

# cience News-Letter

The Weekly Summary of Current Science

A Science Service Publication

Edited by Watson Davis Vol. XI No. 305



10¢ a copy \$5 a year February 12, 1927

ETHNOLOGY

### Doll Family Traced to Stone Age "Adam"

By EMILY C. DAVIS

The "Adam" of the doll tribe was a woman, a fat, round little image of a woman carved out industriously by a cave man artist, some 30,000 years ago.

This announcement has just been made, in more technical language, before a meeting of anthropologists, by Dr. Walter Hough, noted anthropologist of the U. S. National Museum. It means that the ancestry of the smiling unbreakable doll of the modern toy shop has now been carried back generations beyond the oldest dolls loved by Greek and Egyptian children, back into prehistoric times. It means that the evolution of the doll has been traced to times and places before it had become a harmless toy for little girls.

Dr. Hough set out not long ago to write a short history of dolls, because Dr. S. P. Langley, former director of the Smithsonian Institution, had once told another scientist that such an account ought to be written.

"I always wondered why this other man never did follow Dr. Langley's suggestion," said Dr. Hough in a recent interview. "But when I got into the subject only a little way I found out. The history of dolls is most complex. A quest for light on the use and meaning of the doll quickly leads back and away from childish toys into the dark world of cult and religion where dolls were idols; and back again to images and charms used as tools by sorcerers, to fetishes, household gods, and objects of witchcraft."

In these lowest levels of human culture, Dr. Hough found only remote ancestors of the doll family, as different from modern dolls as prehistoric men were different from modern Americans.

Children in these very primitive tribes, both past and present, would



DR. HOUGH studies magic images made by American Indians before the days of Columbus.

not normally play with dolls at all, Dr. Hough says. And with this significant statement, he sweeps away the pleasing picture of the cave man's child crooning over a long rock tied up in a bit of reindeer skin.

Now, we think of dolls and little girls together as naturally as we associate barking with a dog. It would be hard for most of us to think of any outpost of the world where the children do not lavish affection on tov babies, however crude. Dr. Hough himself savs that it is rather natural to infer that all races would have a feeling leading them to give dolls to their babies. It seems reasonable that children of all times and races would demand them. But the real evidence of the matter as he pieces it together, indicates that a deeply rooted feeling of quite a different sort causes primitive men to make images and to restrict use of these images rigidly.

This is the feeling of fear associated with supernatural things. Almost as soon as men began to reason and speak, Dr. Hough explained, they

began to try to control nature, more or less as they would force another human being to do their will. The most powerful and resourceful men of the group claimed to have special influence with nature. They knew the best ways of making rainfall and of controlling disease and of finding game in the forest. They became magicians and medicine men, the oldest professional class in the history of human society.

Exactly how far back men began to attempt to manage nature is not known, but the oldest tangible evidences are the first carved human images made by man. These are the small female figures which date back to the Aurignacian period of the Old Stone Age, and which are known as Stone Age Venuses. A large number of these little stone and ivory figurines have been found at places where prehistoric cave dwellers lived in different parts of Europe. The oldest of them all, perhaps, is a headless torso of a female figure found at Brassempouy, in France.

Images came to be used quite naturally in the making of magic," Dr. Hough continued. "Early man's first idea of supernatural things seems to have been that life extended into the world at certain points. Particular trees, stones, and other objects were saturated, so to speak, with life. The clever medicine men caught this power or some spirit that could do marvelous things, and transferred it to a charm or fetish. And of all the objects most suitable for holding magic power obviously a human figure of some sort was the best.

"The mystery of death, which must have puzzled the earliest thinkers, was directly conducive to the development of human images. Man very early saw that at death something traveled from the chief center of life, the human body, and went to some other

(Just turn the page)

### 

#### Dolls

(Continued from page 93)

place or status. The most satisfactory explanation contrived was that the ghost or spirit went to some particular object or place. So there arose a multitude of rites concerning the departure of the spirit from the body and rites concerning the powers and influences and existence of the ghost. Little human figures, made and controlled by the medicine man, held the life power released by the dead tribesmen, and used it for good or evil as the magician directed.

"It can now be seen why dolls in such communities are for powerful men and not for children. An object set apart by some incantation and made to contain more fully the unseen power of the essence of nature is dangerous, not to be seen or touched except by the initiated. When these ideas are current among lower races, no one would allow a child to possess any image of human or animal form, as such things are forbidden or tabooed under heavy penalty. The children must amuse themselves in other ways."

There are very many examples, Dr. Hough explained, which show the impressive and dangerous properties of images as they are used by primitive tribes, past and present.

In West African tribes, where diseases are brought by spirits, a doctor's task is to transfer the disease carrying spirit away from the patient to some object or other person. One approved way of doing this is to lure the spirit of the disease into a model of the patient made of clay. The clay image is then left by a road where people will pass, and disease and spirit go into the body of the first unfortunate person who happens to come along.

Islanders of the East Indies also use images to deceive a demon that has brought a disease. The method

(Continued on page 97)

#### News-Letter Features

Born over four years ago of the demand and interest of those individuals who had caught a glimpse of *Science Service's* news reports to newspapers, the SCIENCE NEWS-LETTER has since proved interesting to laymen, scientists, students, teachers and children.

Into the pages of the News-Letter are fed the cream of *Science Service's* output directed at the newspapers of the world. To this is added material especially prepared.

Turn the pages and note:

It is a *separable* magazine. You can clip or tear out any article without losing or damaging another article on the other side.

Each article is automatically indexed by the key word printed above its heading. Articles can thus be filed easily into any system of classification.

Each article is automatically *dated* by its last line.

The current *news* of science, reported for Science Service by its own staff and correspondents throughout the world is presented and commented upon in each issue.

Books are *reviewed in brief* as they are received from the publishers.

The classics of science and striking passages from current books, addresses and periodicals are carefully selected and published.

Important *anniversaries* of science are appropriately noted week by week in a special department.

Regular articles tell of the happenings in the *skies* and in the great *outdoors*.

Photographs aid in the telling of the week's science.

Great care is taken to keep its editorial content not only *interesting* but accurate as to fact and implication.

The Science News-Letter is copyrighted and is sold with the understanding that it is for personal, school, club or library use only. Publication of any other is strictly prohibited.



SCIENCE NEWS-LETTER, The Weekly Summary of Current Science. Published by Science Service, Inc., the Institution for the Popularization of Science or-

ganized under the auspices of the National Academy of Sciences, the National Research Council and the American Association for the Advancement of Science.

Publication Office, 1918 Harford Ave., Baltimore, Md. Editorial and Executive Office, 21st and B Sts., N. W., Washington, D. C. Address all communications to Washington, D. C.

Entered as second class matter October 1, 1926, at the postoffice at Baltimore, Md., under the act of March 3, 1879. Established in mimeograph form March 13, 1922.

Subscription rate—\$5.00 a year postpaid. 10 cents a copy. Ten or more copies to same address, 6 cents a copy. Special reduced subscription rates are available to members of the American Association for the Advancement of Science.

Advertising rates furnished on application. Copyright, 1927, by Science Service, Inc. Republication of any portion of the SCIENCE NEWSLETTER is strictly prohibited since it is distributed for personal, school, club or library use only. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicate services issued by Science Service, details and samples of which will be gladly sent on request.

Staff of Science Service—Director, Edwin E. Slosson; Managing Editor, Watson Davis; Staff Writers, Frank Thone, James Stokley, Emily C. Davis, Marjorie MacDill, Sales and Advertising Manager, Hallie Jenkins.

Board of Trustees of Science Service-Representing the American Association for the Advancement of Science, J. McKeen Cattell, Vice-President and Chairman of the Executive Committee, Editor, Science, Garrison, N. Y.; D. T. MacDougal, Director, Desert Laboratory, Tucson, Ariz.; M. I. Pupin, Professor of Electromechanics, Columbia University, New York City. Representing the National Academy of Sciences, John C. Merriam, President, Carnegie Institution of Washington; R. A. Millikan, Director, Norman Bridge Laboratory of Physics, California Institute of Technology, Pasadena, Calif.; A. A. Noyes, Director, Gates Chemical Laboratory, California Institute of Technology, Pasadena, Calif. Representing National Research Council, Vernon Kellogg, Treasurer, Permanent Secretary, National Research Council, Washington, D. C.; C. G. Abbot, Director, Astro-Physical Observatory, Smithsonian Institution, Washington, D. C.; Victor C. Vaughan, Professor Emeritus of Hygiene, University of Michigan. Representing Journalistic Profession, John H. Finley, Associate Editor, New York Times; Frank R. Kent, Baltimore Sun; Mark Sullivan, Writer, Washington, D. C. Rep-resenting E. W. Scripps Estate, W. E. Ritter, President, University of California; Robert P. Scripps, Scripps-Howard Newspapers, West Chester, Ohio, Thomas L. Sidlo, Cleveland, Ohio.

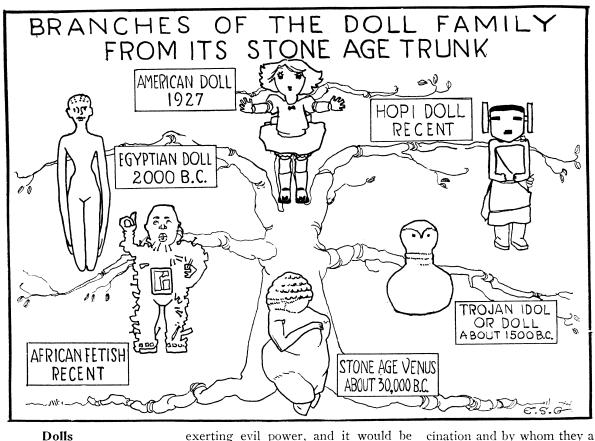
The cave

man's chil-

dren never played with

dolls at all.

Fetishes, charms, and idols are direct an= cestors of modern dolls.



(Continued from page 94)

here is to place a figure representing the sick person in a small boat. The boat is heavily loaded with supplies for a long voyage, and is set adrift. The spirits of evil will thus believe that their victim is escaping them. They will hasten to board the boat, and will be swept away on the current, and not return.

Basute women of Africa carry a doll-like image about until they become mothers. Sauk Indians of Iowa would at one time pay a horse for the use of an image which had power to foretell the sex of an unborn child. Tribes of the Bloomfield River region, in Australia, believe that a person can be doomed by making a wooden effigy of him and burying it in the ground.

Dr. Hough tells how the medicine man of the Zuni Indians would sprinkle an image with meal. He would smoke over it, and by other rites fill it with magic power. Then the image would be asked to assist in the hunt for deer. The Indians would ask where the deer could be found, and if the image was obliging it would send them straight on the track of the deer. When the hunters had killed the game they would reward the image by plunging it into the blood, so that it might feed on the venison, as the people would do. But if the hunt failed, the image was said to be

exerting evil power, and it would be lashed and treated roughly.

And so the stories go on indefinitely, showing the importance of sorcery and the fear and awe surrounding objects used in working charms.

Dr. Hough's next step in doll lineage takes us among tribes of higher culture, with broader imagination. Some began to look on images, not as spirit-inhabited fetishes under the control of powerful medicine men, but as beings with higher attributes, more powerful than their creators, who must now supplicate and appease them.

"At some stage," said Dr. Hough, "the images began to be thought of as containing or representing the spirit of a man's ancestors. In the course of time, in such a process, the ancestors become deities. The idols in which the gods reside are naturally objects of great veneration. Larger and even gigantic gods are created and given correspondingly great powers and attributes. And for the purpose of personal worship, miniatures of these, charged with sanctity, are made and deposited in shrines.

"When the gods fall, as a religion decays or as a people is conquered by another, the cherished idols of former times are shorn of their power. The miniatures of the gods have now come down to the level of children, for whom they present the greatest fascination and by whom they are granted the least reverence."

On this branch of Dr. Hough's doll family tree might be hung old Roman dolls found in Egypt. One such figure has the head of a Roman god with rag clothes—an abandoned deity dressed as a doll for a child.

"In the slow progress of man, the growth of spiritual ideas has gradually drawn the world away from beliefs in the power of material things and thus idols have fallen into low estate," the ethnologist told the scientists when he reported his theory. "Among civilized peoples dolls awake no thoughts of their former import, but before this stage was reached there were many relapses. The Mosaic commandment against idolatry was a necessary prohibition against the making and worshipping of graven images. The Mohammedan injunction against the representation of living forms implied a similar purpose, and had a profound effect on the art of Islam.

"It may be asserted that the free use of dolls is evidence of the submergence of superstition and an advance to higher culture with the consequent broadening of religious ideas. It follows, therefore, that dolls as we know them are not of great antiquity, and the researches of archæology are illuminating on this point.

"The extensive use of dolls by the (Just turn the page)

## Have You A Few Friends

who do not know the Science News-Letter?

As a subscriber to the most unusual scientific magazine of the hour you are, we hope, enthusiastic. We know you appreciate obtaining scientific news months before it can possibly be printed in book form.

The tastes of your friends harmonize with your own—send us the names of several men and women who will be interested in obtaining scientific NEWS.

We shall be glad to send, free to your intimates, a copy of the weekly Science News-Letter.

(Kindly state	wl	neth	er you	wisl	your
name mentioned copies.)	in	the	sending	of	sample

· · · · · · · · · · · · · · · · · · ·	

#### SCIENCE SERVICE

21st and B Sts. Washington, D. C.

#### **Dolls**

(Continued from page 96)

Eskimo may seem to conflict with the assertion that dolls are toys of progress," Dr. Hough says, "yet more knowledge may show that the Eskimo child's doll is a spirit-inhabited charm, as Stefansson has shown that the Eskimo child itself is governed by a ghost ruler."

Dr. Hough's theory of the doll's evolution is supported by much evidence, and many minor gaps in the lineage of the doll which remain may be filled in as archæologists unearth new relics of the past. Ancient dolls in museums are still rare objects.

The oldest dolls which were presumably played with by children are those from Egyptian tombs. No dolls which can be recognized certainly as such have been recovered from Troy or from Crete, where civilization of a high order flourished. The Trojans had images, but from the surviving samples they were more like idols than dolls.

By the fifth century B. C. in Athens, in the time of Pericles, dolls were well established as playthings, and a Greek girl might have a jointed doll of considerable realism. One of these little terra cotta dolls, about five inches high, reposes in the museum of the University of Pennsylvania. It is a lady doll with hair piled high in a Greek chignon. The set smile which is now inbred as a fixed characteristic of the doll family is plainly seen, after 2,000 years.

Highly civilized dolls from the Roman Empire have also been found by archæologists. Some years ago, Baring Gould in his book of Strange Survivals wrote:

"A white marble sarcophagus occupies the centre of one of the rooms in the basement of the Capitoline Museum in Rome. The sarcophagus contains the bones and dust of a little girl, and by the side is the child's wooden doll, precisely like the dolls made and sold today. In the catacombs of St. Agnes, one end of a passage is given up to the objects found in the tombs of the early Christians, and among these are some very similar dolls taken out of the graves of the Christian children."

Even as a child's toy, the doll is still far from being as simple as it often looks. The child, corresponding more or less closely to primitive man in his own personal evolution, gives to the dolls psychic qualities, though in a harmless form with no trace of the primitive fears and superstitions. The dolls of Egypt and Rome, the modern doll of the Indian child, and the doll of the American girl all have strange attributes inherited from the old spirit image.

The dolls of an Egyptian child which were buried with her were not put in the grave so much from sentiment as because the image was thought to guard the child. Dolls of Pueblo tribes in this country commonly represent mythological characters and so have some religious significance, even though they are given to the children as prized possessions and occasionally the children are allowed to play with them as dolls.

And even where dolls are merely looked upon by adults as toys, no different from steam engines and picture blocks, their attraction for children is that they have life. Dolls can be dressed, fed, loved, and taught, and the dolls hear and respond. The doll is a sign of progress, as Dr. Hough shows, when adults outgrow it, and when they give it to the children, not as a dangerous fetish, but as a thing to be played with and loved.

If figures of the doll population of a country are an index of this progress, the United States is ad-Toy manufacturers estivancing. mate that the dolls of this country number 200,000,000, or almost twice the human population. The average doll family of eight individuals makes most American families look small. The doll birth rate is about 20,-000,000 a year, or about twelve times the human rate. And what is perhaps as significant as anything in the psychology of children's love for dolls, the average doll life has trebled in the past twenty years.

Science News-Letter, February 12, 1927

Until men found out how to build a true arch, about 2500 B. C., the longest bridge span was about 40

The Aztecs believed in special gods who brought diseases and in other gods who knew healing secrets.

The Columbia River region may have been the most thickly settled Indian center in this country in early times.

An insect's eyes are always in its head, but its hearing apparatus may be in its legs or other parts of the body.