

weight of a cubic foot of air, under its pressure, temperature, and humidity, at 9 a.m., is shown in column 19.

The most prevalent winds in January were S.E. and S., and the least prevalent were N. and N.W. In February the most prevalent was S., and the least prevalent were E. and N.W. In March the most prevalent were S.W., S.E. and S., and the least prevalent were N. and E. In April the most prevalent were S. and W., and the least N.E. and E. In May the most prevalent were N.W., W., and S.W., and the least were S.E. and S. In June the most prevalent were S.W., N.W., and W., and the least prevalent were E., S.E., and S. In July and August the most prevalent was S.W., and the least were N., E., and its compounds. In September the most prevalent was S.W., and the least E. and W. In October the most prevalent was N.W., and the least were N. and W. In November and December the most prevalent winds were S.E. and S., and the least prevalent were N., S.W., and W.

The numbers in column 29 show the mean amount of cloud at 9 a.m. ; the month with the smallest amount is June, and the largest February. Of the cumulus, or fine weather cloud, there were 91 instances in the year ; of these there were 18 in July and 18 in August, and 14 in September, and one only in February. Of the nimbus, or rain cloud, there were 53 instances in the year, of which 12 were in February, 11 in December, and 9 in March, 5 only from May to October. Of the cirrus, there were 59 instances in the year, of which 11 were in January, 9 in November, and 8 in February. Of the cirro-cumulus there were 16 instances in the year. Of the stratus 14 instances. Of the cirro-stratus there were 6 instances in the year. And there were 126 instances of cloudless skies.

The largest fall of rain for the month was in November, 5·09 ins. ; the next in order was in December, 5·03 ins., of which 1·91 inch fell on the 21st. In December, 1880, the fall was 10·5 inches. No rain fell from April 20th to the 6th of November, making a period of 189 consecutive days without rain. The fall of rain in the year was 17·49 inches, being 11·19 inches less than in the preceding year. The number of days on which rain fell was 48, in the preceding year the number was 66.

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ALTAIC CYLINDERS.

AMONG the Babylonian cylinders—amulets or seals, in the British Museum, and the Phœnician cylinders which are kept with them—there are two or three which appear to belong to the so-called “Hittite” art, because they present hieroglyphic emblems like those of Hamath. It is possible that others classed as Babylonian which present figures of the gods without hieroglyphs may also be of this class (*see* “Guide to Kouyunjik Gallery,” page 136).

Mr. T. G. Pinches (one of our best Akkadian scholars) has kindly sent

me casts of three of these cylinders, which are very similar to those published by Menant and Perrot, from Aidin in Lydia, and other places in Asia Minor. With respect to such cylinders Mr. Pinches says, in the Guide above quoted (p. 126), that they appear to have been used as charms suspended to the wrist, or hung round the neck or waist. The subjects are generally connected with mythology. Another of the same class is in possession of Mr. Greville Chester.¹

No. 1. Menant, *les Pierres Gravées* II, Fig. 111.—Two deities in the usual high cap and skin robe face each other. Between is a bull's head and a scorpion, to the left four small figures under a twisted pattern (often found on these cylinders) with two birds above with long tails. To the left again a figure in a horned cap with sceptre somewhat like those of the god at Boghaz Keui.

The bull and scorpion are the emblems of the second and eighth month (which before 2152 B.C. were the first and seventh month, on account of precession), and they therefore probably indicate spring and autumn. The twist pattern may conventionally represent waves or clouds (it resembles the Chinese sign for cloud); the swallow is the emblem of fate, both in Babylonia and in Egypt. The deity with horned headdress is possibly Ea.

No. 2. Menant, Fig. 112.—The deity with horned cap, followed by a goddess in long skin robe, and by a god with high cap bearing the winged sun on his sceptre, approaches a quadrangular enclosure of twist pattern in which are a man and woman. Her headdress is that worn by the Phœnician and Egyptian goddesses (the globe and feathers), and in her right she holds an *ankh*, or emblem of life; the man wears a tiara or turban, and raises his hand in the attitude of blessing. This may represent a legend like the Median story of the *Vara*, or "garden," in which

¹ Mr. Greville Chester's collection, which he will, no doubt, describe, is of high interest, and contains several undoubted Altaic seals. His great seal from Tarsus may be Babylonian, but is equally likely to be Altaic. It has five designs, which have been published in "Nature." On the base a standing figure presents a trident to one seated on a throne, surrounded by a twisted pattern. On one side the eagle-headed deity (Nisroch) stands before an altar, at which is seated opposite a personage holding a cup and lightning; above him is the winged sun; over the altar the trident is flanked by two luck marks, common in Phœnicia. On the second side this luck mark (which I described in 1883 and 1886) stands between two figures, one seated and holding a stag (perhaps Dara). On the third a figure seated, with tiara and cup in hand (the cup is often held by deities), grasps a bird and a rabbit (emblems of the moon); in the corner is the luck mark. On the fourth side the seated figure holds a *trisol*, or trident, and a bird perches above it. This is one of the finest seals I have seen.

Mr. Greville Chester has also a Babylonian cylinder with a representation of human sacrifice (of which type the British Museum seems only to possess a solitary example), and several Phœnician seals, one with a personal name compounded with *Yah* (the shorter form of the Hebrew Jehovah), as in names read by Mr. Pinches in cuneiform.

the first man was enclosed to protect him from the great winter (Vendidad II, 61), where he is visited by the gods Ea, Istar, and Shamash (Tammuz), as the Chaldean Noah was visited after the flood.

No. 3. Menant II, Fig. 113.—A warrior with sword and spear, with the goat's head (*Tar*) behind him. A smaller personage standing on two mountains with a small deer in front. These face to the right towards two long robed figures with an antelope between, over which is the emblem (found in Phœnicia and Egypt also) of the sun resting in the cup of the crescent moon. The meaning of this combination is perhaps illustrated by the old Chinese compound emblem (Chalmers, p. 107), sun and moon, for *ming*, "bright."

No. 4. Perrot, *Hist. de L'art*, IV, p. 771.—An elaborate design mentioned in "Altaic Hieroglyphs" (2nd edition, page 65). On the upper edge is the twist pattern, and on the lower a sort of curb pattern just like the Chinese emblem for clouds. To the right a deity, marked by a star on his head, sits on a mountain with a deer at his (or her) feet, flanked by hawk-headed cherubs (this may be *Dara* (Ea) or *Istar*). To the left a larger deity, also like the preceding with skin robe, holds a triple lituus, and has the star beneath his throne. To the left again two rampant demons tear one another, and over them are two Altaic hieroglyphs, *Ne-Gug* or *Zi-Gug*, "fighting" or "spirits fighting."¹ To the left again the centre of the design shows a Janus, or two-headed god,² in skin robe, extending a whip towards these demons, and a cross towards three persons in skin robes (two long, one short-skirted), who approach, facing to the right with the hand in attitude of supplication. Beyond these to the left a long robed figure which, like the three suppliants, appears to have a pig-tail,³ faces to the left and holds what may be a snake or a corn-sheaf.

¹ A very curious objection has been taken to the idea that the Hittite texts are religious because the later Assyrian texts are historical. Those who raise this objection seem to forget how much more numerous in antiquity are religious texts than are historical, especially at the earliest period. The British Museum is full of such religious texts from Babylonia and Assyria, as well as from Egypt, and votive texts are common also in Etruria, in Greece, and in Phœnicia. The great lion, with the name and titles of Asshur Nasir Pal, in the British Museum, bears a text in 41 lines in honour of the goddess Istar; and Mr. Pinches remarks: "To such an extent was the worship of the gods carried in Babylonia that *hardly any historical records* are found upon the cylinders of the kings, the inscriptions being entirely devoted to descriptions of the restoration and building of the temples and praises of the gods." This also applies to the texts in Akkadian (dating about 2500 B.C.) found at Tell Loh. Representations, not only of gods, but of demons also, occur on the great sculptures from Nineveh in the Museum.

² This two-headed deity is also to be found on an Akkadian cylinder figured by Perrot.

³ In the great sculptures representing the conquest of Elam in the British Museum several of the Elamites have what looks like a plait or pigtail behind their heads. The Altaic races overspread Elam as well as Media and Chaldea.

Above is the sun-moon emblem for "brightness," already mentioned. Last of all, to the left, a small figure dancing on a fish, supports something which seems to represent the clouds—a Hittite Atlas.

No. 5 (same work, p. 772 Fig. 384).—A four-sided seal. On three sides are figures standing erect on beasts (just as so many deities are represented to stand in India, Phœnicia, &c., &c.). The first, on a horse or ass (*Set*), with the amulet sign, which in Cypriote has the sound *Ra*, and with a tree in front. The second on a deer (*Dara*), with the same sign and two stars. The third with star and amulet on a lion (*Ma*). On the fourth side two bull-headed satyrs support the tree of life with the winged sun above. This seal is from Asia Minor.

No. 6 (same work, p. 773, Fig. 386) represents five deities and five animals under them, with various hieroglyphs clearly Altaic. The first to the right seems to be a goddess, facing the right, and holding the lituus. Her emblem is a dove. The second, also facing to the right, seems to be a goddess. She holds a flower, and stands above a lion; before her is a hieroglyph common at Jerablus, which resembles the cuneiform *Da*.¹ The third deity is male, and faces to the left. He has the wings and tail of a bird, a tiara, a cross in the left hand (on the impression), and flail in the right. His emblem before him seems to be an altar. The animal below is a hare (the moon).² The fourth deity also, with bare legs, and presumably male, is possibly a Janus with two faces. He wears the horned cap of *Ea* or *Dara*, and holds a tree. In front of him is a snake, and the lucky hand, so common at Carthage and all over Asia. His animal is the deer (*Tar* or *Dara*). The fifth deity faces to the right, and holds a sceptre. He is short-skirted, ram-headed, and with wings. In front of him is a flying bird (*Zi*), and behind him what may be a fish (*Kha*). Beneath him is the long-tailed bird (*see back*, No. 1) holding a twig in its beak. In his right hand (on the impression) he seems to hold the *Ankh*, or emblem of life. These five gods perhaps answer to the five deities whose emblems accompany the portraits of Assyrian kings, answering roughly to Venus, Juno, Lunus, Neptune, and Jupiter, or perhaps to the five propitious planets excluding the maligns (Mercury and Saturn). Whatever their precise character, we see that there were in Lydia (for this cylinder comes from Aidin), five gods whose emblems were the dove, the lion, the hare, the deer, and the eagle, to which we are able to add (*see back*, No. 5) a god who stood on a horse or ass.³ These remarks clear the way for the

¹ Behind her head seems to occur the Cypriotic emblem, *Mu*. She may, therefore, be the "Mother" goddess, always distinguished from the Venus of Asia, whose emblem was the dove.

² The hare represents the moon among Mongols. In China the sun and moon are called "the Golden Crow and the Jade Rabbit."

³ The ass is a frequent divine emblem in Egypt for the sun, and in Cappadocia the ass-head occurs with the sign of deity (compare the Myth of Midas and the Median holy ass in the sea). Mr. Greville Chester has a cylinder with a lion having beside it a well-marked ass-head. At Malthai we find deities sup-

description of the three cylinders in the British Museum, casts of which have kindly been sent to me by Mr. Pinches.

No. 7 (British Museum Catalogue, p. 136, No. 52).—On the left two bull-headed genii, with the sun-moon emblem ("brightness") above.¹ It is remarkable that the sun is marked in this case with a cross or wheel, as on the Jerabis stones. Beneath is the head of a deer with branching horns. These genii are the same as on No. 5.² To the right a deity in a mitre with the bird (*Zi*) as his emblem. Then another similar figure facing him in the same head-dress, between them an antelope's head, and the hand raised and open. This last emblem, which is so common at



Carthage, and which, in all countries, is a sign of good luck, occurs with the bird (*Zi*) on a cylinder published by Dr. Wright from Lajard ("Culte de Mithra," pl. xxiii, fig. 1³). The last figure to the right is the usual naked goddess, with hands raised to her breasts, as at Karkemish, Troy, &c. Her emblem is a palm branch or plant.⁴

No. 8 (British Museum Catalogue, No. 54).—To the right, a winged god, faced by a figure which seems, perhaps, about to slay a couching bull, which has a hump like the zebu, a third figure with a sword behind, and between these a fleur-de-lis-like object, apparently a form of the amulet *Ra*. The workmanship, with drilled holes for the heads, &c., resembles that of cylinders from Asia Minor.

No. 9 belongs to a large class in the Babylonian collection, perhaps posed to be Assyrian, standing erect on animals, among which the lion, the horse, the deer, the winged bull, and the dog are distinct. The two gods at Bavian stand erect on lions, and this attitude occurs on coins as well as at Pterid in Cappadocia.

¹ This double emblem, sun and moon, seems later to have been replaced by moon and star (as in the modern Turkish flag), which combination is found with a gazelle on coins of Mithradates, King of Pontus (120–63 B.C.), and with a sheep on coins of Antioch.

² On a seal from Youzghâd found by F. G. R. Edwards, Esq., these bull-headed genii flank the winged sun. Other figures of the gods occur on this seal with a tree and a deer's head.

³ This cylinder represents the sacred tree with goats beneath and the winged sun above, flanked by two figures, with the legend apparently *Zi-An-Sa*, "spirit of heaven favour" (Wright, "Empire of Hittites," Pl. XX, Fig. 5).

⁴ This plant may show that the goddess is the Babylonian *Zirbanitu*, or "bestower of seed."

representing a king, or else the sun-god with his emblem—here a winged wheel—above, and with the eagle, the bird with the twig in its mouth,



and a dog, all behind his throne. On the altar in front a deer's head is being sacrificed¹ by two suppliants. A monkey sits by the altar.² The lion and the moon above we have already seen to be emblems of two goddesses. In the hand of the further suppliant is the head of an ass, either a sacrifice or an emblem of the ass-deity, like the two other emblems in the same line. Clemens Alexandrinus (Cohortatio II) says the Scythians sacrificed the ass to Phœbus. Strabo (xv, II, 14) says it was sacrificed to Mars.

These nine cylinders, and the three others mentioned in the notes, appear all to be of Altaic origin, but it is remarkable how similar is the character of the Babylonian examples when compared with those from Lydia and Tarsus.

The symbolism of many described in the British Museum Catalogue is much the same. In one class we have a sort of Perseus and Andromeda group, the male figure treading on a dragon, the female naked. In another (No. 5) Martu, Son of Heaven, wears a horned cap, and is accompanied by an ibex. The Chaldean Hercules, and his friend, the bull-headed satyr, Eabani, are represented slaying the winged bull, or rending the lion. An ibex also accompanies Eabani. On a Phœnician cylinder (No. 21) El subdues the gryphon and a winged man-headed bull. The deity with the axe³ or hammer, found at Boghaz Keui, and also in Etruria, where he was called Puphluns, occurs on a Cyprian cylinder

¹ Among the Khitai, &c., the deer was sacrificed in honour of the sky. The club held by this deity recalls the clubs of the figures at Merash, Boghaz Keui, &c., on Altaic monuments.

² The monkey (of which I have only observed one other instance) is sitting under the moon. Perhaps we should compare the Egyptian ape with the moon on its head. The monkey figures in Indian mythology, but it is curious to find it in Western Asia. There are well-known representations, however, of apes and monkeys brought as tribute to Assyria.

³ This weapon recalls the *Ai Balla*, "axe" (or hammer) "of honor," used by the Tartars in Bactria. Charun, the "black god" of Etruria, often carries it. It is also carried by a figure on coins of Idrieus, King of Caria, in 353-344 B.C., of his predecessor, Mausolus (377-353 B.C.), of his successor, Pixodarus (340-335 B.C.), and on a coin of the Carian city Mylassa the hammer also appears. We have a well-known figure of a horned god (apparently Rimmon) holding the lightning in one hand and an axe in the other.

(No. 46) with the sacred tree, gryphons, and gazelles and fish. The dog, ibex, goat, and gryphons, with a ravenous animal attacking a deer, occur on another (No. 47).¹ The ibex, bird, monkey, and lion, occur on another of doubtful class (No. 48). The sun-god and moon-goddess, on another, are accompanied by fish-goats, Capricornus (No. 55), while a human sacrifice is offered them, probably for rain in the 10th (older 9th) or autumn month of Capricornus.²

From these notes, to which many others may be added illustrative of these mythological cylinders, we gather the following facts:—

1. The general character and subject of the cylinder charms is the same in Babylonia, in Phœnicia, and in Asia Minor and Cyprus, though the characters used in writing distinguish the different classes in some instances. The curly-toed boots are not distinctive geographically. The presence of the same Turanian race in all these districts explains the connection in art and symbolism very simply.³

2. In Asia Minor at least eight deities may be distinguished, viz, A. *Istar*, the naked Venus connected with the moon and the dove. B. *Nana*, or *Ma*, the mother-goddess (earth) standing on the lion. C. The lion-headed god, holding a fawn or some other animal, accompanied by the head of a rabbit or of a hare (Babylonian *Sin*)—in other cases, a god stands on a hare. D. The ram-headed god with a bird (*Zi*). E. The bull-headed or horned god, accompanied by a serpent (*Ea*, *Esmun*, or *Martu*), whose emblem seems to be the deer (*Dara*). F. The sun-god, with wings and tail of an eagle (*Tamzi*, or *Ud*). G. The eagle-headed deity (*Visroch*). H. The deity, ass-headed, or riding on an ass (*Set*, or Bacchus).

¹ A Cyprian seal, with Cypriotic text, shows a gryphon attacking a deer. Compare the common group of the lion slaying a bull. This latter appears to be mentioned by Hellanicos (whom Josephus notices, Ant. i, 4-9) as representing water and earth, though this may be a late explanation.

² In confirmation of this suggestion of human sacrifice in time of drought may be quoted the Phœnician legend of El sacrificing his son in time of danger, and the well-known Babylonian text, "when the weather is fine . . . on the high place the son is sacrificed."

³ Jade, though rare, is found in use in Mesopotamia. This jade must have come from Eastern Turkestan. It is found also in Switzerland. Jade has always been much prized by the Turanians, and is so still by the Chinese. It may be to the Turanians of Italy, not to Aryans, that its introduction into Europe is to be ascribed.

⁴ The ass-headed god is shown by Rawlinson in his "Ancient Monarchies," and was known to the Gnostics. In Egypt, Set, Typhon, and Osiris are symbolised by the ass. In classic mythology the ass carries Bacchus and Silenus, and Priapus is also connected with the ass. In India the ass belongs to Yama, beneath the earth. In the Zendavesta the "three-legged ass" with one horn stands in the sea (Bundahish, ch. XIX). The ass was often sacrificed to Typhon and other deities, and there is no end to the mythology of this animal.

In addition to these, the sacred tree, the scarab, the winged horse, the gryphon, the man-bull, the sphynx, the cross, the *ankh*, and the lion-headed demons with eagle's feet and long ears, all appear to be common to the Babylonians, Phœnicians, Cyprians, Hittites, and other dwellers in Chaldea, Syria, and Asia Minor, and, in most cases, these symbols occur also in Etruria.

C. R. C.

CHINESE AND HITTITE.

THE supposition that Chinese civilisation is connected with the old Turanian civilisation of Western Asia is by no means a recent theory. Lenormant in his "Manual" in 1868 (French edit. vol. i, p. 401), suggested that Chinese writing was derived from Akkadian hieroglyphics, and others have endeavoured to trace the connection.

The Rev. J. Edkins has written, since 1871 onwards, on the comparison of China and Babylonia, in writing, in astronomy, in the erection of observatories, in government, and in certain superstitions. In 1868, the Rev. J. Chalmers wrote on the same subject, and Professor R. K. Douglas has compared Chinese and Western myths. Mr. Hyde Clarke and Professor T. de Lacouperie have added to these comparisons, and the similarities of legend, language, religion and custom, dress and graphic ideas, must indeed strike any student of the Chinese who is acquainted with the west of Asia.

Nor is there any difficulty in accounting for such points of contact considering what is known of the early history of the Chinese.¹

The Bak tribes (commonly called the "hundred families") came from the north-west, and entered the "flowery land," it is supposed, as early as 2300 B.C. Their language, in both grammar and words, presents numerous affinities to the Akkadian; and even in the modern Cantonese, which, according to Chalmers, preserves archaic terminations, I find about 100 words almost identical with Akkadian monosyllabic words, which agrees with Professor Max Muller's views as to Chinese.

The traditional number of hieroglyphics possessed by these immigrants from Central Asia was 540, including the secondary signs, or combinations of two, or even three, symbols (Lacouperie, "Chinese Civilisation," a lecture published 1880, p. 18). It has been said that this system was directly borrowed from Babylonia, but there are several objections to such a theory. The Chinese numerals are not like those of the cuneiform system (above three), the writing is in vertical lines, not from left to right as among Semitic writers of cuneiform; the compound emblems bear no relation to the compounds of the cuneiform.

The comparisons of Chinese and cuneiform, which I find possible in fifty or sixty cases, connect the Chinese with the very oldest Akkadian symbols which stand erect, and are written vertically for the word, and from right to left for the text. The sound, as well as the sense, is often

¹ See Professor T. de Lacouperie's new volume, "Languages of China before the Chinese," 1887.