mittees. The section of hypnotism will be merged in this section, and investigations of hypnotism, psychical research, or psychical phenomena, in all forms or phases, conducted under its supervision." Among recent articles may be mentioned (beside several elaborate and very fully and admirably illustrated papers on blood and blood-stains in medical jurisprudence), "Criminal Responsibility in General Paralysis," by Dr. Norbury; "Criminal Responsibility in Inebriates," by Mr. Clark Bell; "The Criminal Insane," by Dr. Graham; "The McNaghten Case," and a report of the International Congress of Criminal Anthropology, by Mrs. Louise Thomas, the delegate of the Medico-Legal Society.

The International Association of Criminal Law.

This Association continues to make progress and to develop its activities, although it cannot be said that it has exhibited much sign of advance in our own country. There are now over 600 members, representing thirty different countries, and the Association contains within it three national groups—German, Norwegian, and Belgian—with independent activities. The object of the Association is to apply the knowledge of criminal anthropology gained by medical science to the reform of criminal law, and although this is a matter which primarily concerns lawyers, it is one to which medical men cannot be indifferent, and for the accomplishment of which their assistance is necessary. During the coming autumn there will be a general reunion of the Association, at which the following questions, among others, will be discussed: What influence can sociological and anthropological studies have on the fundamental conceptions of criminal law? introduced by Alimena, Garofalo, Gauckler, von Liszt, and Tarde; The indeterminate sentence, introduced by Brockway, van Hamel, and Prins; The method of organizing uniform and scientific statistics of recidivism, introduced by Bodio, van Hamel, and Koebner. An alienist will also introduce the discussion of moral insanity.

The Association is also engaged on an important but complicated study—"The Codification of Comparative Criminal Legislation." The first volume of this work will shortly appear.

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3. *Therapeutic Retrospect.*

By Harrington Sainsbury, M.D.

At a recent medical meeting in Budapesth, Oct. 22, 1892, Dr. Schreiber combats the view that *electrotherapy* is suggestion-therapy, though he is obliged to admit the latter to be a potent factor in the use of electricity. Amongst other differences, he states that electricity is able to remove inflammatory products, to cause their absorption, whilst suggestion is unable to effect the same. We should be inclined to doubt the possibility of stating

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so definitely what suggestion cannot do, but at the same time we should be more than prepared to allow that electricity is able to do something, for good or for evil, on its own account. To deny this would be to affirm that an agent with very definite physical powers, to which motor structures and sensory nerves respond very readily, is without effect upon the organism as a whole. Surely electricity is something more than the hospital *mistura flava*; at least, we must hope so.—"Therap. Monatsh.," Jan., 1893, p. 32.

On By-Effects and Toxic Actions of Recent Medicaments. By Dr. Richard Friedländer, of Berlin. "Therap. Monatsh.," Jan., 1893, p. 43.

Dr. Friedländer discusses the action of *pental*, C^5H_{10}, as an anæsthetic, and draws attention to certain by-effects, which warn us, at least, to be cautious. Pental, we fear, is in great danger of losing its good name, if, indeed, it has not already lost it, for the absolute safety of administration promised by Prof. Holländer is contradicted by a death recently reported from Vienna. Cases reported by Holländer himself, and by Breuer and Lindner, indicate marked depression of the heart's action or of the respiration as of occasional occurrence. The choice of an anæsthetic concerns us all, and, unfortunately, an absolutely safe one is yet to be discovered.

On Sulphonal Action. "Therap. Monatsh.," Feb., 1893, p. 57.

Dr. Emil Schäffer, Assistant Medical Officer at the Grand Ducal Asylum of Heppenheim, gives a very interesting account of a form of sulphonal intoxication which has only recently been recorded in one or two instances. He describes the occurrence of definite changes in the urine and in the blood. The urine acquires a dark-red colour, due to the presence of the so-called hæmatoporphyrin or iron-free-hæmatin. This body shows very definite chemical and spectroscopic behaviour, which render its identification easy. The blood in Schaeffer's case showed changes indicating a poverty of red cells and of hæmoglobin, but, unfortunately, the number and the colouring power of the cells were not estimated. Accompanying the above urine change was a diminished diuresis, and further there were abdominal pains and tenderness, especially in the regions of the stomach and liver, obstinate vomiting and marked constipation; the tongue moist and red. The patient lost flesh progressively, one-third of the body weight on admission (41 kilogrammes to 27 kilogrammes), and there was great prostration, also an irregular pyrexia. After these had been noted, the better known motor and sensory symptoms of chronic sulphonal poisoning appeared, viz., unsteady gait and occasional giving way of the lower limbs, with loss of patellar reflexes,

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ataxia and weakness of the arms, slow and difficult speech, and great desire for sleep—paræsthesias were also present. The total quantity of sulphonal taken was 180 grammes, and within the space of 270 days. The daily dose when taken was one gramme (15·5 grains). The author then refers to other effects which have been recorded against sulphonal, *e.g.*, the sulphonal exanthem, attacks of heart weakness, paralysis of the extensors of the forearm, exactly simulating lead poisoning (Jastrowitz), etc. In his own case he thinks the obstinate constipation present facilitated the accumulation of the sulphonal effects, but though the patient did suffer from slight habitual constipation on admission, it is by no means clear that the subsequent marked increase of this trouble was not itself an effect of the poison. In the present case the hæmatoporphyrinuria calls for special notice, for up to the present only some twelve cases in all have been recorded. The moist and red tongue observed by Dr. Schäffer, and the fact that indigestible substances did not increase the severe epigastric symptoms, demonstrates, he thinks, that there was no real stomach mischief, and favours the view of Knoblauch that the vomiting of sulphonal is cerebral. Having in our mind a recent case of marked chronic sulphonal poisoning with epigastric pain and tenderness, and with moist red tongue, we are tempted to combat this view most decidedly. The tongue that we saw was obviously an irritable tongue with thin epithelial layer, and along with the anorexia present there was a by no means tolerant stomach.

The author, in conclusion, admits that though hæmatoporphyrinuria has been noted in other affections, yet it has been recorded (though with a small total) in sulphonal poisoning more often than in any other morbid state. Its occurrence, he says, adds much to the gravity of the prognosis.

Ethylic Chloride, C_2H_5Cl. "Therap. Monatsh.," p. 113, March, 1893.

Dr. Edgar Gans, of Carlsbad, reports on the value of this drug in the treatment of neuralgias. He reminds us of the use in France of the chloride of methyle (CH_3Cl.) for the same purpose —this since the years 1884-1885—but adds that in the chloride of ethyle, first introduced by Redard as a local anæsthetic, we have an equally efficient and more easily applied remedy, as well as a safer one. Ethylic chloride is a colourless liquid of ethereal odour. boiling at about 10° C. (50° F.). It is supplied for therapeutic purposes in small tubes about 5in. long, and drawn out at one end into a fine point. At the time of using the capillary end is broken off, and the tube held in the warm hand, the point directed horizontally towards the part affected, and at a distance of about 12in. The part thus treated is frozen. Dr. Gans reports successful treatment in the following cases:—Supraorbital neuralgia, neuralgia of the breast, lumbago, migraine, pruritus scroti. The cases are few

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in number, but added to the evidence we already possess of the value of ethylic chloride as a local anæsthetic in minor surgery and dental operations they serve to establish the efficacy of the drug. Efficient local treatment for neuralgias is a very welcome addition to our armamentarium. By treatment we do not mean mere palliation for the time being, but persistent benefit, such as is claimed for his compound. Reports on ethylic chloride as a local anæsthetic will be found in our journals for the last year or two.

Hypnal. "Therap. Monatsh.," March, 1893, p. 131.

In 1890 Bardet introduced a compound of chloral hydrate and antipyrine as a hypnotic under the name of hypnal. The compound described by him contained about equal parts of the two bodies, and inasmuch as hypnal was found effective in about the same dosage as chloral hydrate, it was evident that the two constituents must co-operate in their soporific powers, whilst at the same time the compound possesses analgesic properties. Further investigations showed that there was more than one compound of chloral and antipyrine, and that these differed much in physical and chemical characters and therapeutic action. Reuter described one such compound which was practically inert, and Filehne, in the "Berlin Klin. Wochenschr.," No. 5, of this year, describes another such. Probably these two are one and the same. An active hypnal, prepared by the Höchster Pigment Manufactory, and tested by Dr. Herz under Filehne's direction, is now described, and it appears to answer to Bardet's hypnal; it contains 45 per cent. of chloral hydrate and 55 per cent. of antipyrine. It is recommended in the milder forms of excitement, in commencing delirium tremens, in chorea, and in "essential" insomnias. The drug took effect in 20-30 min.; the dose for adults ranged between 15-45 grains. It is best given in 10 per cent. solution in water, and its slight taste can be covered by a syrup of orange peel or by an aromatic tincture. As the Quaker said about dirt, if we must have it let us have it in the middle of the room and see it, so if we must have these innumerable compounds let us endeavour to lay bare the intricacies and impersonations of their bulky molecules.

Investigations into the Action of Trional and Tetronal. By MICHAEL HORVÁTH, of Budapesth. "Therap. Monatsh.," p. 135.

These confirm the results of Kast in classifying trional and tetronal as qualitatively similar to sulphonal. They possess the advantage over the latter of a more speedy action, producing sleep within the hour. Quantitatively Horváth thinks that tetronal is more active than trional, in opposition to Schultze's view, but this point is evidently not established. On the same page we find a reference to Dr. Garnier of Dijon's results with these disulphones. He thinks they are rather more efficient than sulphonal, but then he gives this as an impression only.

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By-Effects and Intoxications of Modern Medicaments. By Dr. RICHARD FRIEDLÄNDER, of Berlin. *Paraldehyde.*

This is a valuable summary of the results following the use of *paraldehyde*, and we may note that the drug has undergone a very extensive trial since its introduction. The first point calling for notice, viz., the taste of the drug, is hardly a by-effect, but it is a very practical difficulty in the way of the use of paraldehyde outside asylums—de gustibus. . . . Next we have the elimination of the drug in particular by the breath, the exhalations being very unpleasant, both to the patient and to attendants, but we should have thought this drawback was over-stated when it is said that the breath of one patient is able to foul ("verpesten") the air of a large dormitory. Paraldehyde is irritant to mucous membranes, and is held to be contra-indicated by all forms of respiratory trouble, and, in particular, phthisis, with laryngeal complications. In irritable states of the stomach and intestines it should be avoided, for there are many records of the establishment of alimentary tract irritation, independent of any pre-existing mischief. It is true the statements on this point are somewhat discrepant, Leech, for instance, denying that paraldehyde sets up alimentary trouble, but the balance of evidence is against this statement, and we must take pre-existing alimentary trouble as indicating caution, if not contra-indicating. Diarrhœa is said in some cases to have been caused by the drug. More interesting and more important is the question of the influence of paraldehyde on the circulation, for we may say almost that the stated absence of circulatory depression by paraldehyde is its *raison d'être:* nothing less could excuse its flavour and odour. Careful investigation has practically established this statement, and we may disregard the slight accelerations and retardations, dicrotisms, and irregularities which have been noted. The blood pressure is uninfluenced by small doses, and large doses exert only a slight depressing action. Cases of peripheral vaso-paralysis have been observed in the chronic use of paraldehyde, and a very remarkable case, recorded by Sommer, may be placed alongside of Rehm's case, in both of which extensive tracts of skin of the head, chest and abdomen showed marked injection. The headaches and the complaints of "blood to the head" and the vertigo complained of by patients are possibly interpreted as vaso-paralytic.

In dyspnœal states, with dilated heart, paraldehyde must be used with much care. Rolleston cautions against it; collapse and dyspnœa have followed even moderate doses under these conditions. The harmfulness is here put down to the effect on the respiratory centre, and it must be remembered that when paraldehyde kills (experiments on animals) it is by respiratory paralysis. The effect on the urine is unsettled: Morselli records increased flow; Berger and others have seen diminution—till this is

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established it is, perhaps, premature to discuss the restrictions this would place on its employment. Albumen in the urine was found in two cases of prolonged use of paraldehyde, in one case by Krafft-Ebing, in another by Jastrowitz.

The temperature suffers slight depression, two- or three-fifths of a degree (F.). According to some this is the effect of large doses, whilst small doses may cause slight rise.

The effect on the blood is what one would expect from the reducing power of aldehydes; there results a certain amount of methæmoglobinuria and methæmoglobinæmia, and the corpuscle changes may recall the changes in pernicious anæmia. No case of pernicious anæmia following its use has, however, been recorded.

The action upon the nervous system is a specific one; putting aside the desired effect, sleep, patients may complain of a feeling of intoxication, of confusion, of headache even with small doses, but it is the continued use of paraldehyde which swells the list of nervous effects. Locomotor and speech disturbances, tremulousness, epileptiform attacks, delirium, hallucinations of vision and hearing, loss of memory, and weakness of mind, emotional uncontrol, irritability, exaggeration of the reflexes, sometimes marked, all these separately or in various combinations have been observed. Krafft-Ebing tells of a nervous woman who for a whole year had taken at least 40 grammes daily (about 10 drachms), and who on the third or fourth day of the withdrawal of the drug suffered from epileptiform attacks and auditory and visual hallucinations. This, of course, reminds us of the delirium of alcoholism; *en passant* we may observe that we have seen symptoms closely simulating delirium tremens follow upon the withdrawal of sulphonal. Paraldehyde, like almost every hypnotic, loses its effects with continued use, and it is necessary to increase the dose.

Not a single death from paraldehyde has been recorded.

On the Treatment of Morphinomania. "Bulletin Général de Thérapeutique," April 23, p. 49.

M. Grellety here discusses the terrible progress of morphinomania among medical men. He speaks of two recent deaths from the poison, and that during the last few years some twelve cases among medical men have come under his notice. He urges that the victim's only chance is to enter some hospital or asylum and place himself unreservedly in the hands of the doctor. He further advocates the abrupt stopping of the morphia. A recent *brochure* by Charles Lefèvre on the same subject is cited as insisting upon the necessity of this "under-care" treatment, and as advocating the establishment of special institutions for the treatment of morphinists. In the discussion which followed, M. Créquy thought that the taking of morphia was less to be feared where it was used only for the combating of pain, and that it was only where the drug was taken for the sake of pleasurable,

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emotional, or stimulant effects that it was dangerous. No doubt this is so; morphia may be employed for months or years as a sedative only, without the production of morphinomania, and, indeed, one author advises that there should be a distinction in name between such as use the drug in the treatment of pain only and those who take it for its own sake, for positive pleasure bestowed. But it is certain that morphinomania springs, for the most part, out of the more legitimate use of morphia as an analgesic. M. Bardet suggested that the subjects of this craving, though they may have had good reason for commencing with the drug, are in general mentally unstable, and if they get rid of this vice, fall into another. This is, surely, saying far too much, for though in general the type which succumbs will be the highly strung, and, therefore, unstable, yet we know that they may put this habit aside and acquire a stability which is able to restore them as useful members to society. M. Bardet advised the use of morphia and opium in full dose whenever it was thought fit to use it in medicine; in this way the analgesic and narcotic effects would be obtained, but with probable after-effects, nausea or vomiting, which would not render it acceptable. But is this safe practice? He also advised the use of atropine along with the morphia as a means of suppressing the pleasurable intoxication of morphia. M. Constantin Paul urged, as the essential point, the keeping of the syringe in the hands of the medical man prescribing the injection.

On Exalgine in the Treatment of Hallucinations and on its Action as Compared with Antipyrine. By Dr. E. M. de MONTYEL, Superintendent of the Public Asylums for the Insane in the Seine Department.

The question occurred to Dr. Montyel as to whether by the use of analgesics the sensory perversions of the insane might be treated. A statement made by Dr. Salemi, of Nice, in 1888, that with antipyrine he had cured a patient suffering from hallucination of hearing and sight of three years' duration, incited Dr. Montyel to systematic investigation. In sixteen cases he carefully tested the drug, but the results were entirely negative. In 1891 the Italian observers, MM. Berarducci, announced success with antipyrine in sensory perversions. The quantities they employed ranged between 30-45 grains, as minimal doses, up to 90-120 grains. In his first researches M. Montyel had not exceeded 30 grains, and he, therefore, reopened the study with these larger doses. His results were more definite. In 19 per cent. there was no effect, in 54 per cent. the patients' troubles were greatly aggravated, in some 17 per cent. the patients were decidedly improved, in 10 per cent. the results were doubtful.

The explanation of the success in certain cases (17 per cent.) is to be found, the author thinks, in a suppression of the reflexes on

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which the sensory perversions depend, and all cases of hallucinations which are not dependent on a peripheral excitement or irritation are, he considers, uninfluenced. The theory is plausible.

He next passed to the investigation of exalgine, and he made use of the same material from which he had obtained his results with antipyrine, in order to have a means of comparing these two drugs. The exalgine was concealed in the patients' wine, so that they were unaware of the investigation, a point laid stress on, because of the dissimulatory powers of these patients; the minimal dose was 6 grains at the start, this was raised ultimately to 15 grains (*pro die?*) The results with 29 cases are then detailed and summed up. These were: Aggravation of the symptoms in 22 cases, no result in 7. Lest the previous treatment with antipyrine should have rendered the patients insusceptible, in spite of a long interval of no treatment, ten other patients with hallucinations, who had not been treated, were now submitted to exalgine. The results now obtained showed that exalgine was able to influence certain sympathetic or reflex hallucinations, but with less certainty than antipyrine. Exalgine, moreover, often caused much disturbance of nutrition. We should, therefore, in cases of reflex or sympathetic hallucinations choose antipyrine and not exalgine. Of the mode of administration, we may note that antipyrine may advantageously be concealed in soup, exalgine more effectually in wine. Exalgine causes less general disturbance if given along with food.

PART IV.—NOTES AND NEWS.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

The Quarterly Meeting was held at the Rooms, 11, Chandos Street, Cavendish Square, on Thursday, May 18th. In the absence of the President, Mr. Whitcombe, ex-President, took the chair.

The minutes of the last Quarterly Meeting were taken as read and confirmed.

The ballot was then taken for the following list of candidates for election:—

Walter Reyner Brunton, M.B.Durh., Assistant Medical Officer, Borough Asylum, Milton, Portsmouth.

Maurice Craig, M.A., M.D., B.C.Cantab., Clinical Assistant, Bethlem Royal Hospital, London, S.E.

Henry John Macevoy, M.D.Lond., 41, Buckley Road, Brondesbury, London, N.W.

James Middlemas, M.B., C.M., B.Sc.Edin., Junior Assistant Physician, Royal Edinburgh Asylum.

Athelstone Nobbs, M.B., C.M.Edin., Assistant Medical Officer, Northumberland County Asylum, Morpeth.

Cecil A. P. Osburne, F.R.C.S.Edin., L.R.C.P.Edin., Surgeon to the Admiralty, Hythe, The Oaks, Hythe, Kent.

William H. Rivers Rivers, M.D.Lond., Clinical Assistant, Bethlem Royal Hospital, London, S.E.

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