position which gave facilities for crimes of violence—and had an attempt been made to claim exemption from punishment on the ground of insanity, one can imagine what an immense mass of evidence would be at hand to invalidate the plea. In the case of the second man mentioned, however, there can be little doubt that such a defence would not have been thought of. He lived largely at a distance from his friends, and his command over himself is even still so great that, except under peculiar circumstances, it is next to impossible for a stranger to induce him to betray what would be legally recognised as a sign of insanity.

The conduct of the second patient is in one respect very interesting, as throwing some light on the occurrence of mysterious disappearances. I daresay some of my hearers will remember the case of a gentleman moving in good circles in London whose disappearance excited a profound sensation some years ago. A new silk hat which was identified as his property was found in a public place, but no further trace of him was discovered till some three months afterwards, when he was recognised under the disguise of a cattle drover in one of the western counties. He returned at once to the society of his equals, and attained a good position in one of the learned professions. No satisfactory explanation of his disappearance was ever given, at least to the public, but several years later the circumstance was significantly recalled when the poor gentleman put an end to his own life immediately after having sustained a severe domestic bereavement. There can be little doubt that his disappearance was prompted by a delusion, probably not dissimilar to that of patient K. K.

Case of Persistent Self-Mutilation. By Eric Sinclair, M.B., Medical Superintendent, Hospital for the Insane, Gladesville, New South Wales.

P. McT., æt 25, a native of Ireland, where he is said to have left a wife, was admitted into the Hospital for the Insane, Gladesville, N.S.W., on the 18th November, 1881, suffering from mania, said to be caused by intemperance. For 12 months after admission he had frequently recurring attacks of acute insanity, with intervals of comparative quiet. He never, however, was free from delusions, and occasionally through acting on their promptings was an aggressive and dangerous patient, who required much watching. His disposition gradually changed, and though he became, if possible, more insane,

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he was not so violent or aggressive, but grew more demented, and developed a tendency to mutilate himself in various ways.

The first serious self-inflicted injury occurred two and a half years after admission, when he excised the left testicle. The instrument used was a fragment of a wire nail, about half an inch long, which he had somehow obtained and sharpened. With this, whilst in bed at night, in a single room, he cut through the scrotum, and dissected out the testicle, partly cutting and partly tearing through the spermatic cord and vessels as high as the external abdominal ring. The explanation he gave of his conduct was, that the testicle did not belong to him, but to another patient, a black man, in the same ward. And when asked if it hurt him, he replied, "No, but it did the other b—r." As the black man seemed obnoxious to P. McT. he was removed to another institution.

Five months after this P. McT. during the night removed the remaining testicle, this time using the tongue of a trouser-buckle. This operation was much better performed; a clean incision two inches long leading into the tunica vaginalis, which remained to line the cavity, the cord being separated close to the testicle. In the former case a large quantity of blood was lost, but at this time there was little or no bleeding. He said he had swallowed the testicle to prevent any one else getting it; and this was probably true, as there was blood about his mouth, and the organ could nowhere be found. He would give no reason for this mutilation, but expressed the opinion that there was now no reason for his detention in Hospital.

No mental improvement followed the castration, and indeed no great change could be detected in the mental symptoms, though care was taken to watch for this. He became, however, decidedly stouter and sleeker in appearance. His dementia slightly increased, and he continued his habits of self-mutilation. He would scratch himself with pieces of wood, with fragments of stone or glass, if he could pick up any such in the grounds, with buttons removed from his clothing, or with his nails. The only serious injury inflicted, however, was a small punctured wound on the left temple, which had somehow pierced the artery, causing considerable hæmorrhage.

The next injury was the most serious, and eventually caused his death. On September 27th, 1885, he complained of feeling ill, but careful examination failed to discover any cause for it, though he was pale, looked ill, and refused his food. A small scar on his right temple attracted attention; this he said he had made with a nail about two months before, and that part of the nail was there still. When questioned as to how the entrance of the nail was effected, he said that he had placed the point against his forehead, had then struck it with his hand until it became fixed, then bumping his head against the wall had driven it quite in. It was then remembered that a small wound, probably that made by the entrance of the nail, was noticed and examined about two months before he became ill, but owing to the swell-

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ing caused by the bumping it was impossible to detect the presence of the nail—which was not suspected. At the time he said that the wound was made by a buckle, and there were no symptoms to lead any one to suspect that the injury was other than a superficial scratch with bruising around it.

A small hard lump about the size of a split pea could be felt under the skin, which had quite healed over it. On cutting down on this it was found to be the head of a wire nail, two inches long, which had been driven through the skull up to its head. Its removal was effected with some difficulty, and a small quantity of pus followed it. There were no head symptoms present, no paralysis of any of the muscles of the body, eyes, speech, &c., no vomiting, and no special pain complained of. He was quite conscious, and apparently in the same mental state as he had been for some time, and decidedly not more demented or stupid. After the removal of the nail no improvement resulted, and he gradually sank and died next day.

A post-mortem examination was made seven hours after death. The incision, half an inch long, which had been made to remove the nail, was seen on the right temple immediately to the outer side of the frontal prominence. Round the opening in the skull, on the outside, the bone was deeply eroded; on the inside the internal table had been pushed aside, making a raised and burred edge. On the surface of the convolutions there was a small quantity of pus, about ʒiß, but the suppuration had not extended deeply enough to destroy any of the grey matter. In this position the dura mater was absent, and round the edges of the "abscess" it was firmly adherent to the brain. In the substance of the frontal lobe there was a cavity one inch in diameter each way, filled with altered blood and broken-down brain substance. Its walls were soft, shreddy and pulpy, and the brain-substance all round was stained a deep yellow. The track of the nail was easily followed; entering the centre of the "abscess," in the middle frontal convolution, it passed backwards and inwards in the horizontal plane, ending just in front of the anterior extremity of the corpus striatum.

In other respects the brain was normal, as were the other organs of the body.

Self-Mutilation in a Lioness. In connection with the foregoing case it may be of interest to add the following example among the lower animals, communicated to the Pathological Section of the Irish Academy of Medicine by P. S. Abraham, F.R.C.S., and published in the 3rd Vol. of the Transactions of the Academy, Dublin, 1885.—Eds.

On the 18th of May, last year, a fine lioness in the Zoological Gardens, in Phœnix Park, was discovered to have devoured, during the night, some six inches of her tail—the hair, skin, bones, and

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everything. She did not then touch it for some days, but appeared to be very restless, and on the 27th of the month she recommenced her extraordinary conduct, and demolished, during the night, a great part of the remainder of the organ. She then rested awhile, but again went at it, and at the end of a month there was nothing left of her caudal appendage but the "butt," some four inches or so, which I here exhibit. The organ was now so short and un-come-at-able that she could not reach it with her mouth, and it was hoped that in consequence she would resume her usual tastes and be satisfied with the flesh of other animals; but on the 1st of July she began to lick and gnaw off the skin of the dorsum of the right hind paw. The integument and subjacent tissues are seen to be removed from nearly the whole of the extensor surface of the foot, and it is evident that the tendons would be exposed were it not for the granulation tissue which has formed, as a superficial layer, over them. It was quite certain that while all this was going on the animal suffered extreme pain; the stump of the tail was seen to be in a constant state of quiver, and when a part of the foot was gone, the leg was drawn up, and the creature limped about the cage on the other three legs.

There was nothing apparently to account for this strange behaviour on the part of the lioness. She was in splendid condition, as regards her fur, flesh, and appetite, and her excretions were normal. It is needless to say, various methods were tried to induce her to leave herself alone—complete change of food, sulphur and other aperients, syringing the parts with bitter liquids, &c., but all with no effect. At last, indeed, it was deemed advisable to destroy her, for her suffering seemed so great, and the extent of the wound on her foot was so large, that, even if she left off the bad habit, it appeared impossible that the raw surface could ever properly heal and skin over.

At an examination of the body, made shortly after death, I found the thoracic and abdominal organs all perfectly normal; the right ovary was larger than the left, and its surface presented several large protrudent Graafian follicles. At first I was inclined to think that this ovary presented some abnormality, but after consultation with Dr. Neville, and on its microscopic examination, I have arrived at the conclusion that, beyond some degeneration, it is the seat of no very great pathological change. The brain and spinal cord were not examined.

The lioness, which was about twelve years old, had been in the gardens for five years, and had always been in good health. She had produced cubs three times, but her offspring were, with few exceptions, unhealthy, mostly becoming rickety and dying young. For one year previously to May, 1884, she had not been in season, although formerly she had been tolerably regular in "coming round."

It is well known that foxes and many other animals when trapped by one foot will sometimes gnaw themselves free and leave a portion

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of their bodies behind; and a gradual gnawing and picking away of the tail has also been observed as a not uncommon habit in monkeys in confinement, as well as occasionally in rats, dogs, and several other creatures. The present case, however, does not come under precisely the same category as these; for there appeared to be absolutely no external cause for the procedure, and instead of a gradual gnawing and disappearance of the organ, large pieces were scrunched off at intervals and swallowed.

I have made a great many inquiries as to similar occurrences in other zoological gardens and menageries, and I here take the opportunity of thanking several superintendents and others, some of whose names are mentioned below, for the information which they have been kind enough to give me. The distinction pointed out above does not seem to have occurred to my correspondents, many of whom have mixed up the cases of gradual gnawing with those more nearly like that of our lioness.

As far as I can find out, the only instances of self-mutilation which had previously occurred in our own gardens, were in (1) a female hyæna, who devoured her tail some years ago; (2) a female wolf, who fed upon one of her legs, and had to be destroyed; and (3) a female jaguar, who ate a good half of her tail, which had been injured by the claw of her neighbour, a tiger, over whose cage she was kept. One day, unfortunately, she let down her tail between the bars, and the tiger made a stroke at it; she ate the fragment, which was hanging by a little skin and tendon, but did not further interfere with the stump. This last case, indeed, is not exactly comparable with the others.

A keeper at the Zoological Gardens in London has informed me that some three or four years ago a young female cheetah, scarcely full grown, commenced suddenly to eat her tail. She would bite off two or three inches, then stop for a few days, then become excited and set to work again. This went on for some weeks, her excitement during the time being very great, and she frequently gave loud screams. Finding no improvement, she was destroyed. An old female hyæna, who had never bred, also some years ago at the London Gardens demolished her tail. She would wait till the stump was nearly healed, and then make another meal off it, until ultimately the whole organ disappeared.

Mr. Jackson informs me that the only case which has occurred at the Clifton Gardens was that of a lioness, a piece of whose tail had been bitten off by a neighbouring tiger. She kept the wound open and sore for two or three months, after which it healed over, and she subsequently became a good mother. This also is not quite in point.

M. Hüet, of the Jardin des Plantes, writes that such occurrences have sometimes happened in the case of leopards, lions, and smaller carnivora, and that they are especially common among the monkeys of that collection. He considers the habit due to a disease of the skin, which can be sometimes cured by treatment.

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The late Dr. Bodinus, Director of the Berlin Zoological Gardens, had often observed animals of prey gnawing their tails and nibbling themselves; and he held that the bad habit has its origin in a faulty state of the blood. He recommended, therefore, a change of diet, such as from horse-flesh to young veal, and castor-oil in milk, also local applications, carbolic solution, tincture of aloes, &c. He stated, however, that it is very difficult to prevent wild animals from gnawing themselves when suffering from pain. He had nevertheless been quite successful lately with a young female jaguar who was eating her tail.

M. Herman, Director of the Amsterdam Collection, has only met with one instance of anything of the kind, in an experience extending over forty-six years. This was in the case of a rhesus monkey, "which, becoming mad, began to eat its forehands."

At the Antwerp Gardens no carnivore has ever attacked its tail, unless that organ had been wounded. More than once an animal has shown a tendency to constantly lick the tail, but a good dose of sulphur has removed the irritation. The monkeys, however, have frequently eaten their tails, and nothing but amputation of the organ has stopped them.

Mr. Jamrach has several times met with such cases among leopards and lions, and, of course, often with the monkeys. He ascribes the cause to be either a healing wound or an irritation of the skin, the intolerable itching developing into a mania. He states also that parrots frequently eat their feathers and flesh.

Mr. Salva, of Cross's menagerie, has frequently observed carnivorous animals mutilating themselves, especially among those which are suffering from scrofulous sores. He considers the only successful treatment to be by amputation of the injured limb.

Through the kindness of Mr. Snow, of the Phœnix Park Gardens, I have recently seen a letter from Mr. Carpenter, animal dealer, of Liverpool, who writes of a young Bengal tigress—"I had a letter last November (from the present owner) saying the tigress was very fine, but had a habit of dropping its tongue out and rolling it about a good deal; and a few days later I received a letter saying that it had eaten the whole of its tail off." This animal had never bred.

Lastly, Mr. F. Collins informs me that many years ago he knew of a lioness in Wombwell's menagerie who devoured her tail.

It will be observed that several of my informants ascribe the morbid appetite to some irritation of the skin; and, no doubt, this may account for the gradual disappearance of the tail in the case of monkeys. A sore may be originally formed at the tip, and, when the itching of healing begins, the scab is picked, licked or gnawed off; the newly rawed surface agains heals over, again to be denuded; and this may go on till the organ at last is all gone. Of course a continuous licking with the prickly feline tongue will soon produce a sore, but it seems unlikely that this or the other suggested causes

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will account for an animal suddenly munching off large pieces of its person. On the whole, I am inclined to consider that this departure from the creature's usual habits is due rather to something akin to a mental derangement; and I think that M. Herman is probably right in saying that his rhesus had "gone mad." My inquiries tend to show that the carnivora which have "taken on" in this way have been nearly always females, which have been either very young, just before they began to breed, or old, at the menopause, when their breeding period had come to an end: and I venture to suggest that we may look upon this perversion of taste, in our lioness at all events, as one of the manifestations in the lower animals of that Protean affection which we call "hysteria."

A Case in which an Old Amputation of the Left Upper Arm was associated with an Atrophied Right Ascending Parietal Convolution. By JOSEPH WIGLESWORTH, M.D. Lond., Assistant Medical Officer, Rainhill Asylum. (With illustration.)

The subject of this communication was a female epileptic, æt. 56, who died in Rainhill Asylum on September 18th, 1884, of catarrhal ulceration of the large intestine.

The interest of the case centres in the fact that when patient was only four years of age she met with an accident which necessitated amputation of the left upper extremity. The section had been made about the middle third of the left upper arm, so that a small stump was left, which was partially movable. For a period, therefore, of 52 years this patient was deficient in the movements and impressions connected with the left arm and hand, and it was consequently to be expected that the cerebral centre in correspondence with this region would exhibit some amount of defective development.

The convolutions of the motor area of the cerebrum were therefore submitted to close scrutiny, with the following result:—The right and left ascending frontal convolutions were equally developed throughout, but the right ascending parietal convolution presented a notable diminution in size as compared with the left. For the first three-quarters of an inch (measuring from the median fissure of the cerebrum) the two convolutions were nearly equal in size, the right being, indeed, a trifle the broader, but for the next two inches the right gyrus was about half the breadth of the left, this proportion being observed until just before the termination of the con-

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