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Akiyama, Aisaburo. Shinto and its Architecture. Tokyo: Tokyo News Service Ltd., 1955, Figs., 1, 2, 3, 4.

Harbin, Robert. Origami, The Art of Paper Folding. New York: Funk & Wagnalls Co. Ltd., 1969, Figs. 29, 30, 31, 32, 81.

Origami 2. Cornet Books. London: Hodder & Stoughton, 1972, Fig. 82.

Origami 3. Cornet Books. London: Hodder & Stoughton, 1972, Fig. 80.

Paper Magic. London: John Maxfield Ltd., 1956, Figs. 21, 22, 24, 78.

Origami Illustrated Teach Yourself. Leicester: Brockhompton Press Ltd., 1975, Fig. 83.

Honda, Isao. The World of Origami. Tokyo: Japan Publications Trading Co., 1965. Figs. 5, 6, 7, 20, 23, 25, 26, 27, 28, 37, 39, 40, 42, 44, 46, 48, 49, 50, 57, 59, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76.

Randlett, Samuel. The Art of Origami. New York: E.P. Dutton & Co. Inc., 1961, Figs. 9, 13, 14, 15, 16, 17, 18, 19, 41, 45, 47, 77.

Uchiyama, Kosho. Origami. Tokyo: Kokudo Sha, 1962, Fig. 43.

Yoshizawa, Akira. Origami Dokuhon I. Tokyo: Kamakura Shobo, 1967, Figs. 33, 34, 35, 36, 37, 38, 53, 54, 55, 56, 60, 61, 62, 63.

PREFACE

Origami is the Japanese word which means paper folding, and it belongs to Japan's ancient cultural heritage.

For many generations, Japanese mothers have been teaching the traditional methods of Origami to their children. However, most children lose their interest in Origami as they grow up.

I was no exception until one day almost 15 years ago I was struck by 'a sudden confrontation with my self', when I was playing with a piece of paper to kill time. It was because of the beauty of its shape and form that I began to fold Origami again. But the more I learned about Origami, the more I sensed that there was something there more than mere 'shape and form'. That was the beginning of this study on Origami. Strange to say, the subject of traditional Origami has never been taken up in any study of folklore or Japanese craft and to date no comprehensive account of the origin and historical development of Origami exists.

Although it would require many more facts than are now available to trace the origin of Origami, the purpose of this study is to first inquire into the historical aspects of Origami to find out its origin and development; and secondly to propose a new concept of Origami as art.

Since "Art communicates and establishes on its own sensory and perceptual of form, and it is a direct experience. . . ,"[1] in order to

[1]Irving Kaufman, "Limitation of Research in Teaching Art", Art Education, December, 1967, 20:9, p. 3.

understand Origami as a form of art, then, this paper explores the sensual and perceptual dimensions of Origami through investigation of the available models of Origami.

All of the Origami figures shown in the illustrations were made and photographed by myself not only for the analytical investigation but also for my personal involvement; both were necessary in order to appreciate the larger dimensions of Origami as discussed in this paper. Only through such an appreciation can the evolution of the traditional Origami figures be understood and the art form of Origami evolve.

In conclusion, I should like to acknowledge the advice given me in the preparation of this paper by Dr. Gary Walters and Ruth Sullivan and the patience and encouragement given me by my wife, Fusako, who sustained me through the bad moments and my daughter Mao who believed in me.

CHAPTER 1

EARLY PAPER FOLDING

The history of paper folding developed after a buddhist monk brought paper making methods along with paper folding methods into Japan from China in 538 A.D.

According to a study entitled Paper and Mass Culture of Japan, it was not until the mid-eighth century that paper started to be used for writing and painting.[2] The early Japanese did not have the custom of burning paper at funerals like the Chinese. Therefore, certain questions arise such as: what did the ancient Japanese use paper for and why did the Japanese and not the Chinese develop most of the paper folds, and did they think of them as art?

I believe the questions can be answered by investigating early Japanese ideas about life, society, and man's relations to the world around him; that is, the first element of national character.

Although the origins of the Japanese people are not known for certain, it is believed that they are of a mixed ancestry, including immigrants from northern parts of the Asian mainland and from coastal regions of southeast Asia or from Indonesia or Polynesia, who inhabited the Japanes islands about 5000 years ago.[3] As the earlier society of

[2]Tsuneichi oto, "Paper and Mass Culture of Japan", Nihon Bunka, I, p. 22.

[3]George Sanson, A History of Japan to 1334 (Stanford: Stanford University Press, 1958), p. 12.

hunters and fishermen was transformed into an agrarian society by immigrants from southeast Asia or from Indonesia or Polynesia, the simple customs of individuals developed into the tribe or clan and then into an organized state with associated agrarian ritual and beliefs.[4]

But it is next to impossible to construct a complete picture of Japanese society. Archaeology does not tell the whole story and the literary documents available now were compiled, in part at least, for deliberate political purposes. However, they no doubt embody much valuable evidence about the nature of Japanese society and the development of Japanese thought before the year 500 A.D. For this reason, it is worth quoting some of the texts from Kojiki ("Record of Ancient Matters") and from the Nihongi ("Chronicles of Japan") so that we can get some clue as to genuine Japanese tradition.

The traveller from Wei China reported the practice of ritual cleanliness which is achieved by lustration and similar rites and by abstention from what is unclean.[5]

The Wei report recorded as follows:

> When death occurs, mourning is observed for more than ten days. . . . When the funeral is over, all members of the whole family go into the water to cleanse themselves in a bath of purification. When they go on voyages across the sea, they always select a man who does not comb his hair, does not rid himself of fleas, lets his clothing get dirty, does not eat meat, and does not approach women. This man behaves like a mourner and is called the fortune keeper.[6]

[4] Ibid.

[5] Wei dynasty (200 265 A.D.); Wei records are the most detailed and most reliable of the early Chinese notices of Japan. They indicate that a number of Japanese tribes or clans living in Southern Japan had unified under a single leadership by the middle of the third century.

[6] George Sanson, 1958, p. 25.

Worshipping god (Kami) and purification are the most important features of the early cults and of Shinto.[7]

The word Kami is usually rendered as god or spirit in Western languages, but this word carries the general sense of upper or superior and a thing or person is called Kami if it is felt to possess some superior qualities or power. Kami stands for a special power or influence possessed by certain persons, things, or places.[8]

Here is a quotation from the Nihongi, which seems to be concerned with the early cult and the origin of paper folding.

> When the Sun Goddess came to shut herself up in the Rock Cave of Heaven. . . . Here upon Ama-no-Mikoto rooted up a true Sakaki 'evergreen branch' tree of the Heavenly Mount Kagu, hang upon its upper branches a mirror of eight hands, made by the ancester of the mirror makers. . . .on the middle branches he hung carved jewels of Yasaka. . .on the lower branches he hung tree-fibre (made of bark of the paper mulberry). . .so she opened a little the Rock-door and peeped out.[9]

It is interesting to compare the charms used in the early cults with that of Shinto ceremony, for the sacred Sakaki tree (a species of Eurya ochacea), Mirror, Sword, Jewel and Yushide (a divine offering made of paper) are still indispensable to Shinto.

For this reason, it is believed that the earliest paper product was one similar to the paper strips attached to a sacred rope with tufts of straw and used as symbols in Shinto. In the creation of these early products, bark of the paper mulberry was hung on evergreen trees. Paper was probably sacred in the early cults (see Figs. 1-5).

[7]The use of the word Shinto to describe the early beliefs of the Japanese is apt to be misleading in so far as it suggests an organized religion, because Shinto is not a religion like Buddhism or Christianity but rather an expression of the most intimate and vital sentiments of the Japanese.

[8]George Sanson, 1958, p. 25.

[9]Unknown, Nihongi, trans. by W. G. Aston (Rutland: The Charles E. Tuttle Co., 1972), p. 49.

The sacred rope Shime-Nawa, in Japanese is hung on the four sides of the place believed to be or to be made sacred. It is used as a sign to avert evil spirits and as a demarcation against pollution.[10]

> It is woven of clean rice straw always twisted in a leftward direction from which 7, 5, and 3 strips of straw are drawn out at intervals. Hence, the Chinese refer to this rope as the 7,5 and 3 rope. Between these strips of straw are fastened the Yushide, a divine offering made of paper.[11] (see Fig. 3).

It is mentioned in the Kojiki and the Nihongi that straw rope became sacred because of a great mythological event. One day the Sun-Goddess emerged from the Heavenly-Rock-Cave into which she had retired out of displeasure and from which she was ushered into a new Palace. On that serious occasion, the new Palace was surrounded by straw rope to prevent her from returning to the Cave.

But since Shime-Nawa is woven of rice straw, I believed that there may be some relation between its origin and the agrarian rites. In Japan, farming was propagated on the southmost island of Japan during the first century B.C.. It is believed that the then main growing crop was waterfield rice plant and the method of rice plant culture was that of scattering the seeds in marsh land. The farmers had to enclose the rice field in the marsh land by hanging rope around to indicate the ownership of the field.[12]

Strips of bark from trees were attached to the rope at intervals. They, flapping in the wind, might oust vermin from the field and

[10]When the history of Shinto shrines is traced back to the beginning in the ancient period, one finds shrines of which the very grounds were sacred and their mountains and forest considered holy.

[11]Aisaburo Akiyama, Shinto and its Architecture (Tokyo: Tokyo News Service Ltd., 1955), p. 115.

[12]Kunio Yanagida, Ine no Nihonshi (Tokyo: Chikuma-shobo, 1970), p. 273.

the farmers might then imagine that it was the result of the power of the stips of bark that enabled them to enjoy a good harvest. This conception is speculative but I believe that by association with agrarian rites and beliefs, the rope and the strips of bark eventually became the sacred Shime-Nawa.

A further indication of the sacred function of rope is the prehistorical potteries found in Japan which have mysterious straw rope patterns; old Chinese documents reveal that in Japan there was no ideograph, only carving wood and making knots. In The Golden Bough, J. G. Frazer says that many people in different parts of the world entertain a strong objection to having any knot about their person at certain critical seasons, particularly childbirth, marriage and death. But knots are not only taboos. They may also " . . . serve to avert not only wizards and wolves but death itself."[13]

The evidence thus suggests that rope has been used not only for practical purposes but also, as in the case of paper, as a vehicle for the expression of a universal sense of the sacredness of fertility which is instinctive in mankind. There is no clear reason why sacredness is associated with rope and paper. It might be conferred by its rarity, by its beauty, by its exceptional shape or by its great utility. I would suggest it is because of a feeling that in it the luck and hope and power of man are vested arising from the new sensual experience of working with rope or paper.

This emotion can also be called Kami in Japanese. This emotion

[13]J. G. Frazer, The Golden Bough (London: Macmillan & Co. Ltd., 1967), pp. 314-320.

is described by Ernest Cossirer in his discussion of the unconscious basis of human myth, language, art and science — what he calls the unconscious grammer of experience.

> Just let spontaneous feeling invest the object before him, or his own personal condition, or some display of power that surprises him, with an air of holiness, and the momentary god has been experienced and created. In stark uniqueness and singleness it confronts us; not as a part of some force which may manifest itself here, there and everywhere, in various places and times, and for different persons, but as something that exists only here and now, in one subject whom it overwhelms and holds in thrall.[14]

It is probably through the connection of 'experience of the momentary god' with a strong feeling of new sensual experience that paper folds and straw ropes find expression in early Japanese Shinto. How is it possible to join two dissimilar experiences? It is by ". . . the use of metaphor, by finding the image or symbol that unites them at some deeper emotional level of meaning",[15] so that man may protect his limited capacities from the confusion of overloading with information and knowledge of his environment and himself.

Paul Klee states in his jounals as follows:

> The history of the work [of art], which is chiefly genesis, may be briefly characterised as a secret spark from somewhere which kindles the spirit of man with its glow and moves his hand, and the movement is translated into matter. The work as human action is movement both in the productive and receptive sense.[16]

[14]Ernst Cassirer, Language and Myth, trans. Susanne K. Langer (New York: Dover Publications Inc., 1953), p. 18.

[15]J. S. Bruner, On Knowing (New York: Atheneum, 1968), p. 18.

[16]Paul Klee, Notebooks Volume 1, The Thinking Eye, trans. by Ralph Manheim, ed. by Jurg Spiller (London: Lund Humphries, 1967), p. 357.

The 'indivisible moment of experience' or the 'secret spark' come from the phenomena of nature, consisting of the sun, moon, stars, wind, thunder, lightning, rainstorm, and so on; earthly phenomena such as rivers, seas, mountains, waterfalls, fountains, stones, rocks and the like; animals; trees; and even such inanimate things as mirrors, swords, jewels, scarfs and straw-rope.

Primitive man confronted by phenomena of this kind would think of fetishes, spirits or gods. Mr. Collingwood proposed to call the level of experience where these associations take place 'the psychical level'; the level of experience at which we merely feel in the double sense of that word, i.e., experience sensations together with their peculiar emotional charge.[17]

What man sees at this level is the image of feeling which ". . . is transmission of phenomena, projection from hyper-dimensional, a metaphor for protection, divination, mystery."[18] It is therefore, a moment of vision, 'a momentary experience' or 'secret spark' that distinguishes such phenomena and objects from ordinary experiences. It is an organic production of the condition of existence.

The earliest paper folds are a symbolical projection of this special experience or subjective reality or, in the words of Susanne Langer, ". . . the direct presentation of a feeling. . . ." deeply rooted in primitive sentiments.[19] They are ". . .the absolute image—the image

[17]R.G. Collingwood, The Principles of Art (Oxford: Clarendon Press, 1938, Oxford University Press, 1969), p. 164.

[18]Paul Klee, 1968, p. 59.

[19]Susanne K. Langer, Problems of Art (New York: Charles Scribner's Sons, 1957), p. 134.

of what otherwise would be irrational, as it is literally ineffable; direct awareness, emotion, vitality, personal identity — life lived and felt, the matrix of mentality."[20]

The early paper folds, then, were not added to Japanes life but were that life itself.

[20] Ibid., p. 139.

CHAPTER II

CEREMONIAL PAPER FOLDING

I have found that the symbolical projection of 'ideas of feeling', 'the direct presentation of a feeling', motivated by the flexible interplay of perception, thought, impulse, intuition and emotion, is the genesis of paper foldings.

From the earliest times man, using his power of ideation, has been engaged in a search for general rules whereby to turn the order of natural phenomena to his own advantage.[21] Man's visual perception, far from being a stream of impressions, is shaped by his concepts or his understanding of generalities so that man can abstract his concept: Man projects ideas and feelings into a new dimension and symbolizes them. This is what is meant by [redacted] concept of subjective experience.

> As intellectual and cultural development progresses, our relation toward the outer world changes proportionally from passive to active attitude. Man ceases to be a mere shuttlecock at the mercy of outward impressions and influences; he exercises his own will to direct the course of events according to his needs and wishes.[22]

In this way, the power of 'a given emotion' over man is replaced by his power over it; he becomes aware of himself in the activity of feel-

[21] J. G. Frazer, 1967, p. 65.

[22] Ernst Cassirer, 1953, p. 19.

ing the sensations and emotions of the moment. He dominates his feeling.

As I mentioned above, in relation to early paper folding, the great heros who have superior quality or power are called Kami. Such heros led the federation of the clans to the establishment of central power in the Yamato district about the fourth century A.D.. For this reason, the word 'Government' is usually translated into Japanese as "Masturigoto" which means the business of worship or ceremonial observances. It was in this capacity that the early emperors presided over the state, and their sacred function gave them a certain political advantage.[23] The Imperial Palace and the Shinto containing the Sacred Regalia were equally sacred, practically one and the same, and the priests took part in state administration.

In the fourth century A.D., Buddhism and Confucianism were introduced to Japan. Their introduction created strife between the Buddhist and the heros of the clans, whose functions were concerned with the practices of nature worship.[24] They served to stimulate in some way the ancient cults and persuaded its adherents to regard what had hitherto been an anonymous body of religious practices as a system comparable to those two organized beliefs. Thus, the sharmanistic ritual of early Shinto was institutionalized and organized; the rite of nature worship became a ceremony of emperor worship (the emperors being the descendents of great heros), and the early ritual was augmented by an enjoyment of ceremonies and a delight in beautiful color and shape.[25] As part of the

[23]George Sanson, 1958, p. 35.

[24]Ibid., p. 77.

[25]Ibid., p. 214.

rites of nature worship, ropes and paper folds had been absolute images or formulated experiences: they were in themselves sacred. Under the ceremony of emperor worship, however, they became mere ornaments of ceremony; they became symbols of sacredness, i.e. they were sacred as symbols that ". . . embody basic ideas of life and death, of man and the world. . . ."[26]

During the Heian Period (794 - 894 A.D.), paper folding continued to flourish in ceremonial practice. In order to understand why this is so, it is necessary to review the history of Japan. During the seventh, eighth and ninth centuries, institutions in Japan were built up after the Chinese model.[27] And under the influence of an ancient belief that a dwelling place was polluted by death, the center of government transferred from place to place, wherever there was an appropriate place for the heart of an agrarian society.[28]

In the Nara Period (710 - 774 A.D.), Buddhism, which was sponsored and promoted by the ruling class for their own purpose of centralizing power, spread so rapidly that Buddhist monasteries attained a position of threatening the Imperial House.[29] This was one of the reasons for moving the capital from Nara to Kyoto. But it is worth mentioning

[26]Susanne K. Langer, Philosophy in a New Key, Mentorooks (New York: New American Library, 1951), p. 133.

[27]George Sanson, 1958, p. 62.

[28]Ibid., p. 82.

[29]Ibid., p. 89.

that the great anthology of poetry called Manyōshū, which can be taken as reflecting Japanese sentiment in the seventh and eighth centuries, reflects a strong and continuing current of enjoyment of the beauty of nature, despite the Buddhist influence.[30]

The main feature of the early Heian Period may be described as a reaction against the Chinese influence. The Japanese wished to free themselves from Chinese dominance in matter of learning, thought and taste, while still respecting the Chinese intellectual tradition.[31] The daily life of Heian men and women in the middle and upper classes was governed by divination, which in general indicates the precautions which a man must take against misfortune, and exorcism, both of which belonged to a tradition of magic and sorcery going back to a remote past long before the influence of Buddhism had touched Japan.[32] For these reasons, it can be said that foreign ideas like Buddhism and Confucianism did not make a lasting impression on the Japanese mind.

During the Heian Period, the later kind of elaborate ceremonial paper foldings and knot making was widely used with overt or covert literal signification among aristocrats on such occasions as Shinto ceremonies, presentations of merit, and weddings (see Figs. 6-13).[33] Noshi, a typical paper ornament of this kind, is attached to a gift with a bound paper string culminating sometimes in an elaborately tied knot (see

[30] Ibid., p. 92.

[31] Ibid., p. 129.

[32] Ibid., p. 213.

[33] Saburno Ienaga, Nihon Bunka shi (Tokyo: Iwanami, 1956), p. 76.

Figs. 6 - 8).

The word Noshi is an abbreviation of Noshi-Awabi, a thin strip of dried abalone attached in the middle of the paper-fold. The use of abalone on Noshi for gift dates back to twelfth century, though its significance is no longer known.[34]

The carefully tied knot is called Musubi, while the fold and knot together are termed Mizuhiki to signify the hope of the giver that the recipient will enjoy good fortune. "The ascetic motive, the feeling for simplicity, frugality which one finds in Noshi is a characteristic of Heian taste as is the strong sense of form and color expressed by contrast in brilliant costume and elaborate ceremonial. It is ". . .an integral part of the great aesthetic tradition which is perhaps rooted in the early ideas of ritual purity."[35]

From the Heian tradition of ceremonial paperfolding and knot tying developed the tradition of Japanese packaging. The methods and techniques of paper folds and knots used in packagings were inherited and preserved by folk artisans because of their appearance of sacredness. Mr. Hideyuki Oka points out in his book How to Wrap 5 More Eggs that the purpose of the package was to discriminate between the content and pollution.[36]

Historians have noticed that the connection between value and cleanliness is basic in Japanese culture and originates in the earliest formation of that culture.

[34]Isao Honda, The World of Origami (Tokyo: Japan Publications Trading Co., 1965), p. 27.

[35]George Sanson, 1958, p. 179.

[36]Hideyuki Oka, How to Wrap 5 More Eggs (Tokyo: Bijustu Shuppan, 1974), p. 12.

> It is useful, however, to notice that the beginnings of moral consciousness can be traced in the earliest mythological narratives, in the words represented by the Chinese characters standing for 'good' and 'bad'. The native words are Yoki and Ashiki, 'good' and 'bad' in the sense of agreeable and disagreeable. But we also find, parallel with Yoki and Ashiki, pairs like Uruwashiki and Kitanaki, 'clean' and 'dirty', and Yoki and Ashiki themselves used for 'lucky' and 'unlucky'.[37]

For the ancient Japanese, sin implies not only penal offense but also illness, disaster of nature, being filthy and everything man has a hatred for and dislike of.[38] Man as a giver, therefore, must wrap his gifts in a careful and elaborate way so that the recipient will think their content is pure.

One may think of this as an act of magic; the word 'magic' is used here to denote certain practices associated with primitive societies. In early Shinto (nature worship), there were many magical practices like divination by burning animal bone or tortoise shell.[39] The earliest Chinese accounts of life in Japan tell us the magic power of the Queen of the Wa ("Japan") who was a great sorceress.[40]

"The Magical act is", as Mr. Collingwood suggests, "to generate in the agent or agents specific emotions that are considered necessary or useful for the work of living; the secondary function of a magical act

[37]George Sanson, 1958, p. 80.

[38]Saburo Ienaga, 1956, p. 212.

[39]Unknown, Kojiki, trans. by D. L. Phillipi (Tokyo: Tokyo University Press, 1969), p. 82.

[40]George Sanson, 1958, p. 80.

is to generate in others, friends or enemies of the agent, emotion useful or detrimental to the lives of these others."[41]

This definition can be used to differentiate early folding from ceremonial folding; early folding is used to generate in paper a certain emotion that is valued for itself because it is sacred; ceremonial folding is a means of generating in others or friends useful emotion. This difference is captured in the distinction Susanne K. Langer draws between the symbol used in art (ceremonial folding) and the Art symbol (early folding). The difference between them is not only of function but of kind.

> Symbols occuring in art are symbols in the usual sense, though of all degrees of complexity, from simplest directness to extreme indirectness, from singleness to deep interpenetration from perfect lucidity to the densest overdetermination. They have meanings, in the full sense that any semanticist would accept. And those meanings, as well as the images that convey them, enter into the work of art as elements in its composition. They serve to create the work, the expressive form.
>
> The art symbol, on the other hand, is the expressive form. It is not a symbol in the full familiar sense, for it does not convey something beyond itself. Therefore, it cannot strictly be said to have a meaning; what it does have is import. It is a symbol in a special and derivative sense, because it does not fulfill all the functions of true symbol: it formulates and objectifies experience for direct intellectual perception, or intuition, but it does not abstract a concept for discursive thought.[42]

Early folding came into existence, then, from sensory experience by means of attending not to how the physical object felt and looked but to the emotional feeling itself which was objectified in the folds of paper and in the knot of rope. It was an objective projection of 'exper-

[41]R. G. Collingwood, 1969, pp. 66-67.

[42]Susanne K. Langer, 1957, pp. 138-139.

ience', 'an absolute image'. The primary function of such an image is to formulate experience as something imaginable. The next stage in cognitive activity is the conversion of image into logos. Ceremonial folding represents this conversion in which the raison d'etre of the object is no longer the fold itself, but what it represents, its meanings.

The ceremonial folds are the articulated symbols of what the early folds present; they are ideas of feeling.

CHAPTER III

PAPER FOLDING AS PLAY — ORIGAMI

In the beginning, as I have said, paperfolds were sacred objects. Then, they became charms or ornaments of the Shinto ceremony, symbols of sacredness. Shime-Nawa and Mizuhiki were both symbolical objects consisting of paper folds and ropes and/or knots together.

In the later Heian Period, paperfolding and knot making evolved separately and both, at this time, I believe, entered into the domain of play; they became a form of amusement. Paperfolding evolved into Origami, while knot making evolved into Ayatori which is known as cat-cradling in English.

There is, however, little direct evidence for the claim that the recreational paper folding we call Origami came into existence and widened its repertoire of folds in the later Heian Period other than an ode by Kiyosuke Fujiwara (1104 - 1177). In this ode Fujiwara describes folding a frog out of blue paper and sending it to his mistress.[43] Despite this limited evidence, it is reasonable to suppose that the figures of ceremonial paperfoldings such as the crane, tortoise and butterfly evolved at this time into the recreational figures of Origami.

[43]Kosho Uchiyama, Origami (Tokyo: Kokudo-sha, 1962), p. 203.

In ceremonial paperfolding these figures were symbols. The crane and tortoise were symbols of good fortune and long life; the carp was symbolic of persistency and aspiration, while the frog was an emblem of love and fertility.[44] Fujiwara's ode indicates the transition from ceremonial to recreational paperfolding that must have taken place about this time because he uses the traditional symbol of love and fertility in courting his mistress, but he uses it outside of the ceremony.

In order to clarify the reason why ceremonial paperfolding as symbols of sacredness evolved into Origami as play, it is useful to inquire briefly into the nature of play.

Johan Huizinga searches for the root of play in the origin of man's history and still further in prehistoric times. According to him, play generally speaking, is a free activity which, however, could completely captivate the players' mind in spite of its lack of seriousness and necessity for daily life. It must be noted that the emotion which captivates the players' mind seems to arise from the common mental experience which I have described in my discussion of the origin of early paper folds as an organic product of the condition of existence.

Huizinga posits something which can only be called play as a condition for the development of primitive man's life and behaviour — his language, religion, production techniques, courtship, various courtesies and art.[45]

[44]Edward Kallop, "Introduction", Samuel Randlett, The Art of Origami (New York: E. P. Dutton & Co., Inc., 1961), p. 13.

[45]Jhohan Huizinga, Homo Ludens, trans. Hideo Takahashi (Tokyo: Chūoh-Kouronsha, 1963), pp. 11-32.

Play can include physical, intellectual, moral and aesthetic values and these values contained in play can project play into culture. Play growing into culture takes two forms: one is the event of festivity like parades or dancing and the other is the games held on festive occasions. These two forms have always taken place everywhere in the world.

Games are competitive by nature, for they generally require an opponent against whom one competes in order to win. Such play always produces in both the opponents and spectators doubts as to whether the player can win or not. Even in the case of games which do not require an opponent, similar emotions are aroused. Tension and insecurity are one of the general characters attached to playing games and these emotions are shared by player and audience alike. The most important value attached to competitive play is winning. Winning proves one's superiority to the others and the superiority of one's own group to other groups. Furthermore, the superior prowess demonstrated within the game easily extends to imply superiority within the culture as a whole: the winner becomes a superior person, not just a superior player. He becomes a hero, who embodies the whole image of cultural values and ideas of his group. The winner, then, wins something more than the game; he gets respect and is invested with honor. And this honor is extended to the entire group to which the winner belongs. His success is thus identified with both individual and group.

In early times the ideal of playing for honor is mirrored in the ideal of battle for honor. This honor is, at first, shared within a single family or with neighbors and gradually extends to the larger local community and finally to a nation as a whole. Eventually these ideals become embodied in the literature of the national culture. For example,

the imagery of the Samurai spirit or of medieval chivalry both expresses and in turn influences the cultural attitudes and behaviour of the groups which produced it. It makes them study by steeling their courage; it tells them their obligations and the term in which they must carry out their mission: In Japan, play like Ken-dō (Japanese fencing) or Jūdō implies activity not only physical but also mental the aim of which is to harden one's body and mind.

For this reason, play may be regarded as a contribution to as well as a relief for our life, for it is indispensable to the cultural formation of society and to the vital function of consciousness in the individual.

The early paper folds used in the nature worship cults, the ceremonial paperfolds of the Heian Period and Origami all have a common function, then, of expressing Japanese sentiments, the way of Japanese life. It can be said that the Japanese cultural identity has been handed down from remote ages to the present-day and it is this identity that brought paperfolds into being as sacred objects, as symbols and finally as play. The original paper folding offered 'a moment of vision', 'a momentary experience' or 'secret spark', and Origami offers through recreation a means to recapture that vision or experience, a means to rekindle the spark.

The Heian Period is characterized as a time of peace and leisure. The period in which ceremonial paperfolding was most common was also a glorious period of brilliant development in painting, literature, architecture and other arts and crafts; a period of the Japanization of imported cultures, so to speak, and a period in which the aristocrats indulged in luxurious living. But the final centuries of the Heian Period produced a time of transition in which power was transferred from the aristocrats

to the newly rising warriors. — Samurai. It became an unstable time socially, politically, and spiritually for four centuries.[46]

> The defeat of the conservative movement led by Yorinaga was a turning point in Japanese political history. Its effect was to bring to an end the rule of the Imperial House and to put in its place a new system in which effective power came into the hands of a military class.[47]

The aristocrats in the later Heian Period escaped from the unstable frustrating world and engaged in the world of imagination through various ceremonies, games of cards, poem competitions and sports, just for a pastime. They had no work to do whatever, only the business of being supported and being amused.[48]

Paperfolding as play, then, perhaps originated in a negative withdrawal from an unfulfilling cultural order during the later Heian Period but it positively preserved the benefits of aesthetic experience and flourished in the succeeding Edo Period (1603 - 1860) as Origami.

> Having given up the world, as it were, man can still find in abstract beauty one realm in harmony with his soul, one realm where things are as he enjoys making and seeing them.[49]

Origami is a form of amusement, but it required discipline as well. There are unwritten rules such as:

[46]Saburo Ienaga, 1956, pp. 76-78.

[47]George Sanson, 1958, p. 212.

[48]Saburo Ienaga, 1956, pp. 76-81.

[49]Walter Abell, The Collective Dream in Art (New York: Schocken Books, 1966), p. 242.

1. The paper model (a desired shape to be made) must be achieved by folding only, without the aid of scissors or glue. (There are, however, standard models in existence, which with cutting or adding color, become so perfect that the end is held to justify the means, and scissors and glue were allowed).

2. The shape of the model should be easily recognisable withouth the addition of colors or special markings.

3. The model should be capable of folding flat after it has been displayed.[50]

This form of discipline is similar to the discipline practiced in Taoism, a derivation of Zen. Zen, like Taoism, is the worship of Relativity and aims at establishing an intimate relation between man and the universe.

> The chief contribution of Taoism to Asiatic life has been in the realm of aesthetics. Taoism is the art of being in the world; for it deals with the present — ourselves, it is in us that god meets with Nature and yesterday parts from tommorrow. The Present is the moving Infinity, the legitimate sphere of the Relative. Relativity seeks Adjustment; Adjustment is Art. The art of life lies in constant readjustment to our surrounding. Taoism accepts the mundane as it is and tries to find beauty in our world of woe and worry.[51]

Zen was and is a way of life. Zen's conception of greatness is in the smallest incidents of life; it, therefore emphasized a discipline of the self, applying as much to artists as to warriors, to the physical process of creativity as well as to the aesthetic vision. Moreover, Origami is a 'sensitive art' with overtones of mystical experience fundamental to the practice of Zen:

[50]Robert Harbin, Paper Magic (London: John Maxfield Ltd., 1956), p. 11.

[51]Kakuzo Okakura, The Book of Tea (Rutland: The Charles E. Tuttle Company, Inc., 1956), p. 44.

> At the magic touch of the beautiful the secret cords of our being are awakened, we vibrate and thrill in response to its call. Mind speak to mind. We listen to the unspoken, we gaze upon the unseen. The master calls forth notes we know not of. Memory long forgotten all came back to us with a new significance.[52]

Two important books of Origami were published at the end of the eighteenth century by the head priest at a temple called the Rokō - An of Ise. One is called Chūshingura Orikata, in which Origami presentations of the activities of the main characters in all eleven acts of the famous play Chūshingura appear in woodcut illustrations. The other, Senbazuru Orikata ("Folding the Thousand Cranes") contains the most widely known crane folding method and makes skillful use of the appeal of the bird as a symbol of good fortune (see Figs. 50-52). The folding methods call for the use of one sheet of Origami paper, in which one makes a number of slits to produce a fairly good number of mutually connected squares. Each of these squares folded into a crane gives a very virtuoso Origami effect. The book illustrates the proper cutting methods and makes full use of the special stiffness of Japanese paper to produce a typical Japanese Origami.[53]

The most famous Origami book of all is Kan-no-Mado, which, however, is properly called Kayara-Gusa.[54] It contains over ten ceremonial folds and over thirty of the folds that belong to the recreational class. All of them are illustrated brush drawings. The author of this book, Adachi Katsuyuki (d 1850) remarks:

[52] Ibid., p. 78.

[53] Isao Honda, 1965, p. 26.

[54] Kōhei Nagano, "The miscellaneous note of Origami", Taiyo, March, 1968, p. 115.

> Origami spread as an amusement for friends. Since such folds as the thousand cranes, the boat, the vehicle, the lotus flower, the sanbo, the komoso, the thread container and variety of type of helmets, are all generally known, there is no need to illustrate them.[55]

His remark indicates that Origami has become very popular among pupils of the time, namely the Genroku era. This clearly reflects the mood of the citizens, their interest in play and novels and the plastic arts.[56] The most prominent figures were Chikamatsu Monzaemon, the great playwright (1653 - 1724); Ihara Saikaku, the most gifted novelist (d 1693); Hishikawa Monorobu (d 1714), a founder of the Ukiyo-E; and perhaps here one should also include the itinerant poet Matsuo Basho (1649-1694), a great master of Haiku or seventeen-syllable poetic epigram.[57]

Thus, in the 19th century, Origami took its place among the arts of a leisured class. Since Adachi Katsuyuki's method requires the use of scissors, Isao Honda, one commentator, remarks that the Kayara-Gusa folds are not the finest as far as true Origami goes because scissors are used quite often and the folding techniques are most complicated. The

[55]Isao Honda, 1965, p. 24.

[56]Strictly speaking, Genroku is the name of the era lasting from 1688 - 1704; but it is commonly used to denote a pattern of life which flourished in those years, when urban society in Japan had reached a peak of material prosperity and a blossoming of the arts was enjoyed by the citizens. The civilian population of the Genroku era, consisting of manufacturers, merchants and their employees, contributed to the evolution of the culture in the domain of arts more freely than the Samurai who were restricted by the rules and manners of feudalistic moral and who were obliged to suppress their feelings.

[57]George Sanson, A History of Japan 1615-1867 (Stanford: Stanford University Press, 1961), pp. 151-153.

Kayara-Gusa, however, did encourage pupils to pursue the development of Origami.[58]

After the Second World War, Origami was practiced more than ever as a hobby not only by Japanes but by pupils in countries all over the world. Modern Origami folders like Mr. Uchiyama, Mrs. Margaret Campbell, Robert Harbin, Samuel Randlett, and Mrs. Lillian Oppenheimer, emphasize the importance of creating new models more than copying the instructions of old folds, and they have invented a new system of Basic Folds as they tried to solve the problem of how best to explain the method of making new models. The basic folds are five, according to Mr. Randlett: Diamond Base, Fish Base, Bird Base, Frog Base, Waterbomb Base.[59] Each of the basic folds has the advantages and the limitations which depend upon the models one wishes to make.

What modern Origami folders are emphasizing is sensory awareness.

> . . . the true art in paperfolding does not arise from manual dexterity. Clean folding and neat manipulation of the paper are naturally essential, but what is needed most is vision. A moment comes when the folded base seems nothing but a mass of planes and angles, but in it the folder will see — (amorphous and incomplete, but nonetheless visible) — the bird, animal or toy which a bit more handling and folding will serve to liberate from the paper. It is the moment of vision that distinguishes folding in pursuit of beauty and from folding merely for a pastime or to allay nervousness. The rewards of the first are incomparably greater.[60]

[58]Isao Honda, 1965, p. 25.

[59]Samuel Randlett, The Art of Orgami (New York: E. P. Dutton, & Co., Inc., 1961), p. 177.

[60]Gershon Legman, "Quotation", in Robert Harbin, Paper Magic (London: John Maxfield Ltd., 1956), p. 15.

I hope to have demonstrated that in the early fold, in the ceremonial fold, and in Origami, there lies a common experience: an 'invisible moment of experience', 'a secret spark', 'a moment of vision', and that Origami evolved in the twelfth century from the ceremonial practice of paper folding as an act of purification or symbolization of sacredness which were the most important features of the early cults and of Shinto.

I, personally, can classify all paperfolds into three basic folds: basic shape folds (Figs. 37-44), envelope-type folds (Figs. 14-21), and balloon-shape or package folds (Figs. 45-49). Such research indicates to me that these folds were derived from gift-wrapping.

It can be said, then, that Origami, originating from the ceremonial folds, is a development of wrapping folds, and the difference between the two lies in the contents or what is wrapped. Ceremonial folds were used to wrap gifts to Kami or to superior persons; they were the media package to transmit Japanese sentiments.

The folds of Origami making animals, birds, fishes, insects and flowers out of a sheet of square paper are life wrapping folds, and Origami, then, grows out of the magical act of ceremonial folding.

Origami tore open the media package and treated the packaging — folding — as raw material.

CHAPTER IV

THE INVESTIGATION OF ORIGAMI MODELS

Paper is generally considered as a material for writing or printing on or for packaging, i.e., as a medium for transmitting contents. And as a medium, paper has made a great contribution to the history of man. In early Japanese culture paper was used for copying Buddhist Scriptures and recording the historical arts of man and writing artistic ideas. Such use of paper is typical of many cultures. Moreover, the Japanese have used paper in many practical ways for everyday live, such as paper sliding screens, called Shōji in Japanese, paper tablewares, round fans, umbrellas, playthings like kites and dolls and so on. However, most importantly, the early Japanes believed that paper itself possessed something — a superior power — and regarded it as a sacred object. In the Heian Period, paper was folded in a special way to present a gift for the gods as a symbol of purifying the contents. Thus, among the Japanese, paper itself has assumed symbolic meaning and paper objects have been used in a ceremonial way.

The purpose of the second part of this study is to find out the meaning of a sheet of white square paper used in the traditional Origami and to rediscover the essential character of packaging as a quality of Origami through investigating the available means of Origami.[61]

[61]The old Origami books like Kayara-Gusa, Chūshingura Orikata and Senbazuru Orikata and the traditional wrapping folding book like Noshi

As I have suggested above, 'Origami can be viewed as packaging,' but it is necessary to clarify the meaning of packaging. As it is generally understood, the purpose of packaging is to wrap something for transport or to attract purchasers. The value attached to the act of packaging is thus commercial gain. But the Japanese regarded wrapping and packaging as an act of purification for the benefit of the recipient. It was a feeling of love and consideration for others that motivated them to develop the ceremonial folds. In this way, packaging became a form of art in that its purpose was to express and communitate value to the recipient. Indeed, one could argue that in this sense all art is a kind of packaging for it consists of a sensual medium molded or shaped to transmit a content. It is this sense of packaging that is perserved in the art of making folds in Origami.

The experience reported by many folders of Origami, however, indicates that Origami also differs from ceremonial folding in its use of paper. In Origami, paper is used not only as a medium to transmit the contents but also as an instrument for discovery or as a vehicle for artistic expression. Many Origami folders report the experience of being fascinated by the discovery that a sheet of paper offers almost infinite possibilities. The square white paper comes to signify the unknown, forgotten or neglected world, and they emphasize the importance of discovery and creation of a form rather than the mere reproduction of a form by following instructions in a manual.

and Tsutsumi and Tsutsumi and Musubi were unobtainable. Therefore, my investigation of the traditional Origami figures is limited to the available traditional models from books like Harbin's Origami books, Randlett's The Art of Origami, Yoshizawa's Origami Dokuhon, Honda's The World of Origami, and Uchiyama's Origami.

In the previous chapter, I stated that Origami evolved from ceremonial folding and the difference between the two was their contents. The content of ceremonial folds was an object of some sort whose wrapping symbolized a speical Japanese sense and value. On the other hand, the content of Origami is 'the creative process itself.'

I define Origami, then, as an exercise, using a sheet of paper which signifies the world, to wrap our living. Through this exercise we may understand more about ourselves and the world.

I believe that in the process of unfolding ourselves and the world, Origami becomes something more than a pastime. It becomes a form of art.

The following figures and the basic folding diagrams are intended to trace the development of Origami folds and to reveal clues to the subliminal change which represents a dialogue between our inner self and what is outside of it, our scientific mind and artistic heart, our intellect and emotion.

Since a sheet of crumpled paper can be analyzed into either concave or convex creases, all paper folds are made up of variation of the two creases.

All Origami, therefore, depends on the four geometrical divisions of the square illustrated below.

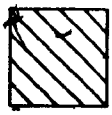

Fig. a.

Fig. a is a diagram of the folds used to make the lover's knot. It is called the diagonal fold because it divides the diagonals of a square into eight sections (Fig. 17).

Fig. b is a diagram of the folds used to make the Box, House. It is called the checkboard fold. The square of paper is folded into three (Fig. 21) or four parts (Fig. 37).

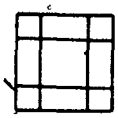

Fig. b

Fig. c is a diagram of the folds used to make the Flying Bird. It is called the corner radial fold. Each of the corners of the square of paper are divided into four or eight sections (Figs. 27-30).

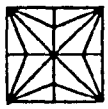

Fig. c.

Fig. d is a diagram of a fold used in many Origami figures, for example the Frog. It is called the radial fold from the center. The square of paper is divided into 16 or 24 sections, radiating from the center (Fig. 46).

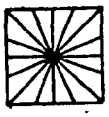

Fig. d.

Any configuration of paper that serves as the starting point for an Origami figure is called a basic fold. Here are illustrated seven traditional basic folds which, however, are named differently by different folders.

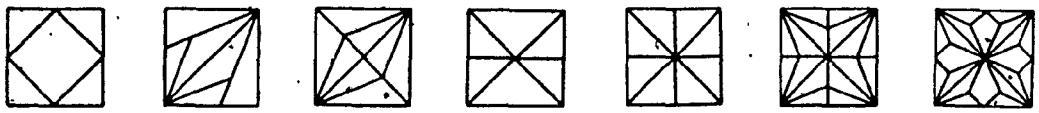

Fig. e Fig. f Fig. g Fig. h Fig. i Fig. j Fig. k

It is worth noticing that the completed Frog Base (Fig. k) could be regarded as four tiny Fish Bases (Fig. g) joined together. This is one among many indications that the intricate basic folds were developed by inventing new combinations of the simple basic folds. (Figs. 46, 48).

The Basic I or All corner fold (Fig. e), which is believed to be the oldest of all Basic folds, the Preliminary fold (Fig. i), the Bird Base (Fig. j), and the Frog Base (Fig. k) are all folded by bringing up four corners together. In other words, a technique of wrapping up something or a method of packaging is used.

New basic folds are generated by transforming the original shape of the paper from square to another shape.

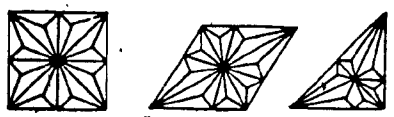

Fig. l Fig. m Fig. n

The Frog Base (Fig. l) can become the base for the Goose (Fig. 62) or Kite (Fig. 60), when the shape of paper is transformed from square to rhombic (Fig. m) or to right angle triangular shape, (Fig. n).

Fig. o Fig. p Fig. q

The Bird base (Fig. o) makes base for the Grasshoper (Fig. 59) or Craw Fish (Fig. 64), when the shape of paper is transformed from square to right angle triangular (Fig. p) or equilateral triangular shape (Fig. q).

New folds can also be generated by using two instead of one sheet of paper (Figs. 65 - 76).

It can be said, then, that Origami was developed from the ceremonial folds by the three menods mentioned above:

1. using combinations of the basic folds.
2. transforming square paper to another shape.
3. using two sheets of paper.

Origami embodies the inherent Japanese sense of values and sense of nature. It is a wrapping of something invisible and intangible. That something is, I propose, life itself.

BIBLIOGRAPHY

ABELL, Walter. The Collective Dream in Art. New York: Schocken Books, 1966.

AKIYAMA, Aisaburō. Shinto and Its Architecture. Tokyo: Tokyo News Service, Ltd., 1955.

BRUNER, Jerome S. On Knowing. New York: Atheneum, 1968.

CASSIRER, Ernst. Language and Myth. Translated by Sussane K. Langer, New York: Dover Publications Inc., 1953.

COLLINGWOOD, R.G. The Principle of Art. Oxford: Oxford University Press, 1969.

FRAZER, J.G. The Golden Bough. London: Macmillan &o., Ltd., 1969.

FUJWARA, Kakuichi. Nihon no Musubi. Tokyo: Chikuji Shoten, 1974.

HARBIN, Robert. New Adventures in Origami. New York: Funk & Wagnalls Publishing Co., Inc., 1972.

_____. Origami Illustrated Teach Yourself. Leicester: Brockhampton Press Ltd., 1955.

_____. Origami, The Art of Paperfolding. New York: Funk & Wagnalls Publishing Co., Inc., 1969.

_____. Origami. London: Hamlyn Publishing Group Ltd., 1974.

_____. Origami, 1, 2, 3. London: John Maxfield, Ltd., 1956.

HONDA, Isao. The World of Origami. Tokyo: Japan Publications Trading Co., 1965.

HUIZINGA, Johan. Homo Ludens. Translated by Hideo Takahoshi. Tokyo: Chuoh Kouron Sha, 1963.

IENAGA, Saburō. Nihon Bunka Shi. Tokyo: Iwanami Shoten, 1959.

KAUFMAN, Irving. "Limitation of Research in Teaching Art," in George Pappas, Concepts in Art and Education. London: Macmillan Co., Collier-Macmillan Ltd., 1970.

KLEE, Paul. Notebooks, Volume I, The Thinking Eye. Translated by Ralph Manheim, edited by Jurg Spiller. London: Lund Humphries, 1969.

LANGER, Susanne K. Philosophy in a New Key. Mentor Books., New York: New American Library, 1951.

————. Problems of Arts. New York: Charles Scribner's Sons, 1957.

MIYAMOTO, Tsuneichi. "Paper and Mass Culture in Japan", in Nihon Bunka. Tokyo: Japanese Culture Research Institute, 1976.

NAGANO, Kohei. "The Miscellaneous Note of Origami", in Taiyō. Tokyo: Heibonsha, March, 1968.

OKA, Hideyuki. How to Wrap 5 More Eggs. Tokyo: Bijustu Shuppan Sha, 1974.

————. Tsutsumu. Tokyo: Mainichi Shinbun Sha, 1976.

OKAKURA, Kakuzō. The Book of Tea. Rutland: Charles E. Tuttle Co., Ltd., 1956.

RANDLETT, Samuel. The Art of Origami. New York: E. P. Dutton & Co., Inc., 1961.

SANSON, George. A History of Japan to 1334. Stanford: Stanford University Press, 1958.

————. A History of Japan, 1615-1867. Stanford: Stanford University Press, 1961.

UCHIYAMA, Kōsyō. Origami. Tokyo: Kokudosha, 1962.

Unknown. Kojiki. Translated by D. L. Phillipi. Tokyo: Tokyo University Press, 1969.

————. Nihongi. Translated by W. G. Aston. Rutland: Charles E. Tuttle Co., 1972.

WERNER, Heinz, and KAPLAN, Bernerd. Symbol Formation. New York: John Wiley & Sons, Inc., 1967.

PRINCIPAL SPECIMENS OF SHIME-NAWA

Shime-Nawa are differently called at different places, so the names are omitted here.

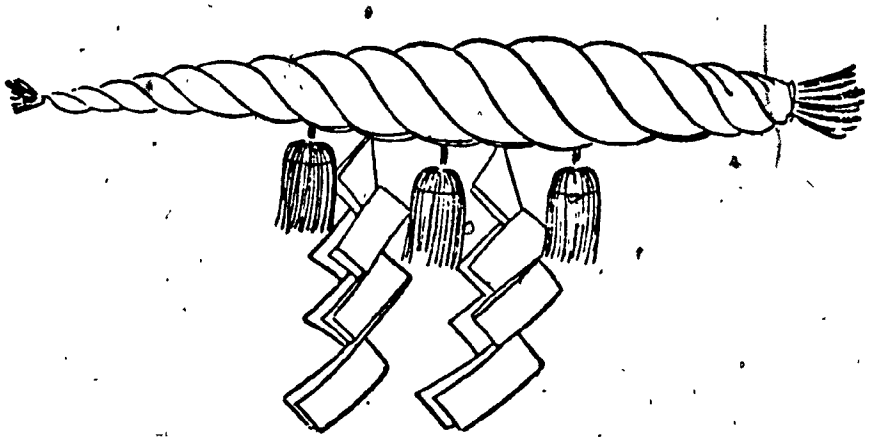

Fig. 1

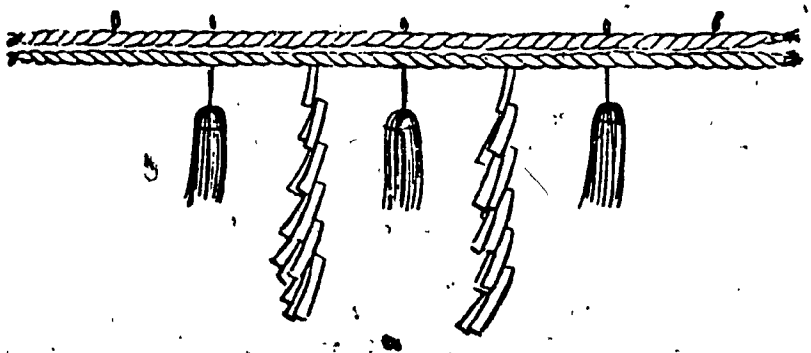

Fig. 2

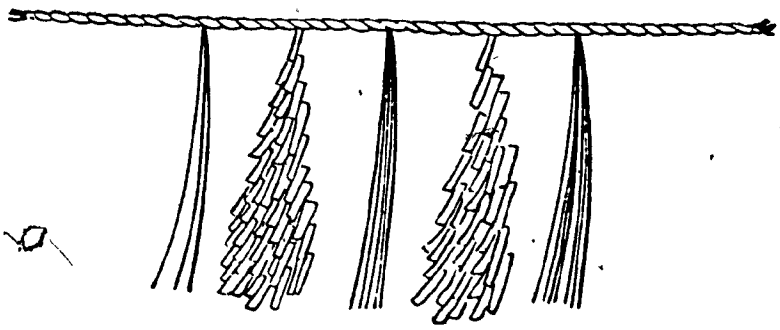

Fig. 3

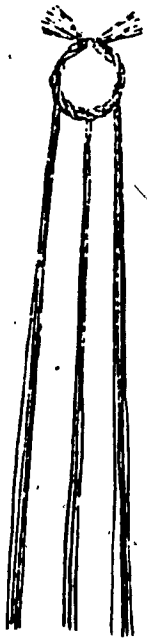

Fig. 4

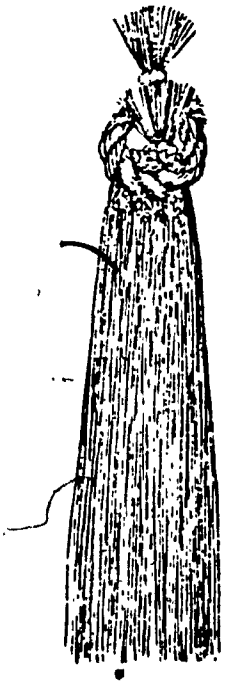

Fig. 5

CEREMONIAL PAPER FOLDS

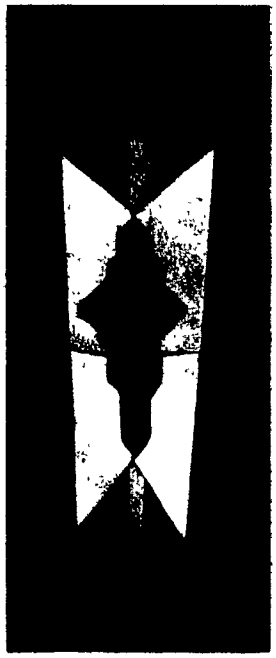

Fig. 6 - Noshi

Fig. 7 - Noshi

Fig. 8 - Noshi

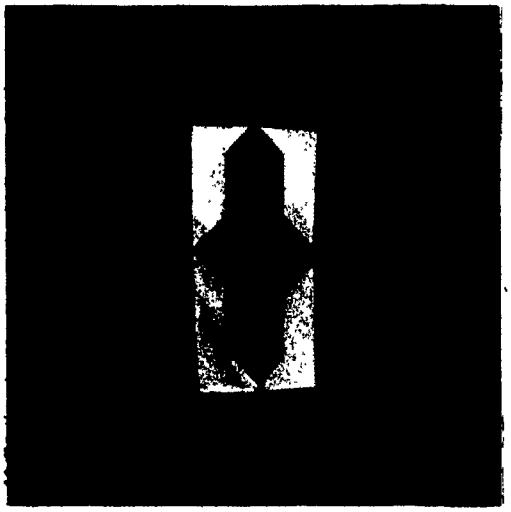

Fig. 9 - Paper scent-holder, but also used as a purse.

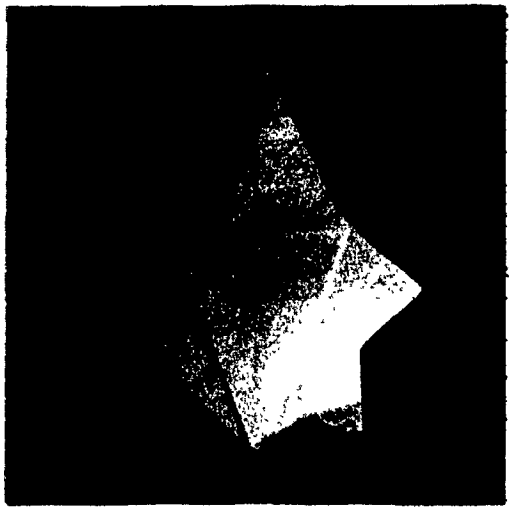

Fig. 10 - Celebrational Bundle. This was used as an envelope for a letter or as a wrapping for a small present given on the occasion of a family celebration.

Fig. 11 - Paper plate for ceremony.

Fig. 12
Chopstick Bundle.

Fig. 13
Chopstick Bundle.

TRADITIONAL ORIGAMI FIGURES

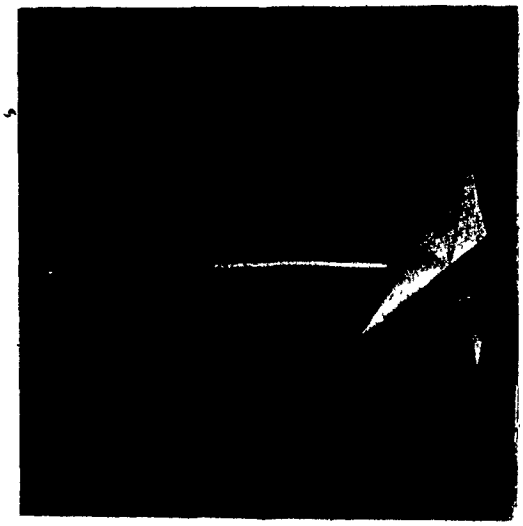

Fig. 14 - Talking Fish.

Fig. 15 - Cicada.

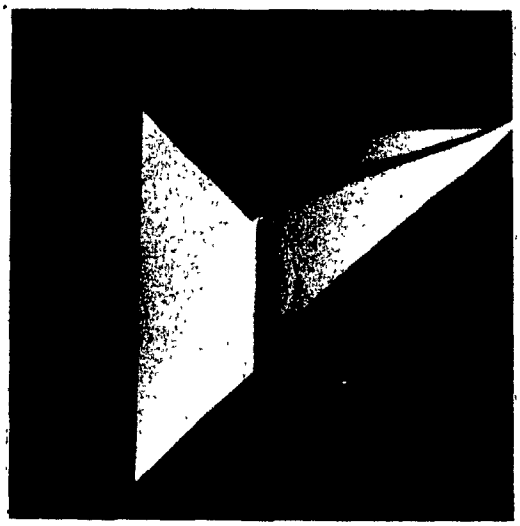

Fig. 16 - Butterfly.

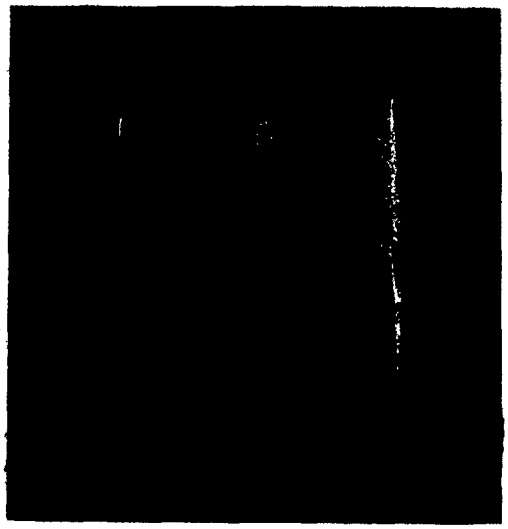

Fig. 17 - Lover's Knot. (impossible to untie).

Fig. 18 - Bunny.

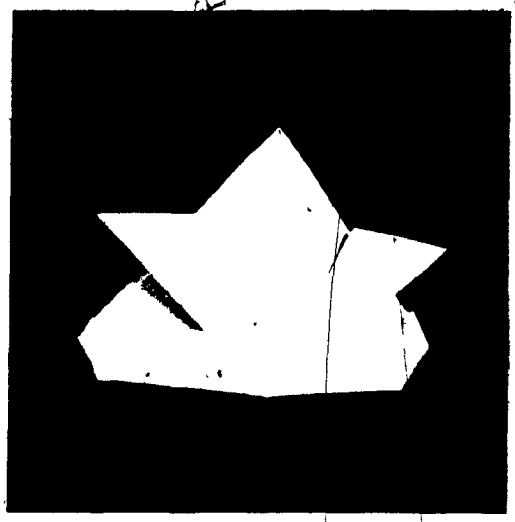

Fig. 19 - Kabuto.
(Japanese Helmet)

Fig. 20 - Scarlet Carp.

Fig. 21 - House.

Fig. 22 - Butterfly.

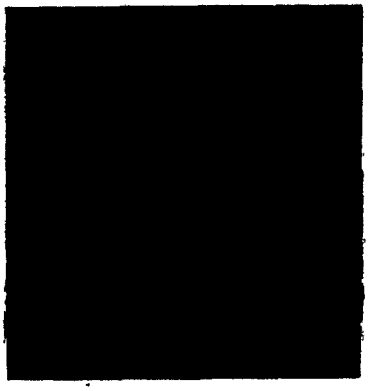

Fig. 23 - Fukusuke. (a big-headed dwarf).

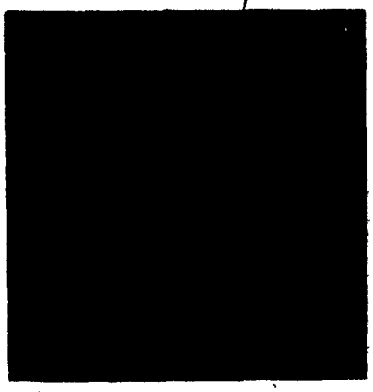

Fig. 24 - Turtle.

Fig. 25 - Japanese Nightingale.

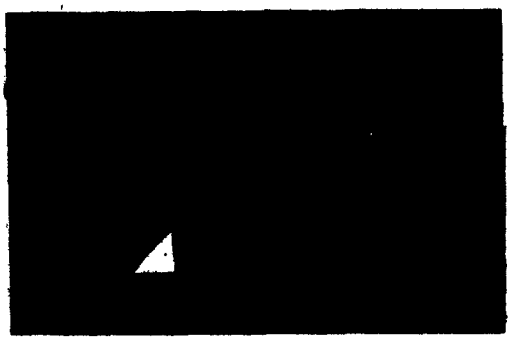

Fig. 26 - Mandarin Duck.

FLAPPING BIRDS

Grip the chest of the bird with one hand. By pulling the tail gently in and out with the other hand the bird will flap its wings.

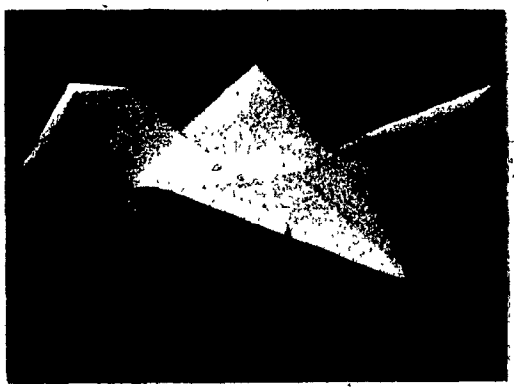

Fig. 27

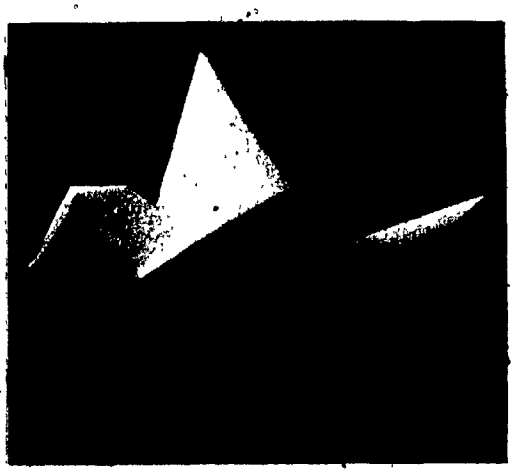

Fig. 28

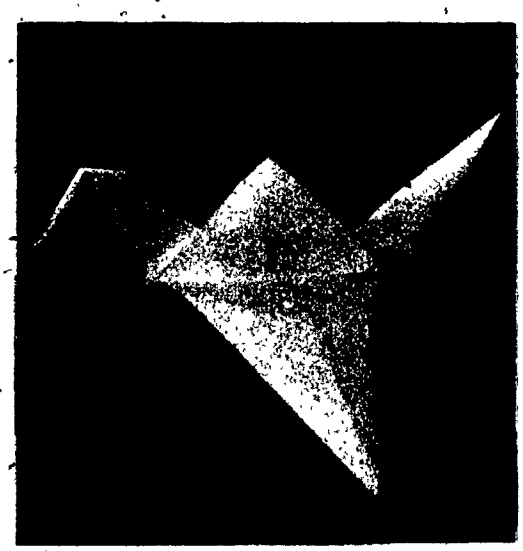

Fig. 29

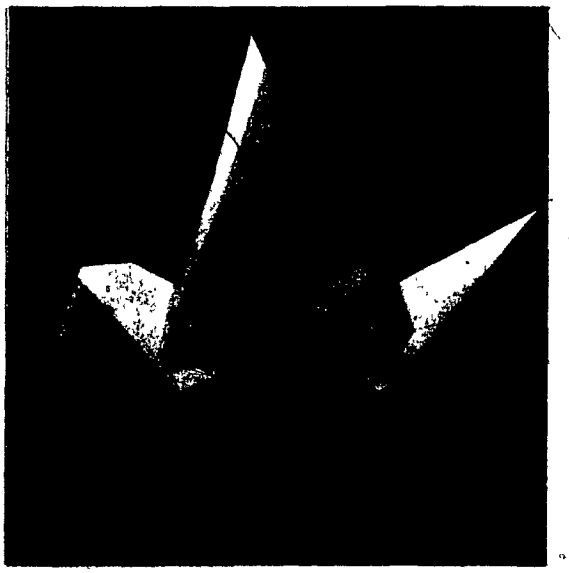

Fig. 30

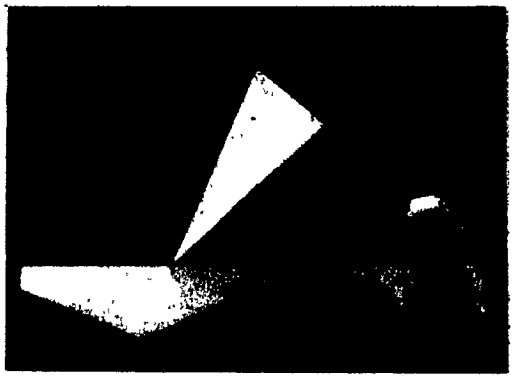

Fig. 31 - Flapping Dove.

Fig. 32 - Flapping Stork.

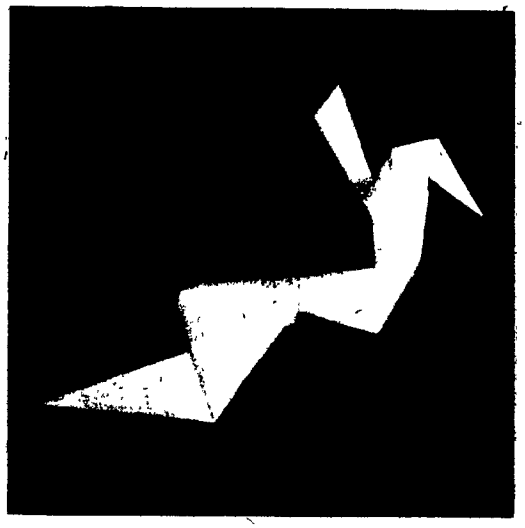

Fig. 33 - Flapping Crow,

Fig. 34 - Flapping Dove.

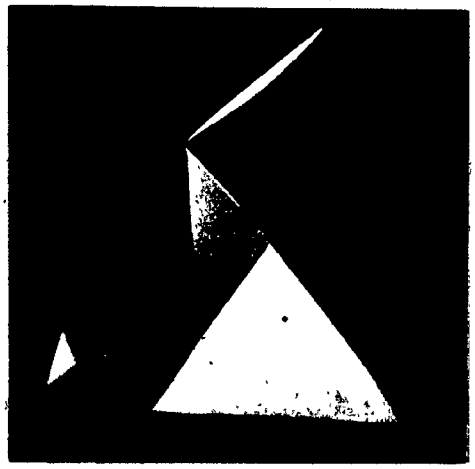

Fig. 35 - Dove.

Fig. 36 - Nesting Crane.

BOX-SHAPE CONSTRUCTION FIGURES (Traditional)

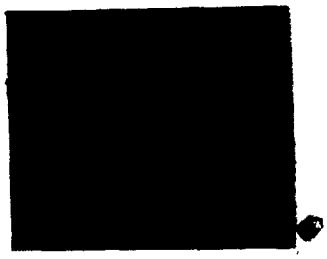

Fig. 37 - Box.

Fig. 38 - Winnowing.

Fig. 39 - Sanbō (Sanbō is used as an offering to God).

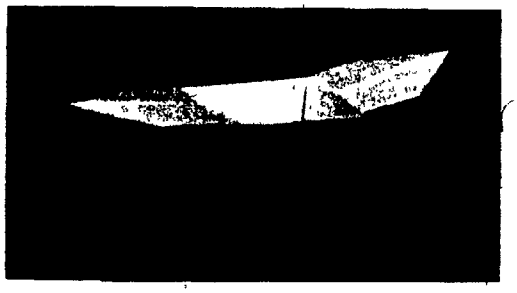

Fig. 40 - Sanbō.

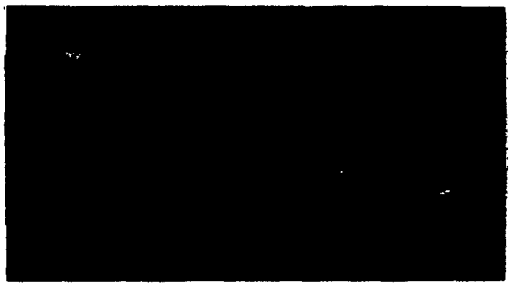

Fig. 41 - Boat.

Fig. 42 - Boat.

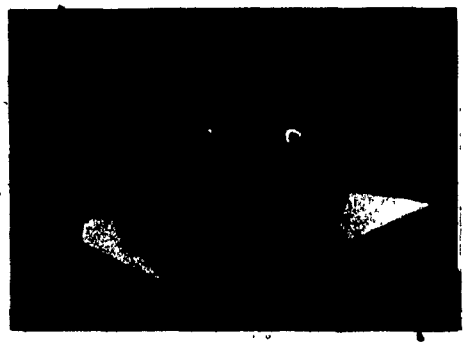

Fig. 43 - Snail.

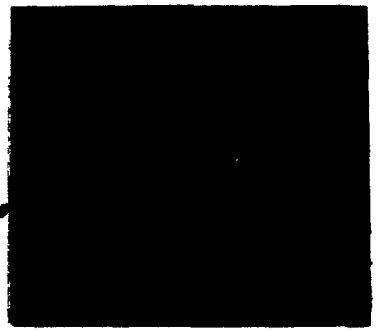

Fig. 44 - Kago. (Japanese Style Sedan Chair).

BALLOON-SHAPE CONSTRUCTION FIGURES
(Traditional)

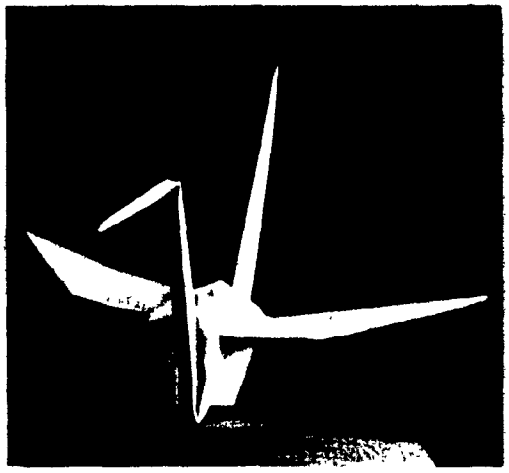

Fig. 45 - Box Crane.

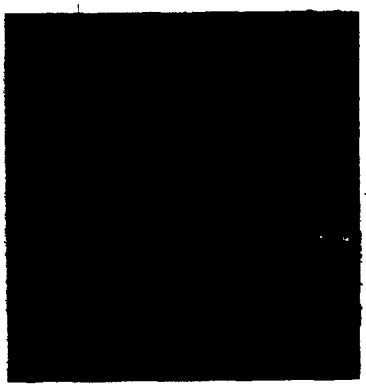

Fig. 46 - Blow-up Frog.

Fig. 47 - Water Bomb.

Fig. 48 - Crab.
(The Crab is made of four bird bases).

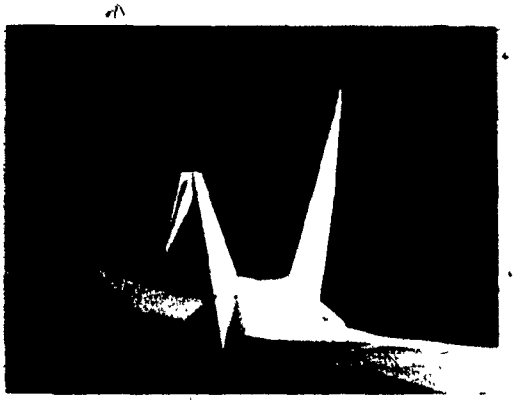

Fig. 49 - Crane.

SENBAZURU-ORIKATA FOLDS

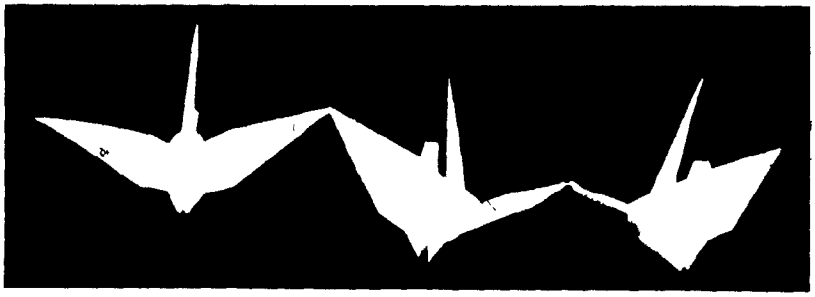

Fig. 50 - Triple Cranes.

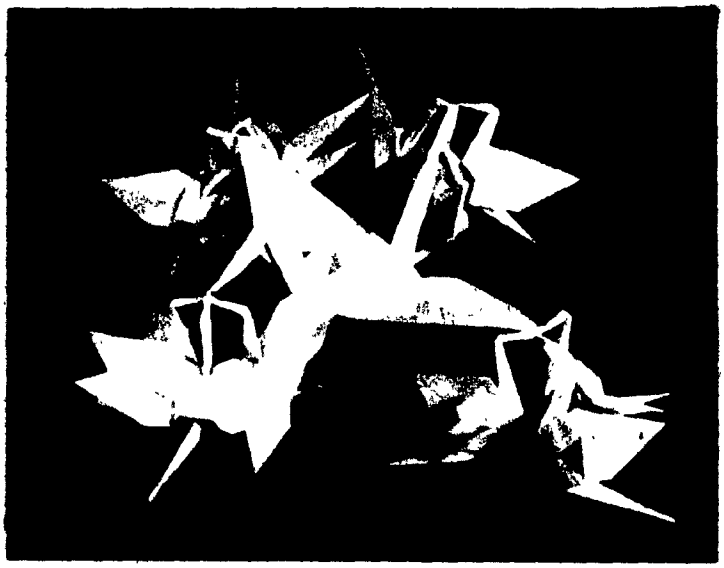

Fig. 51 - Mother Crane and Babies.

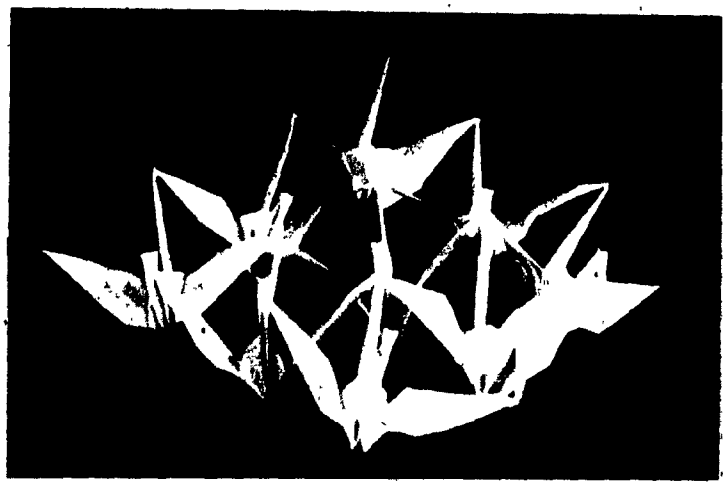

Fig. 52 - Surf Cranes.

NEW ORIGAMI FIGURES

by transforming the shape of the paper from a square to another shape.

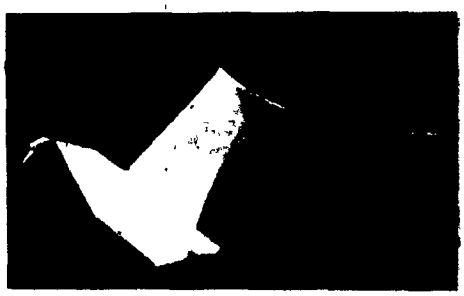

Fig. 53 - Sea Gull.
(Equilateral Triangular).

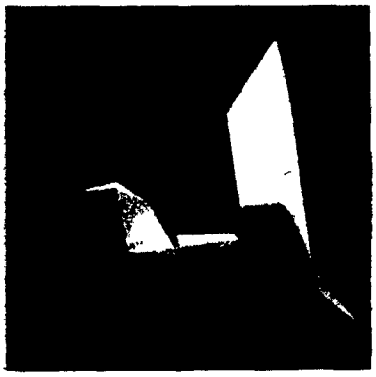

Fig. 54 - Wild Goose.
(Equilateral Triangular).

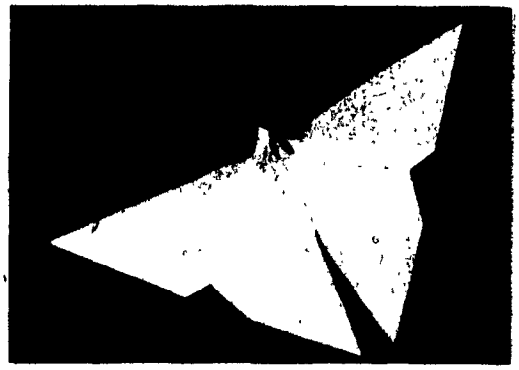

Fig. 55 - Butterfly.
(Equilateral Triangular).

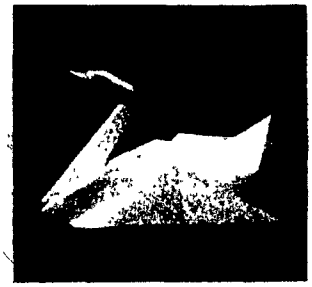

Fig. 56 - Swan.
(Equilateral Triangular).

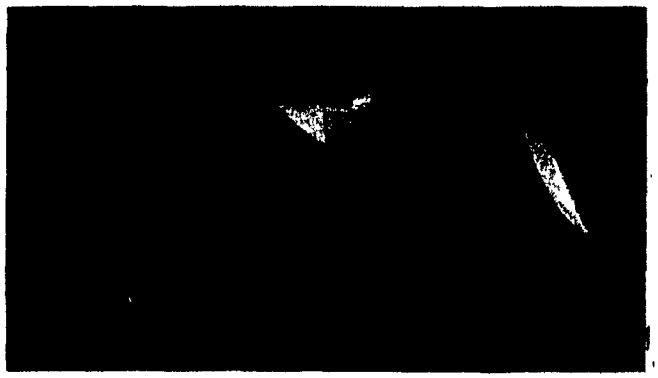

Fig. 57 - Bat.
(Rhombic).

Fig. 58 - Quacking Duck.
(Rhombic).

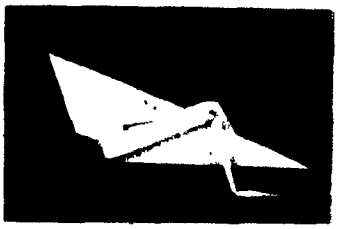

Fig. 59 - Grasshopper.
(Right angle triangular).

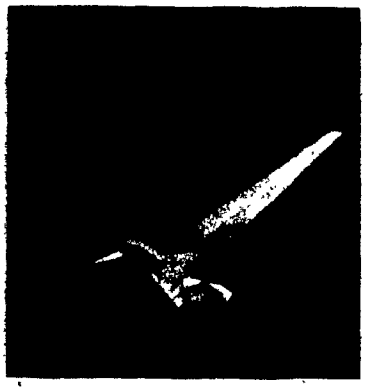

Fig. 60 - Kite.
(Right angle Triangular).

Fig. 61 - Dragonfly.
(Hexagon).

Fig. 62 - Goose.
(Rhombic).

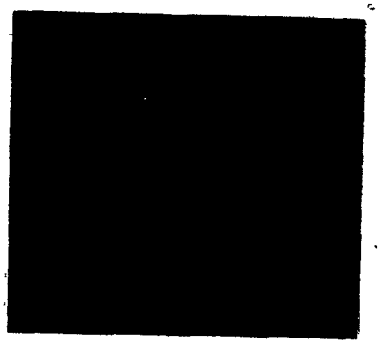

Fig. 63 - Rooster.
(Rhombic).

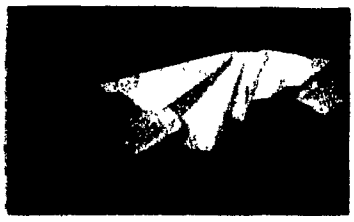

Fig. 64 - Craw Fish.
(Equilateral Triangular).

NEW ORIGAMI FIGURES
using two sheets of paper

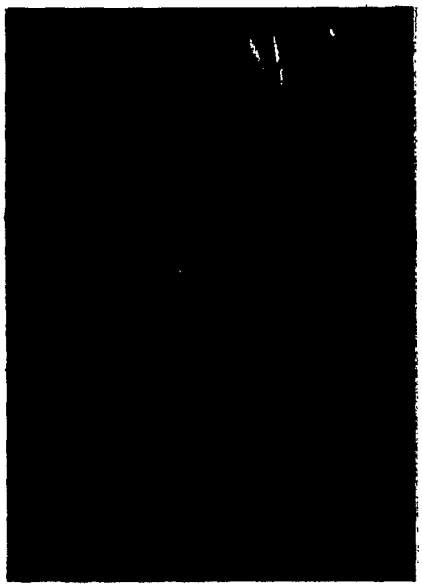

Fig. 65 - Reindeer.

Fig. 66 - Pig.

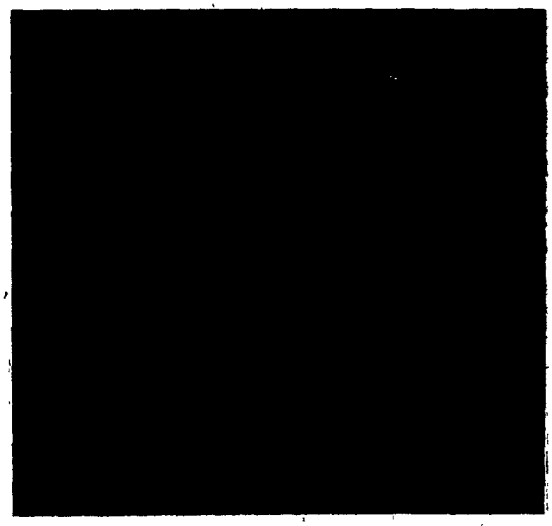

Fig. 67 - Spitz.

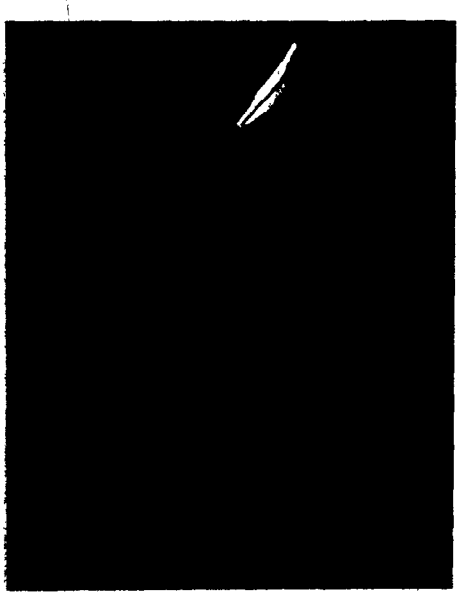

Fig. 68 - Seated Fox.

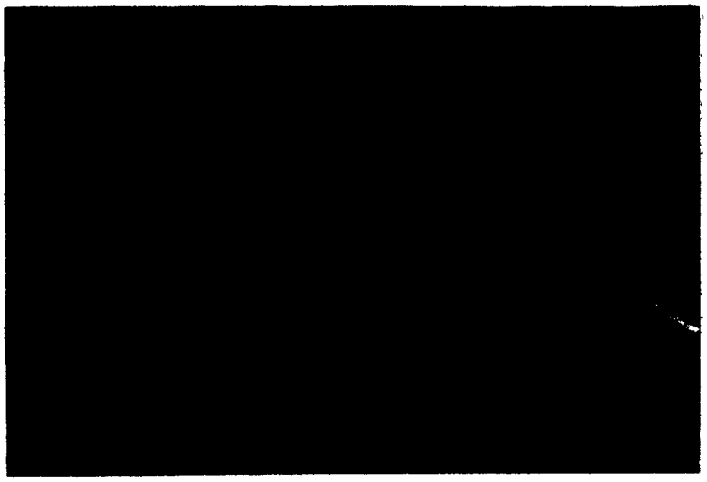

Fig. 69 - Rhinoceros.

Fig. 70 - Wolf.

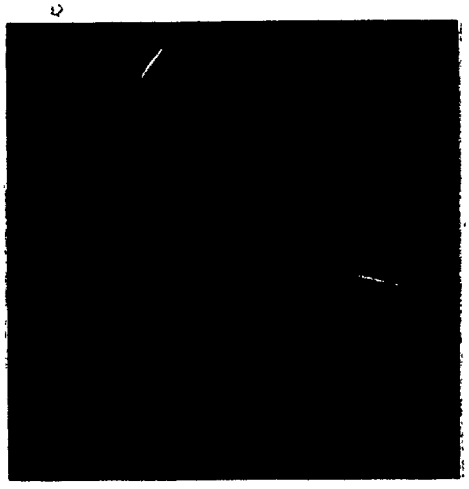

Fig. 71 - Monkey.

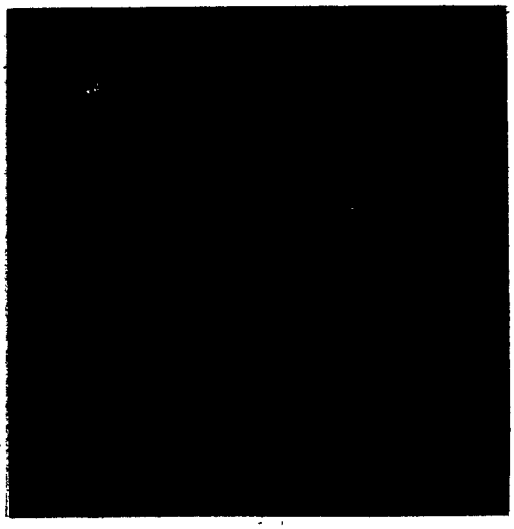

Fig. 72 - Horse.

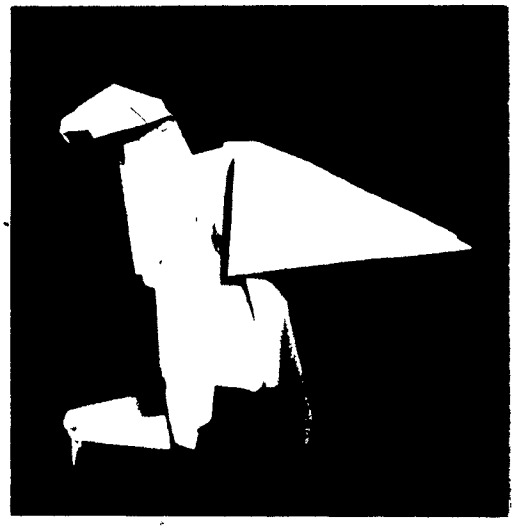

Fig. 73 - Eagle
(Two sheets of Rhombic paper).

Fig. 74 - Giraffe.
(Two sheets of Rhombic paper).

Fig. 75 - Dragon
(Two sheets of Equilateral Triangular paper).

Fig. 76 - Alligator.
(Two sheets of Rhombic paper).

NEW ORIGAMI FIGURES

made by non-Japanese

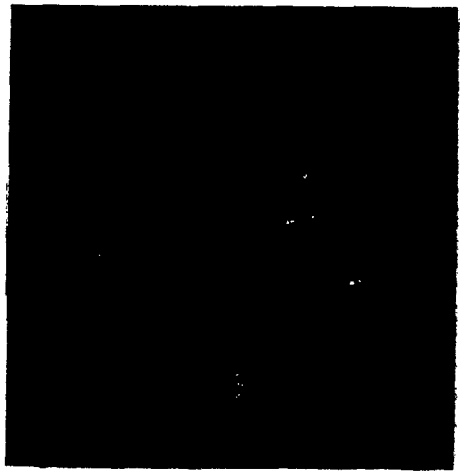

Fig. 77 - Decoration
by R. Harbin, England.

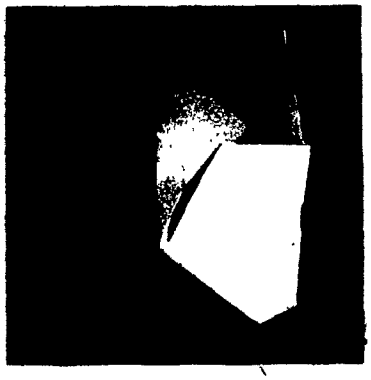

Fig. 78 - Rabbit
by W. McComb, Ireland

Fig. 79 - Brontosaurus
by S. Randlette, USA

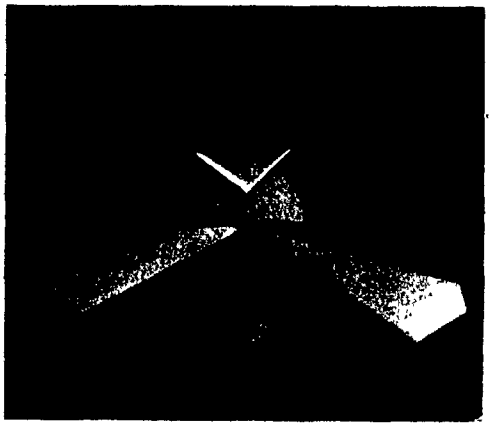

Fig. 80 - Fly
by Alice Gray, USA