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A REVIEW OF DR. MAX BARTEL'S WORK, "DIE MEDICIN  
DER NATURVÖLKER, ETHNOLOGISCHE BEITRÄGE  
ZUR URGESCHICHTE DER MEDICIN."  
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WITH A CONDENSATION OF THE SUBJECT MATTER ON PRIMITIVE  
MINOR AND MAJOR SURGERY.\*

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I have just read Dr. Max Bartel's work on the "Medicine of Primitive Peoples," and as it contains a number of interesting facts, I have been tempted to translate for your benefit some of the more striking examples of minor and major surgery related by this learned author.

While it is doubtless true that many of their methods in minor surgery are based upon the assumption that diseases are the result of some evil spirits implanted in the body, who manifest their presence by pain or other subjective symptoms, and that, for the purpose of curing the patient, it is necessary to open the body and let the devil out, this cannot possibly be the basis of procedure in all instances, and is certainly not the case with many of their major op-

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erations, which appear to be well planned and executed. Daily observation must have convinced them, at an early stage of their history, that injuries are the result of natural causes in their conflict with wild animals, or other tribes, or accidents, while engaged in the chase, sports, or daily avocations; and the very fact that the causes were apparent, and that they were not dealing with some supernatural internal foe, may have inspired them with courage in the management of wounds, and with extended experience, their skill and methods naturally improved, until we see them perform operations which, up to within a few years, were rarely attempted by the most civilized operators.

A method of *dry cupping* by means of sucking the parts with the mouth of the medicine-man appears to be in vogue among the natives of Australia and North America; sometimes this suction is continued until blood oozes from the part; this has been observed among the Onkanagans of British Columbia, the Klamaths, Koroks, and the natives of Australia, not only in the treatment of a number of diseases, but also in inflammatory conditions, bites of serpents and scorpions, and in the management of arrow-wounds and bleeding surfaces.

The Indians of lower California and Northern Mexico, the Flatheads and Mincopies, frequently combine with the above method scarification by means of sharp fragments of stone or flint, and the Dakotas, Winnebagos, and the Karaya Indians of Brazil, and some of the tribes in Alaska, use special implements made of flint for this purpose. The Australian negroes and Mincopies use sharp fragments of glass; the natives of Southern Mexico and the Mosquitos employ fish bones, and some tribes in Mexico resort to thorns. The Ashantis scarify the parts with a thorny leaf, and the natives of Watubela Island pick up a fold of the skin by means of a bamboo forceps, and then scarify the part. Scarification, either singly or combined with subsequent suction by the mouth, appears to be a very common method for the local abstraction of blood, corresponding to our dry and wet cupping. The Navajo and Chippewa In-



dians have become more refined, and, instead of the mouth, apply a hollow reed; and those of Alaska place the hollow tibia of an eagle over the diseased part and then apply suction. A still more refined method is in vogue among the natives of North Africa, the Kaffirs, and Basuthos of South Africa, the Islands of Suang, Sermata, Leti, Moa, and Lakor in the Malayan Archipelago, and the Winnebagos, Creek and Dakota Indians of our own country. These peoples employ the horns of buffalos or cows; the points are perforated, the lower and large end is applied over the diseased parts, the air is exhausted by suction, and the opening is quickly closed with a piece of soft wax. These methods are quite commonly resorted to, not only for the extraction of the evil spirit, but also for the relief of inflammatory pain and neuralgia.

*Venesection* appears to be employed by a number of Indian tribes, many of whom have special instruments, resembling the point of a knife, tied to a stick, and generally made from a piece of flint. The Kwixpagmut Indians, at the mouth of the Yukon river in Alaska, use a small iron knife, and the natives of Australia resort to fragments of quartz or sea-shell. A very novel, if not amusing, method of venesection is practiced by the Indians of the Isthmus, who shoot their arrows at the patient with sufficient precaution to prevent deep penetration until a vein is struck. Such anatomical ignorance is nowhere else found, for the Karaya Indians of Brazil open the frontal vein for the relief of headaches, the Honduras open a vein in the thigh or leg, while the Indians of Central California take blood from the right arm if the disease is located in the trunk, and from the left arm if located in the extremities; the old Peruvians opened a vein at the root of the nose.

*Circumcision*, and other ritual operations, are frequently practiced by the primitive races. The natives of Northern and Central Africa and the Mohammedans of Asia employ a razor, the ancient Hebrews use a flint knife, and the inhabitants of the Malayan Archipelago resort to a sharp piece of bamboo; some employ the circular method, while others,

like the Serang Islanders, simply split the prepuce; for this purpose the operator, usually an older man, stretches the prepuce over a piece of wood, places the knife longitudinally over it, and drives it home by means of a solid block of wood; hæmorrhage is controlled by tamponade and the application of styptic powders.

The girls of the Malayan Islands are subjected to a *slight excision of the præputium clitoridis*, the operation being performed by women. In East Africa, a portion of the mons veneris and the labia majora are excised usually with a dirty razor. By means of suitable position and fixing the thighs, or the introduction of a few stitches, union of the vulva is effected; the insertion of a small tube prevents complete closure and admits of the escape of urine and menstrual fluid. This operation has been styled infibulation. Before marriage, the old union is partly divided, and just before parturition the opening is still further enlarged, while, after recovery from confinement, the operation of closing the vulva is frequently repeated.

*Cosmetic operations*, such as tabooing, the formation of geometrical scars, perforation of the lips, nose and ears for the suspension of ornaments, are of course very common. Among the natives of the Malayan Archipelago, a beastly habit of perforating the glans penis, for the purpose of inserting foreign bodies for erotic purposes, is in vogue, while others make an incision on the dorsum of the penis and insert a small gravel, or some other foreign body, and allow it to become encysted. V. Miklucho-Maclay reports that the natives of the Northwest Coast of Australia split the lower half of the glans penis from the meatus downwards for purely erotic purposes.

*Removal of Foreign Bodies.*—For this purpose quite a number of expedients are resorted to. The Karaya Indians of Brazil employ sharp fish-teeth for the extraction of thorns, splinters, insects, and other foreign bodies. The Haussa of Northwestern Africa employ primitive iron forceps. The treatment of abscesses consists primarily in the application of poultices; this has been observed among the



natives of Australia, Easter Island, and Engano; among the Ashantis and North American Indians, a favorite application consists of hot mashes of leguminous leaves and ashes. The medicine-man of lower California does not hesitate to open an abscess by means of suction with his mouth, whilst the Frazer River Indians, the Bilgulas, and the negroes of Victoria, scarify or incise the part with iron or bone knives; the South-sea Islanders of Tahiti, Samoa and Tonga open obstinate abscesses and boils with their scarifying implements made of fragments of shell, flint, and glass, large thorns, or the tooth from a shark. Hamilton witnessed among the Nicobares the application of the lower jaw of a fish supplied with very sharp teeth, which was driven into the tissues by a blow with a block of wood; profuse hæmorrhage ensued, and the abscess terminated in speedy resolution. The Dayakes of Borneo open their abscesses and boils with a wooden knife; the Kirgise according to Pallas, treat carbuncles, after making numerous punctures, by the application of tobacco and ammonia, and Corre attests that he saw the Fullahs of Rio Nuñez treat an ulcer by compression with a sheet of native copper.

*Dental operations* are fully attended to; they often use files and chisels, but do not hesitate to resort to the hammer and brute force for the removal of teeth. The people of Sokotó, however, have an instrument closely resembling the modern gum-lancet, and very fair shaped forceps.

*Wound Treatment.*—Most of the primitive people permit their *trivial wounds* to heal under the scab; some, however, like the Karoks, Ashantis, Dakotas, the natives of South Australia or New Guinea, and of lower California, apply poultices prepared from pounded leaves and juicy barks. The Karayas of Brazil dust their wounds with powdered charcoal, and the inhabitants of Engano Island apply hot ashes or leaves. The Samoans fumigate their wounds with the smoke from black walnut wood, whilst some of the tribes in Southern California prepare ointments, and others of Alaska have perfected plasters from cedar-rosin.

The negroes of Victoria are said to *control hæmorrhage* in

ordinary wounds by suction; they also believe in compression and free drainage, and after suppuration subsides, they cover the parts with rosins; they also appreciate the necessity of reopening the wound in case it becomes foul or unhealthy.

Whilst many deny that our North American Indians possess any therapeutic knowledge, it is nevertheless true that in *suppurative and sloughing wounds*, the Shaman prepares a decoction of willows, and by blowing it either directly from his mouth or by the use of a reed, he thoroughly cleanses the wound, and thus employs, whether unknowingly or not, I do not pretend to say, an antiseptic solution, the active principle of which we all know is salicylic acid; moreover, the Dakotas, in suppurative wounds, not infrequently introduce drains made of the bark of trees, and also employ a primitive syringe made from an animal bladder and a quill.

Attempts to *close wounds with sutures* are not infrequent. Schoolcraft refers to some of our Indian tribes who employ sutures made of sinew or tree-bark, which are permitted to remain until after the sixth day. The natives of South Australia resort to compression, and the Winnebagos never permit ugly-looking wounds to heal by first intention, but keep them open, so as to heal from the bottom.

Bartels gives a very interesting account of a *visceral injury* in the person of an Indian chief, who received a punctured wound of the chest anteriorly between the fourth and fifth ribs, implicating the lung and resulted in profuse hæmorrhage, which the Shaman was unable to control. During a violent fit of coughing, a portion of the injured lung was forced through the opening and became incarcerated; this stopped the hæmorrhage, but it puzzled the medicine-men what to do with the protruded viscera. They finally concluded that to return it into the cavity might result in a renewal of hæmorrhage, and therefore decided to cut it off, boil it, and feed it to the patient. This was done, the internal wound filled up with granulations, and the chief made a good recovery, with the exception of a pulmonary hernia,



which manifested itself, however, only during violent fits of coughing.

Another Indian, in an encounter with a grizzly bear, received the benefit of his paws in the shape of two ugly wounds, one affecting the left side of the face, tearing the cheek and ear and destroying the eye; the other penetrated the thorax in two places, blood and air escaping from the pleural cavity. The Indian was picked up for dead and carried to his tepee. Upon showing signs of consciousness, he was placed in a position favorable for drainage, and the wounds were assiduously bathed with some mucilaginous decoctions, and at the expiration of a few months, he was sufficiently well to take a long journey to the agency of Sault St. Marie.

Baker reports the case of a native of Ceylon who encountered a wild boar; the animal having been slightly wounded, threw the native down and performed a rapid abdominal section; a companion rushed to Weddah's assistance, replaced the protruded intestines and applied an abdominal bandage. Baker saw the subject a few years afterwards, and an immense ventral hernia and a transverse bluish cicatrix eight inches in length, attested the narrow escape of this native. He does not state whether a suture was employed or not; nevertheless, the case must be considered as a remarkable recovery from abdominal injury with visceral protrusion.

A few years ago, I was called to see an Indian girl who had been bitten by a rattle snake; the arm was enormously swollen, and the child showed profound constitutional symptoms, and would probably have perished if her father had not applied a buckskin ligature above the elbow. The wound in the thumb had been freely sucked and the entire arm covered with a poultice of chopped fresh lupine.

*Gunshot Wounds.*—It is somewhat surprising that there are so few data concerning the treatment of this class of wounds. My experience is that the Indians, as a rule, pay very little attention to gunshot flesh wounds, and simply permit them to heal under the scab, corresponding to our

primary occlusive method. In the treatment of shot fractures they resort to retentive splints, but do not pay sufficient attention to the reposition of the fragments. Bartels, in speaking of the treatment of arrow wounds, refers to the Opoates of Mexico, who remove all blood clots by suction with the mouth, and afterwards dust the wound with peyote powder. In the course of two days, the wound is washed and again dusted with this powder; and after treatment every other day in this manner, the wound is dusted over with finely-powdered lechugilla root. This tribe is said also to employ balsams, prepared from the leaves of maguey, lechugilla, date-palm and rosemary. The Karok Indians cover their arrow wounds with tar from the *pinus edulis*.

According to Bowditch, *shot injuries of the extremities* among the Ashantis, especially when complicated with hæmorrhage, usually prove fatal, as they have no means for the control of arterial bleeding. Wolff, in speaking of the negroes of Ouango, rather admires their surgical skill, for he saw a man with a shot fracture of the tibia, dressed with a suitable splint made from swamp grasses, and extending above the knee and below the malleoli. This splint secured perfect immobility of the fragments, and was, moreover, supplied with a fenestrated opening for the escape of the wound secretions.

The Mincopies dress their shot wounds with leaves; and the Samoans, for the purpose of removing a barbed spear or arrow, make a counter-opening and push the missile through. The control of hæmorrhage appears to be a difficult task for most of the primitive people, and the majority are helpless in the face of blood. The Haidah Indians and some tribes in Alaska, resort to eagle-down, while the Dakotas, Winnebagos and other tribes employ vegetable stypics; some in conjunction with compression.

The Karayas of Brazil have recourse to circular constriction; and the natives of Humphrey Island and Manahiki apply the spongy part of an old cocoanut. In Morocco, circular compression, and, if necessary, the application of hot pitch are employed. The South Sea Islanders



have some sort of primitive tourniquets, and use them in the treatment of arterial hæmorrhage, in connection with a native fabric made of the paper mulberry tree. The North American Indians, in *violent nose-bleeding*, stuff the nostrils with hot pulverized charcoal.

*The actual cautery* appears to be a favorite remedy among primitive people for all kinds of ailments. The Mincopies apply a large flat and carefully heated stone in the treatment of skin diseases over the affected part. The Twana-Chemakum and Klallam Indians apply hot pieces of cedar bark in the treatment of rheumatic affections. The natives of Gilbert Island use hot pieces of cocoa-shell, and the Indians of Southern California resort to the actual cautery by means of a live coal in the treatment of a primary syphilitic ulcer. In Morocco, China and Japan, the cautery iron is used in a variety of surgical and other diseases.

*Fractures and Dislocations.*—On the whole, the results of treatment of these injuries by primitive people are disappointing, and very few of them appear to have the slightest idea of the mechanism of these injuries. While it is true that many of them apply retentive splints, few appreciate the necessity of reposition of the fragments, extension and counter-extension, and the results are seen in many badly united limbs. The Creek and Winnebago Indians are said to have obtained some very gratifying results, while the natives of Southern Australia also manage their case quite well by the application of splints and clay. In many instances, after straightening the limb, it is surrounded with a casing of clay, which in time hardens and prevents displacement. Bartels mentions a fracture of the femur thus treated, where there was no perceptible lameness or shortness; and in the case of a boy who sustained a fracture of the jaw by the fall from a horse, treated by the application of a clay-mask over the entire face, the result was equally satisfactory.

*Amputations.*—Judging from the meagre data, it would appear that such operations are rarely performed. In Morocco, the ablation of one or both hands is frequently pre-

scribed as a mode of punishment; and Quedenfeldt reports that in these cases the hæmorrhage is controlled by the application of hot pitch. Corre declares that the stumps are very neat and symmetrical, but we have no record where the operation was seen by an intelligent witness.

*Hernia* is also rarely referred to, although it is well known that the umbilical variety is quite common, especially among the tribes of Africa. Moore saw a medicine-man at Radschputana apply a hot iron over an injured hernia, thus proving his ignorance of the nature of the case; a native of the Loyalty Island operated upon himself for a femoral hernia, but perished in consequence. Schoolcraft says that our Indian tribes are perfectly at sea in the treatment of strangulated hernia, while in the reducible form they employ very suitable bandages. Quedenfeldt's collection of trusses from Morocco shows that they treated their cases quite intelligently.

*Operations on the genito-urinary organs* are frequently mentioned. Castration appears to be a favorite treatment in hydrocele and orchitis, especially among the natives of Fahiti, Samoa, Tonga and the Loyalty Island. The Chinese are fond of the moxa in the treatment of vesical calculus. Moore saw a case at Radschputana where a vesical concretion had wedged itself in the neck of the bladder and finally ulcerated through the rectum. While most of the natives of India now seek relief at the hands of European surgeons, the operation is frequently performed by professional stonecutters, much in the same way as it was done a century ago in Europe—viz: the finger is introduced into the rectum and the stone pressed against the perineum, an incision is made over the protruding part, and after dividing the walls of the bladder, the stone is removed by means of forceps.

We have the history of a Kiowa chief who, in 1862, received an arrow *wound in the right buttock*; the shaft was removed by the Indian medicine-man, but the iron head having penetrated quite deeply, was permitted to remain. Immediately after the injury the patient voided bloody urine,



but the wound healed kindly, and for six years the chief was able to engage in the chase without inconvenience. In August, 1869, difficulties in micturition and other symptoms pointing to vesical calculus, induced him to seek the advice of Dr. W. H. Forwood, U. S. Army, at Fort Sill, who removed, by lateral lithotomy, an egg-shaped calculus which weighed nineteen drachms, and was found to consist of a uniform deposit of triple phosphate around the iron arrow-head. The patient was almost convalescent on the eighth day, when his band carried him to his camp sixty miles away, where an epidemic of fever was prevailing, and he died nineteen days afterwards. The specimen is now in the Army Medical Museum.

According to v. Miklucho-Maclay, a peculiar operation, called "Mika" and "Kulpi," is practised on boys at the age of twelve and fourteen, among the Diegerrie tribe, residing along Cooper's Creek, in Australia, consisting in a *complete splitting of the urethra along the lower surface of the penis* from the orifice to the scrotum. According to Taplin, the operation is performed as follows: A suitable piece of kangaroo bone is introduced into the urethra as far as the junction of the scrotum, and using this as a guide, the operation is completed by means of a flint knife or shell fragment; sometimes the incision is made without a guide, the penis being placed on a piece of tree bark. After the operation, a piece of soft bark or a piece of bone is inserted to prevent adhesion of the wound surfaces. Of the effects of the operation, we are told that the urethra is no longer a canal, but a shallow groove, with the outlet close to the scrotum, and they have to urinate in a feminine fashion. During a relaxed condition, the penis is very much shrunken, and has the appearance of a large button, while during an erection, it is broad and flat, and in coitus the spermatic fluid is ejaculated outside of the vagina. The motive for this mutilation is stated by the natives to be a limitation of the offsprings, while others simply declare it to be the custom of their ancestors, and they follow it. The women of Nasim confirm the statement that men thus operated upon cannot

beget children. It is a noteworthy fact that the finest specimen of manhood in some tribes are spared from this mutilation; but among the Nasims, the custom appears to be reversed, as only the more promising types are selected as a mark of special distinction for this operation; and the Reporter adds, that they are special favorites among the women. Some of the natives of Brazil are reported to resort to external urethrotomy for the removal of a peculiar transparent fish about two c. m. in length, which is apt to slip in the urethra during bathing.

*Operations on the Neck and Trephining.*—Corre reports a case of extirpation of the cervical glands among the Fulahs in the territory of Rio-Nuñez, and Flegel brought some instruments on his return from Haussa, which are used for the removal of membranes and secretions in the treatment of throat diseases; the instruments consist of hooks, tongue depressors and hollow chisels and spade-shaped implements.

*Primitive Trephining* is practiced among the natives of Uvea, one of the Loyalty Islands. Samuel Ella, who has lived a long time among them, says that they are still in the stone age, and that it is a common belief among them that headaches, neuralgia, vertigo and other head symptoms are the result of a crack of the skull or pressure upon the brain, and the remedy consists in making a crucial or T-shaped incision over the soft parts, and subsequently scraping the skull with a piece of glass until the dura mater is reached through an opening about the size of a silver dollar. Sometimes the operation in the hands of an inexperienced operator, or in consequence of impatient friends, is extended to the pia mater, and the patient dies in consequence; as it is, about 50 per cent. prove fatal, but owing to superstition this barbarous custom has become so prevalent that half of the adult population are seen with a hole in their skull. Ella adds, that it has been reported to him that sometimes a piece of cocoanut shell is placed over the opening to protect the membrane, the plate having been previously reduced to a suitable thickness, and neatly polished. Formerly the tooth of a shark was extensively used



in the operation, now they prefer a fragment of glass, and usually elect a point for the operation near the junction of the sagittal and coronal suture.

George Turner confirms these observations, and says that whilst the mortality is great the curative effects are also well marked. Indeed, if these natives only lose 50 per cent. of their cases, the result is as good if not better than those obtained by civilized surgeons before the antiseptic era.

Mr. Umlauff, of Hamburg, is in possession of a mummy from New Caledonia, which shows that the patient perished during the operation, for, as Bartels remarks, the operation was incomplete, and shows no reparative attempts, and that it was not performed *post-mortem* for the purpose of liberating the soul or spirit of the deceased, is shown by the very incompleteness of the operation.

Trephining is a very ancient operation, as shown by the numerous skulls found in different parts of the world, which date back to the neolithic period. Prunières and Paul Broca have made a special study of the subject, and whilst some of the skulls indicate that the operation was performed *post-mortem*, a goodly number present signs of reparative efforts, and others indicate that many of the subjects survived the operation for some time. In none of the specimens, had the operation its seat in the frontal bone, whilst in the mummy referred to, and in a collection of pre-columbian, Peruvian skulls, the operation was invariably over the frontal bone. Squier, who has studied many of the specimens, is of the opinion that the Peruvians executed the operation by means of a chisel.

*Abdominal Operations.*—It must be a matter of agreeable surprise to the abdominal surgeon to learn that some of the brilliant operations have been performed by primitive operators. Bartels quotes Bancroft, who cites the case of an Onkanagan Indian, upon whom the abdomen was laid open and a large amount of fat removed; the wound was closed with stitches and the patient recovered. A Chippeway Indian is reported to have successfully performed *Cæsarian section* upon his own wife, whilst Felkin, in 1879, witnessed

at Kahura, in the Uganda of Central Africa, a Cæsarian section, performed by one of the medicine men of the tribe, and describes the operation as follows :

The woman, a primipara, aged 20, was placed upon a reclining couch, and after a partial stupefaction by means of banana wine, she was secured across her chest to the bed with a broad bandage made of bark fibre, another bandage secured her thighs, the ankles being held by an assistant ; a second assistant stood on the right side of the bed and fixed the abdomen, whilst the operator with knife in his right hand, stood on the left side of the bed. After murmuring some incantation, he washed his own hands and the abdomen of the patient with some banana wine and subsequently with water. He uttered a shrill note, which was answered by the multitude without, and made his incision, reaching from the pubis to the umbilicus, dividing the abdomen and uterus with one stroke of the knife, so that the amniotic fluid gushed forth. All bleeding points in the abdominal wall were promptly touched by an assistant with a red-hot iron. The operator quickly enlarged the uterine incision, whilst an assistant held the wound apart, and when the uterine opening was sufficiently enlarged, he extracted the child, which was given to another assistant, and the umbilical cord was promptly divided. The operator now laid his knife aside, and rubbed and pressed the womb with both hands ; he also introduced his right hand into the uterine cavity and dilated the cervix with two or three of his fingers, and then removed the placenta and blood clots through the abdominal wound. In the meantime the operator endeavored to secure firm contraction of the womb, while the assistant cautiously applied the actual cautery to all bleeding points, and another assistant was kept busy trying to prevent protrusion of the intestines. The uterine wound was not sutured ; the assistant relaxed his hold of the abdominal wound, which was covered with a porous grass mat, and the patient was lifted up and partly turned upon her side to permit of free drainage of the abdominal cavity, after which she was gently placed upon her back, the mat removed, and the abdominal wound closed by means of seven slender but well polished nails, resembling accupressure needles and a twisted suture made of vegetable fibre. The wound was covered with a thick paste, made from the chewed pulp of two different roots, over which a warm banana leaf was laid, and the whole secured by a



firm bandage made of Mbugu-fibre. The woman bore the operation without complaint, and one hour afterwards rested very comfortably.

Felkin reports that the temperature on the second evening after the operation was  $101^{\circ}$ , and pulse 108. The child was put to the breast two hours after the operation; on the third morning the dressings were removed, and a few of the needles; the remainder were taken out on the fifth and sixth days. There was very little pus, which was removed by means of a spongy pulpa; and on the eleventh day the wound had entirely healed.

It may be argued that the ancient Peruvians resorted to trephining for the purpose of liberating an evil spirit, but no such superstitious notion could have actuated the operation just referred to, or the following instances, which actually pre-suppose physiological knowledge, in so far as *ovariotomy* has been performed by primitive people for the express purpose of rendering the woman sterile. Roberts saw such a case in India, and Mac Gillivray noticed at Cape York, in Australia, a dumb female on whom ovariectomy had been performed by a native medicine-man, so that she might not give birth to mute children. Rotsh observed among the natives of Australia, at Parapitshure Lake, a peculiar looking girl, who avoided the company of other women and was almost in constant company of young men, sharing their occupation and hardships, though manifesting no special fondness for them. The native guide pointed to the large cicatrices in the groin of this unfortunate girl, and in broken English explained, "All same spayed cow." Rotsh adds, that she was not the only specimen he saw, but that it was the custom to supply a limited number of hetaira, who cannot become mothers.

In conclusion, permit me to repeat that the within notes, with slight exceptions, are a condensation of the subject-matter, compiled by Dr. Bartels, whose work is a monument of pains taking research and a most important ethnological contribution to the early history of medicine.

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