

Fall" of the empire, a young man of foreign appearance, about five in the evening, was seen to be making the round of the several chapels. Suddenly he stopped before the altar of St. Francis of Assisi, and remained in rapt attention before the picture of the saint. More than an hour elapsed, and he was still seen standing, perfectly motionless, his eyes fixed on the well-known painting. At last the *custode*, as it was time to close the church, told him that he must withdraw. The stranger seemed not to hear, and moved neither a foot nor a muscle, still gazing as if in ecstasy at the picture. The *custode* shook him, and urged him to go, but in vain, till at length the Municipal Guard were called in, and the young man was lifted bodily from the pavement, and taken first to the station-house, and then to the Ospedale della Consolazione. The guard had tried to bring him to consciousness by dashing water in his face and shaking him; but, finding these measures ineffectual,—the man remaining with his eyes fixed on some invisible object above, and not a muscle of his body stirring,—they brought him to the medical waiting-room of the Consolazione. There the physicians immediately pronounced the case to be one of hypnotism, and, after various remedies had been tried without success, they at last succeeded in bringing him to consciousness by hypodermic injections of ether. On coming to himself, the patient turned out to be a Bavarian; and one of the attachés of the German Embassy, who had been summoned, identified him as a young, recently graduated physician of Munich, who had been subject to hypnotic fits for some time past. Thanking all the officials—medical, municipal, and diplomatic—for the care and kindness he had experienced at their hands, he returned to his hotel. The Roman press, commenting on the occurrence, remarks that two or three centuries ago the same phenomenon would have been regarded as treasure-trove by the church, and the chapel of St. Francis of Assisi, in the Ara Coeli, would have attracted crowds of pilgrims eager to come under the direct influence of the saint. Medical science, however, may now say, "Nous avons changé tout cela."

#### The Protection from Diphtheria and Tetanus by Inoculation.

The Berlin correspondent of the *Medical Record* has cabled to that journal under date of Dec. 4 that he has received advanced proofs of an article on the prevention of diphtheria and tetanus in animals, based upon experiments in the Hygienic Institute at Berlin, made by Dr. Behring, assistant in the institute, and Dr. Katsato of Tokio. He states that after long experimentation, these observers claim to have cured animals suffering from either of these diseases—diphtheria and tetanus—by the inoculation of the serum from the blood of animals already infected. It is claimed by a large number of experiments, first, that the blood of rabbits protected from tetanus possesses the property of destroying the tetanus poison; second, that this property is possessed by the non-cellular serum obtained from the blood; third, that this property is of so constant a nature that it also remains active in the organism of other animals, so that notable therapeutic effects are produced by the transfusion of blood or serum; fourth, that the property of destroying the tetanus virus is absent in the blood of those animals which are not protected against tetanus, and, if the tetanus virus is injected into non-protected animals, it can be so demonstrated, even after the death of the animals, in the blood and in the other fluids of the body.

#### The Curability of Galloping Consumption.

The announcement by so well-known a physician as Dr. McCall Anderson that acute phthisis, or galloping consumption, is curable, excites a good deal of surprise and quite as much incredulity; yet the *Medical Record* states that Dr. Anderson reports seven cases of this character, of which five recovered.

#### Cancer Mortality among the Jews.

An English paper (quoted by the *Medical Record*) states that one of the lecturers at Owens College, Manchester, has put forward the assertions (1) "that no Jew or Jewess has ever been known to suffer from cancer;" and (2) that "the immunity of the Hebrew race from this frightful scourge was attributed to their abstinence from swine's flesh."

#### The Micro-Organisms of Standing Water.

Drs. Scala and Alessi, according to *La Rivista Internazionale d'Igiene* for August, have completed a series of experiments demonstrating that micro-organisms multiply in standing water at the expense of the organic matter liberated in the water, this multiplication being but slightly influenced by a temperature a little above zero. They note the fact that micro-organisms diminish in water charged with carbonic acid. After demonstrating that light, movement, pressure, and cold have no influence on these micro-organisms, they experimented directly with carbonic acid, their experiments resulting in the proof of the lethal action of carbonic acid on the micro-organisms of water. This action they consider analogous to that by which other ferments die in liquids produced by themselves.

#### LETTERS TO THE EDITOR.

\*\*\* Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.

The editor will be glad to publish any queries consonant with the character of the journal.

On request, twenty copies of the number containing his communication will be furnished free to any correspondent.

#### Right-Handedness.

ANENT the articles in *Science* upon right-handedness and effort, by Professors James and Baldwin, it may not be amiss to call attention to the anatomical and physiological conditions that offer at least one explanation of right-handedness in most persons.

That one cerebral hemisphere stands in dominant relation with the opposite side of the body is so well known that it is only mentioned as a reminder; but it may not be generally known that the left cerebral hemisphere is larger than the right, its inner face (at the great longitudinal fissure) coming very near to the middle line, while the corresponding inner edge of the right hemisphere is well to the right of the median line. The existence, then, of greater nutrition and greater functioning ability in the left hemisphere might well be assumed. But that there is a reason for the greater size, development, etc., of the left hemisphere, is evidenced by a study of the conditions of blood-supply to the two hemispheres. The left carotid artery ascends almost perpendicularly so as to form, as it were, an elongation of the ascending aorta, while the right carotid is given off from the *arteria innominata*. The right vertebral artery is given off by the subclavian after the latter has described its arch and become horizontal, but the left vertebral arises from the apex of the subclavian's curve. There is thus the distinct advantage to the left hemisphere of a better blood-supply because of the much straighter course taken by the great channels carrying it. On the other hand, this greater directness of communication between the heart and left hemisphere explains the greater readiness with which the latter is subjected to certain forms of disease. A clot of fibrine whipped off a diseased valve is carried much more readily because of the direct route (*via* the carotid) to the left hemisphere; and in conditions of degenerative weakness of the arteries in general, those of the left hemisphere, being subjected to greater pressure in their distal ramifications, will be more apt to yield than corresponding ones in the right.

In passing, it may be mentioned that the location in the left hemisphere of the centres connected with the faculty of language is explainable on the ground of better development of that hemisphere. An admirable lecture on this subject by Professor Gerhardt appeared in *Berliner klinische Wochenschrift*, No. 18, 1887.

Concerning the different periods at which different motor activities become manifested in the human infant, it is well to remember that the voluntary motor tract is not completely developed in the human being until after the end of the first year (Flechsigs), and that the fibres developing from the occipital cortex only begin to appear between the second and third months of extra-uterine life. Up to the latter period, motor activities following visual stimulation must be considered as reflex; but the use of the right hand predominantly, or at a later period from conscious choice, is a conse-

quence of the pre-existing better nutrition, and hence readier functional activity, of the left cerebral hemisphere.

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51 West 47th Street, New York, Dec. 3.

### Onondaga Folk-Lore.

UNTIL recently David Cusick's "History of the Six Nations" was the chief treasury of Iroquois legends, though much could be gathered from the writings of early missionaries and travellers. These, however, paid more attention to customs of life. Of late more care has been given to the collection of stories, and with fair results, but many old tales have been forgotten. Even so prominent a legend as that of Hiawatha was unknown to the whites fifty years ago, but it may not be very old among the Indians themselves. As a frequent visitor to the New York Onondaga Reservation, I have occasionally obtained some material of this kind, part of which has been published, and can only regret not doing this earlier.

The Onondagas have a strong belief in witches, and take precautions against them. A clear-headed and intelligent Indian told me that he met a spirit one night, and described its appearance. He took a good look at it, not being afraid, for, being a Christian, he was sure no spirit could hurt him. Supposed witches are avoided or placated, but are not now punished, though once they were put to death. I have been in an unfathomed cave on the east side of the reservation, where, it is said, a witch was cut to pieces, and thrown into the rocky cleft, many years ago.

Pygmies are supposed to live under ground, sometimes appearing to men, and their old abode was pointed out to me. They are the Che-kah-ha-wha, or Small People, of the Onondagas; the Yah-ko nen us-yoks, or Stone Throwers, of the Mohawks; and the Ehn-kwa-si-yea, or No Men at All, of the Tuscaroras.

The tale of the vampire, which caused a change in the mode of burial, was first published by David Cusick. The version given me differs somewhat from this and that of Mrs. Erminnie A. Smith. Leaving out the graphic details for another time, the story may be briefly told. A man and his wife, with their father, one night occupied a deserted cabin. As the fire went down, a skeleton form appeared, killed the old man, and began gnawing his body. This aroused the younger persons, and the skeleton retreated when they stirred up the fire. By stratagem they escaped one at a time, but were soon pursued. Their friends came to meet them when they heard their cries, and they were rescued. The people assembled, found a skeleton in a bark coffin in the house, resolved to burn it; and out of the flames came a red fox, which burst through their ranks, and disappeared in the forest.

The story of O-kwen-cha, or Red Paint, deals with the marvels of magic, in which the boy proved powerful. He saved his grandmother by overcoming the great wrestler, and brought an uncle to life. By destroying a giant he restored another uncle; and by overcoming a wonderful dog, a third. The fourth uncle was delivered by a longer and curious trial, and he returned home with them, to find his grandmother grown old. By an odd expedient he restored her young looks, twisting a stick in the loose skin of the back of the neck, until all the wrinkles were drawn out of her face. I found a resemblance, in one part of this tale, to a Canadian legend related by Mr Chamberlain. Red Paint arranged the scattered bones, and then pushed against a tree, crying, "Look out, look out! this tree will fall upon you!" The bones united, jumped up, and ran away. In the Canadian story the boy shoots an arrow in the air, with a similar exclamation and result.

It is unlucky to shoot at the white sea-gull, the bird of the clouds, or the one that never lights on the ground, for it dives in the air, and the hunter misses his aim. If he does this twelve times, on the thirteenth he will vomit all the blood from his body. This is the bird which destroyed Hiawatha's daughter, and not the white heron.

The Great Mosquito was an immense creature, and did much harm. One story relates that the Onondagas and Cayugas destroyed him, but with much loss to themselves. Clark ascribes the victory to Hiawatha, but the usual hero is the Holder of the Heavens. On the Tuscarora Reservation, near Lewiston, the stone

is shown on which he rested, and the tracks of pursuer and pursued were preserved near Syracuse, N.Y., until quite recently. The bird-like prints of the monster's feet were described to me, and the place of his death yet retains its early name. All the stories agree in making the small mosquitoes originate in the decaying body.

The Onondagas raise the old tobacco (*N. rustica*), and it is used for sacred purposes, though not restricted to them. When medicinal plants are sought, a little tobacco is strewn around the first one found, and it is left for good luck. A little bag of tobacco is attached to the wooden false face, when this is left long unused, and this still remains on the one I have. Tobacco was always burned with the white dog.

The False Faces form a society, somewhat like medicine-men, and are supposed to have magic powers. The old masks are of wood, and these are like those described one hundred and fifty years ago. Green Pond, a little west of Jamesville, is one of the reputed early resorts of the False Faces, their magic powers opening the rocky walls. They still have feasts of their own, and assist at others.

I have been often asked whether the curious silver brooches have any significance as emblems or charms. None at present, certainly. Originally made by white men, their manufacture at last passed into Indian hands, and they were used simply as ornaments. All my crosses had been worn by Pagans. I have many forms of these brooches, but they are becoming rare. They are circular, square, lyre-shaped, diamond-shaped, stars, single or double armed crosses, Masonic emblems, combinations of hearts and crowns, etc. Some persons have attached much mystery to these double-armed crosses, as though they were antique and rare. I have had a number from Onondaga Indians, who recently used them. Among many silver ornaments and brooches, I have had and seen but one brass brooch.

There are some wampum stories, and much that is curious in its use. The Iroquois had no true wampum until the Dutch came, but may have used colored sticks or quills. An Onondaga tale makes Hiawatha's wampum of eagle-quills, and ascribes the invention to him. He alone could call down the wampum bird.

Some of the old feasts and games are yet retained. Both Seneca and Onondaga snow-snakes are made, and much used; a boy often holding several in his hand, and throwing them one after another. The boys also use the javelin a great deal; and another favorite game with children is mumble-the-peg. Their name for violets signifies "heads entangled," the flowers being interlocked and pulled apart. Lacrosse has almost disappeared, base-ball taking its place. Among implements and ornaments I still find early forms; but they are fast being displaced, and some which I used to see cannot now be found at all. W. N. BEAUCHAMP.

Baldwinsville, N.Y., Dec. 3.

### Osteological Notes.

CONSPICUOUS by its prominence, occupying the lateral regions of the mammalian cranium, and connecting these with the face by an osseous bridge, is the series of bones known as the jugal or zygomatic arch. As this arch presents many modifications in the various orders, for the full understanding of its morphology it will be necessary to trace out its correlations not only with the neighboring structures, but also with the habits and environment of the animal. Composed often of three bones,—the malar or jugal in the centre, flanked on either side by the zygomatic process of the squamosal and by the malar process of the maxilla,—the arch may be reduced to two, the process of the squamosal and the jugal, or the process of the squamosal and the post-orbital process of the frontal. The number of bones present depends upon the advanced or receding position occupied by the orbit, also upon the position held by the articulation of the mandible in relation to the orbital cavity, whether this be above, below, or on a level with it. Although the arch in certain cases is very imperfect, it can never be said to be entirely absent. The strength of the jugal arch, the most important factor in its existence, depends upon its line of direction, whether this be straight or curve!, and upon the amount and manner of this curvature; upon the number,