and slaves, and urging men to stop the appalling and horrible sacrificial slaughter of human victims, which went on for many thousands of years with all its loss of life, its shrieks of anguish¹¹⁰ and its rivers of blood, to supply wholly imaginary wants of spirits? There seems to be no indication that any such voice was ever heard. Surely no

¹⁰⁹ It was the custom of some Indians after a death to "burn with the deceased all his effects, and even those of his nearest relatives" as sacrifices to provide for his spirit; and as a result "it not unfrequently happens that a family is reduced to absolute starvation." For other examples of much suffering caused by this custom see Spencer, *Sociology*, I, Secs. 103, 140.

¹¹⁰ In ancient America "the chief idol of the Itzas was Hubo, who was represented by a hollow metal figure with an opening between the shoulders through which human beings were passed, charged to implore the favor of the gods. A fire was then lighted beneath the figure, and while the victims were roasted alive, their friends joined in a dance, drowning the cries of the victims with shouts and rattling of drums." Bancroft, *Native Races*, III, 482, 483. A somewhat similar ceremony was practised by the Carthaginians, and, according to a rabbinical tradition, by the Hebrews in their worship of Moloch in the valley of Hinnom, at Jerusalem.—*Chamber's Encyclopædia*, art. "Moloch."

one can contemplate the awful havoc wrought in the world by this mistaken belief without feeling that such a message was sadly needed—if it could be sent.

But while no voice seems to have come from beyond the grave, the increasing intelligence of the race, and the growing spirit of humanity resulting from the supplanting of the militant by the industrial type of civilization, has tended to abolish sacrifices and other relics of the ignorance of our savage ancestors, and men are coming more and more to feel that all human life is precious, and that it should not be sacrificed to supply the imaginary desires of spirits, or to satisfy the greed of the living. Fear of the spirits, which so darkened the lives of men and caused so many sacrifices for ages, is dying, and the most intelligent are seeing that the ignorant beliefs which deluded primitive men, must yield to the light of scientific truth. Science wins its victories by appeals to the reason and not by wielding the sword. Its chief sacrifices are the errors it kills, and its altars were never marked by rivers of human blood and wails of anguish. Its spirit does not feed on blood, and it seeks to save human life and not needlessly sacrifice it. As the old errors are outgrown and intelligence develops, science offers visions of a brilliant future awaiting the race, based on a knowledge of nature's laws and the command of nature's forces—for the golden age lies in the future, and not in the early, dark ages of primitive ignorance.

In this brief article we have endeavored to trace the origin, development and decline of a custom and belief—for the custom was based on the belief.

NOTES ON COUNT TOLSTOY.

BY THEODORE STANTON.

DURING the past ten years I have been a frequent caller and dinner guest at the home of Count Tolstoy's official French translators—Monsieur and Madame J. W. Bienstock,—where I have met several of the great writer's closest friends and, on one occasion, his son. It has been my habit, on returning home, to make notes on some of the anecdotes and biographical facts concerning Tolstoy which I learned there. The following notes are selected from this budget.

* * *

Tolstoy's son once told me that this was the way his father generally spent his time. He would take his first breakfast after the family, when he had finished his early morning occupations. His wife saw that the frugal meal was ready, but if her husband did not come into the dining-room at the customary hour and the food had got cold, a fresh breakfast was prepared. The second breakfast, which was also taken alone, would occur between 2 and 2.30, and consisted, as a rule, of two eggs, vegetables and milk. After the meal, a walk of two hours or more. Sometimes, Count Tolstoy would walk six miles. It was his favorite relaxation. On returning from his promenade, Tolstoy would lie down for an hour's rest. The family dinner, at which Tolstoy was present, was at six o'clock. Then Tolstoy would return to his writing. Every day when he was in the country, he would receive a dozen or more young peasants of both sexes to whom he would teach history, geography and especially sacred history. At the close of each school season, he would read to the children short stories based on the Bible, and then would ask them for their criticisms. He put considerable value on these infantile comments, and more than one modification in the text of these admirable little narrations was due to an observation or a

question of these simple Russian boys and girls. After this hour of teaching, Tolstoy would come into the drawing-room to listen to music or play chess, which game he liked very much. Tea would be served at ten o'clock and at eleven Tolstoy would invariably go to bed.

* * *

Tolstoy visited the Optina Poustine Hospitium for the first time on July 22, 1877, accompanied by the well-known philosopher Strakov. He was there again in 1881. They came on foot from Yasnaya Poliana. It was dark when the two strangers arrived and the bell was just ringing for supper. Because of their peasant garb, they were not admitted to the refectory of the monks, but were left with the mendicants. The next morning, Tolstoy went into the bookshop managed by the monks; and while there a peasant woman came in to buy a cheap copy of the Bible. But this edition was sold out. Thereupon, Tolstoy paid for a dearer volume, handed it to the delighted woman, and said:

“Take this, read it and teach it to your son, for the gospel is a consolation throughout our life.”

Then the monks learned that Tolstoy had been among them!

* * *

Among Tolstoy's disciples have always been a number of physicians. One of his younger medical followers I once met in Paris, and he had much to say of his older confrère, Dr. Petrovitch Makovitzky, who was Tolstoy's only companion in his recent final flight. It appears that Dr. Makovitzky, who is now over fifty, visited Yasnaya Poliana several times before he became, in 1904, the private physician of the whole Tolstoy family, took up residence with them and abandoned a large practice in Slavonia. Nor were his professional cares confined to the Tolstoy family. He doctored free all the peasants of the region, sometimes as many as sixty persons calling on him in one day. Tolstoy had the warmest affection for him. “If nature made saints,” he said of him on one occasion, “Dr. Makovitzky would certainly be among the elect.” During recent years Tolstoy and Makovitzky became so attached to one another that their lives were almost as one. In fact, during the last illness of the philosopher, this exceedingly able physician was so overpowered with grief and despair that his presence at the bed-side was useless from a scientific point of view. But now that his dear friend and master is gone for ever, though his sadness is terrible, he has, I understand, got command of himself and begins once more to take up the duties of the every-day world, “just as our dear Tolstoy

would wish," he remarked to a friend who has just reached Paris from Russia.

* * *

Several times during his long life, Tolstoy has suddenly disappeared from his family circle. Thus, while still very young, he went secretly to the Caucasus and then published "Infancy" and "Adolescence," without his name appearing on the title-page. For a long time both friends and relatives did not know that he was the author of those volumes.

He did the same thing before the publication of "What I Believe," secreting himself with a friend in the Optina Poustine Hospitium.

In the eighties, he wished to leave for America with the Doukhobors¹ and live with them according to the simple precepts of the Evangel. But his family got wind of his intentions and persuaded him to abandon his project, though not without great difficulty.

But during the last few weeks, his intimate friends knew that he was firmly determined to turn his back on the world and live "in *tête-à-tête* with his God," as he said.

* * *

When Tolstoy suddenly left his home just before his death, it was generally said that the determining reasons were chiefly financial. His best informed friend in Paris gives me the following reliable facts on this subject, prefacing his information with the remark that several of the things said on this head by the newspapers during the past fortnight have been inexact.

"It is well known," says this friend, "that when the Nobel Peace Prize was unanimously offered him by the Norwegian Committee, he refused it, saying that to his mind the only persons worthy of it were the Doukhobors. The question has well been asked why Tolstoy did not accept these forty thousand dollars and then turn the same over to his friends. But if he had done so, he would not have been Count Tolstoy.

"This refusal of the Peace Prize was not approved by his wife and children. This has been asserted and denied. But it is quite true. Imagine then the vexation in the family circle when he declined last October another round forty thousand dollars, coming from Sweden this time,—the Nobel Prize for Literature. But the

¹The Doukhobors are a religious sect of peasants who left Russia in 1900 because their refusal to serve in the army, on the ground that taking life is a sin, subjected them to persecution. They formed a colony in Manitoba. Tolstoy was their ideal, and they keep as one of their most precious documents a letter he wrote them in commendation of their way of living.—ED.

last straw on the camel's back—the "straw" in this instance is money and the "back" may be either that of Tolstoy or his family, according to the point of view—was the recent refusal by the former of a million rubles, over \$750,000, offered by the leading publisher of Russia, Marx, for the copyright of his complete works. It is evident, therefore, that considerations of 'filthy lucre'² played a large part in Tolstoy's last fatal departure from home ending in his premature death; for premature it was, as he was never in better health than this autumn, and he should have lived several years yet."

* * *

A person in a position to know gives me these facts concerning the financial condition of the Tolstoy family. They own a large private house at Moscow and an extensive estate named Yasnaya Poliana. In addition, the family owns the copyright on all Tolstoy's writings prior to 1884. But everything published since that date is unprotected. It should be explained, however, to the honor of Tolstoy, that long before he died, the sons were given their share in the paternal property and that his daughters, with the exception of the youngest, Alexandra, the father's favorite, are married and provided for.

* * *

It is at Yasnaya Poliana that Tolstoy preferred to receive the many visitors from all parts of the world who wished to see him. Here it was that he met Mr. Bryan, though Andrew D. White, when he was American Minister to Russia, seems to have made his acquaintance at Tolstoy's city residence. Tolstoy, like all famous men, was sometimes bored by senseless intruders. Thus, among the callers one day were three elegantly dressed gentlemen who spoke admirably well English, French and German. They informed the servant that they were ardent admirers of his master and they wished to see him on an important subject. Countess Tolstoy was informed of the presence of the trio and as her rôle was always to protect her husband as far as possible from strangers, she endeavored to learn what was the object of their coming. But this was impossible and in the end they were admitted to Tolstoy's presence, when he quickly learned that they came in the name of the manufacturer of a well-

² It is well known that Tolstoy hated the very thought of money. He looked upon money as the root of all evil and in consequence of his views which he applied to practical life he would have died a penniless beggar had not his wife in due time taken charge of the business end of his affairs. The countess is a practical woman who came to the rescue of her husband when bankruptcy was staring him in the face, and we can not blame her for protesting against the application of the count's unpractical philosophy. See *The Open Court*, XVI, 396, "A Nearer View of Count Tolstoy," by Elizabeth E. Evans.—Ed.

known tooth-wash, to offer him \$20,000, for the right to put his portrait on each bottle!

* * *

All of Tolstoy's manuscripts belong to his devoted and faithful friend Vladimir Tchertkoff and are kept at Christchurch, in Hampshire, England. To protect them against theft or fire, M. Tchertkoff has in his cellars safes of the newest models. Besides himself, there are only two persons and the Bank of England who know the combination of these safes.

* * *

A friend of Henry Bataille, the French dramatist, told me yesterday an anecdote of Tolstoy which will illustrate his latter-day detestation of ownership in literary creations. When Bataille had the idea of drawing a play from "Resurrection," he wrote Tolstoy proposing that they divide the profits. But of course Tolstoy refused and added: "If I had seen a play in my story it is probable that I would have presented it in the form of a drama rather than in that of a novel." A similar reply was sent to the adapter of "Anna Karenina."

* * *

These notes may well close with these reflections by Tolstoy on death, which M. Bienstock hands me and which I am given to understand have not been published heretofore.

"To say that the feeling which takes possession of one at the approach of death resembles that which we experience when we cease from work, would be like saying that the prodigal son, when he returns home, is happy because he is at the end of his journey. Though of course something of this kind is felt, it is trivial in amount and inferior in quality and cannot over-shadow that deep sentiment which stirs the very depths of the soul when the end of life is at hand.

"Furthermore, we have all had this feeling of fatigue and this longing for death. I have known it several times during my existence; not when I have thrown off the passions of the hour, but, on the contrary, when I was subject to them though not satisfied by them. But it was not very strong at this moment.

"When you are not well; when you have toothache or stomachache; when the pains of rheumatism are shooting through the body,—you do not care for life and you often say to yourself, Wouldn't it be well to fall asleep, to fall asleep forever?

"But when you really stand on the border of the tomb, life lights up with such a flame, that the absurd desire of departing to the only eternal and indestructible realm never enters one's head!"

MISCELLANEOUS.

A BOWL FROM NIPPUR.

BY ALAN S. HAWKESWORTH.

Dr. Myhrman, Ph. D. of Upsala, Sweden, contributes to the *Hilprecht Anniversary Volume* the text and translation of "An Aramaic Incantation Text," illustrated by two full-page photogravure reproductions of the baked clay bowl from Nippur, inside of which the said incantation is inscribed. It is written in a rabbinical Hebrew script, and in a dialect closely akin to that of the present or "Babylonian" Talmud, magical bowls and Talmud, indeed, being common products of the same locality, surroundings, age, and men. The bowl under discussion, moreover, as Dr. Myhrman points out, derives an additional value from the unique fact that among the medley of divine and angelic powers invoked, the gnostic Abraxas is included, a divine name that hitherto, strangely enough, has not been found upon these relics of superstition and black magic.

NOTES.

The American method of voting is so complicated that it means a citizenship which is for experts only. As a result we have a government by politicians. In English cities, the council elects the mayor and all other officials. The people simply make one choice on election day, and know what they are doing. Their scrutiny is concentrated and the representatives whom they elect are responsible for the rest. As a result graft and other political nuisances are practically unknown in the city administration of England. The Short Ballot Organization, 383 Fourth Ave., New York, advocates a reform which would adopt the English method.

We have just learned indirectly through personal correspondence of the very recent death of the Baroness von Zedtwitz who, it will be remembered, was one of the Caldwell sisters who founded and endowed the Catholic University at Washington. As lately as in the December number of *The Open Court*, the editor reviewed her book, *The Double Doctrine of the Church of Rome*, in a brief article. The news of her death will be received with regret by the many who know of her conscientious attitude toward life and her seriousness of purpose.

God the Beautiful, by Emil P. Berg, has been translated into German by E. Forsyth under the title *Gott als Inbegriff des Schönen* (Lugano: Coenobium, 1910). This series of letters has been compared to Max Müller's *Deutsche Liebe* in its sentimental tenor, and portrays a pantheistic God-conception.

Books by Professor Ernst Mach

"Science is the economy of thought." (*Science of Mechanics*, p. 481.)

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A few copies of ZARATHUSHTRA, PHILO, THE ACHÆMENIDS AND ISRAEL, pp. 460+xxx, (Chicago: Open Court Pub. Co., 1906, price \$4.00 net), are still to be had of Kegan Paul, Trench, Trübner & Co. and of the leading booksellers in Oxford at 12s. 6d. "He treats his subject thoroughly and exhaustively. . . deep and patient studies." J. J. Modi, Head Priest of the Parsi Colaba, Bombay, in the *Parsi* of Bombay, 1900.—"A wealth of learning and thought." *Nation*, N. Y., Aug. 30, 1906.

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"Alles was für die Erklärung der Gāthas nothwendig ist." (So also Dr. West in J.R.A.S.)—"Immer wird es die Grundlage bilden, auf der sich jede weitere Forschung aufbauen muss. . . einen hervorragenden Dienst." *Zeitschrift der deutschen M. G.*, 1896 (the late) R. Pischel (first Sanskritist of Germany).—A new edition has been inquired for, and a renewed Government subvention is expected from an antiquated engagement.

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By ARTHUR COLLIER

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PRESS COMMENTS

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January, 1910.

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