Passing to the clinical section, we find considerable additions from the rich experience gained by personal observation, and from the records of the Wakefield Asylum. Proof of long years of keen attention and powerful thought is manifest, and especially when the diseases discussed have a decided pathological basis, such as alcoholic insanity and general paralysis. Dr. Bevan Lewis is one of the few alienists who have used a reaction time apparatus, and we trust that his description and results will lead to further work in this direction. We would suggest that the more elaborate apparatus described by Dr. Rivers in the *Journal of Mental Science* for 1895 will be used in addition, as it affords a test in choice reaction time. We cannot refer at length to the various points of interest raised by this new edition in the clinical section. Suffice it to say that the chapter dealing with progressive systematised insanity merits careful perusal, and the chapter on treatment may be taken as summarising Dr. Bevan Lewis's methods, which are exclusive of such as assume a connection between mental derangements and visceral disturbance. But this is surely rather sweeping in view of the successful results of treatment in myxœdematous insanity for instance.

With regard to the final chapter on pathology, we find it but little changed, and must conclude that the author has not accepted more recent opinions as satisfactory. Dr. Bevan Lewis cannot but be familiar with the work done since he first presented us with his views as to the scavenger cell, which have not been generally accepted. It may be that in the turmoil of contemporary pathology, and in face of such opinions as Van Gieson's in reference to the retraction of the dendrites, he is desirous of confining himself to what he considers fixed and definite. Be that as it may, we cannot but accept the new edition of this powerful book with respect and admiration for the man who has shown that the responsibilities of everyday work in a great asylum are perfectly compatible with labours of the most exacting and tedious nature. His reward is in the results of these labours and the honour of his high professional position.

Part III.—Psychological Retrospect.

THERAPEUTIC RETROSPECT.

By HARRINGTON SAINSBURY.

Action of Peronin (Dr. Meltzer, *Therap. Monatsh.*, June, 1898).—The writer points out the importance, especially in asylum practice and in mental treatment generally, of having many strings to one's bow. We possess, it is true, many hypnotics and narcotics, but habituation, idiosyncrasy, the presence of complications of the disease,

and secondary effects of the drug will often exhaust the list of available soporifics, the symptom insomnia still persisting.

Peronin is one of the more recent substitutes for morphine; it is the hydrochloride of benzyl-morphine. Dr. M. finds the solubility of peronin much less than that stated by Munk, and he recommends the addition of alcohol to aid solution, and of saccharin to cover the bitter irritating taste. His formula is—

Peronin	...	2 parts.
Saccharin	...	0·5 „
Spirits of wine	...	100 „
Water	...	900 „

The alcohol percentage strength of the spirits of wine is not stated.

This solution is to be well shaken each time before administration. Of this solution 55 minims, say one drachm, will contain $\frac{1}{10}$ gr. of peronin. Whatever the dose taken, further dilution with water will make it more palatable, and will complete the solution of the drug.

Patients were selected, generally paralytics, whose attacks of excitement and insomnia could, as a rule, be reckoned upon to last several days. The dosage was started at $\frac{1}{4}$—$\frac{1}{3}$ grain of peronin, this quantity never causing unpleasant effects, thence it was gradually advanced up to 1·5 grs.

Forty-five administrations of peronin in the case of five patients gave a successful result in 70 per cent. of the trials. The same five patients treated with other hypnotics, viz. paraldehyde 60—150 grs., amylene hydrate 60—75 grs., chloral hydrate 30—45 grs., sulphonal 30 grs., trional 30 grs., gave 64 per cent. of successes. Sleep began with peronin in from a quarter to one hour, and it lasted from two to eight hours; the other hypnotics acted in about the same time, and gave about the same duration of sleep.

Combinations of the above-named hypnotics with $\frac{1}{3}$ gr. of morphia were compared with combinations of the same hypnotics with $\frac{2}{3}$ gr. of peronin, the latter giving decidedly better results.

In one patient only did peronin cause thirst, and in one instance only was there a moderate sweating.

Peronin administered *by day* to *five* patients, paralytics, but *not in the stage of excitement, and not suffering from want of sleep*, showed some hypnotic power, but far less than in the foregoing series, and decidedly less than the case of the other group of hypnotics. Dr. M. found that in a series of experiments upon himself peronin had very much the same effect as morphine, but he found that it had fewer disagreeable after-effects. He thinks that there is little danger of peroninism, because the effects pass off so much more quickly than those of morphine; this he interprets as showing correspondingly rapid elimination.

As to the effects of peronin on pain, he brings forward no evidence, though in two cases an unpleasant itching was removed. Upon the pupil he noticed a distinct contraction effect in the experiments upon himself (his paralytic patients had immobile pupils).

Peronin is not adapted for hypodermic use because of its insolubility. It is a costly remedy, though not dearer than trional and amylene hydrate.

The effective dose of peronin ranges between $\frac{1}{3}$ gr. and 1·5 grs.

Reference to the literature of peronin is given, *e. g.* to the observations of Schröder, Nowack, Eberson, Munk, and v. Mering-Halle.

Heroin: on the Pharmacology of some Morphine Derivatives, and on the Clinical Value of Heroin (Drs. Dreser and Floret, *Therap. Monatsh.*, September, 1898).—Codeine, as we know, is a morphine derivative; it is, viz., methyl morphine. Heroin, the new derivative, is a substitution product by the replacement of the two hydrogen atoms of the hydroxyl groupings of morphia by two groupings of acetyle. This compound Dr. Dreser investigates pharmacologically, and he concludes that it possesses a decidedly greater sedative action upon the respiration than codeine, reducing the frequency though at the same time increasing the depth of the inspiration and the volume of inspired air. Coincidently heroin reduces the oxygen consumption in the body, in particular by quieting muscular action throughout the body. The effective dose of heroin was found to be about 0·001 gramme ($\frac{1}{60}$ grain), whereas that of codeine was about 0·01 gramme ($\frac{1}{6}$ grain); and inasmuch as the lethal dose of each is about the same, it follows that we have a much safer drug in the new derivative.

Dionin, or the hydrochlorate of morphia-ethyl-ether, another derivative, has the advantage over peronin and heroin of a much greater solubility. It dissolves, viz., in water in the proportion of one to seven. Professor v. Mering speaks highly of it as a means of checking a disturbing cough and inducing quiet sleep, surpassing codeine in these actions. For the discussion of the whole subject of these newer morphine derivatives see v. Mering's article in *Merck's Report* for 1898 (published 1899).

Pyramidon in Nerve Affections (Dr. Rudolf Laudenheimer, *Therap. Monatsh.*, April, 1898).—Dr. Laudenheimer reports his experience during some twelve months with this antipyrin derivative, which Filehne introduced into practice. Observations on upwards of a hundred patients were made, and the outcome of these observations is that pyramidon must be regarded as a really serviceable antineuralgic, effective in smaller dose than antipyrin or migrainin, and relatively to these a safe remedy. Dr. L. estimates that 6 grs. of pyramidon are equivalent in effect to about 15 grs. of antipyrin. His dosage varied between 4 and 12 grs. administered thrice daily, but at times this dosage would fail when a single massive dose of 15—20 grs. proved effectual,—as, for instance, in a case of severe supra-orbital neuralgia. Headaches, generally of widely different origin, were much benefited by the drug, *e.g.* the headaches of convalescence from certain psychoses, those of the chronic alcoholic, two cases of headache in chorea chronica, three of cerebral tumour, certain cases of neurasthenic head pain, &c. Neurasthenia, however, did not in general offer a favourable field for its employment

The effect of the drug seldom manifested itself before half an hour, and sometimes it would delay 1—2 hours

The gastric crises of tabes, said to be benefited by pyramidon, did not yield very decidedly to the drug in Dr. L.'s hands, but in one case the lancinating pains of the disease were greatly lessened by it.

Upon states of mental excitement in insanity no action was observed; no serious by-effects or after-effects were noted.

The Therapeutic Value of Recent Synthetic Analgesics (discussion opened by Dr. Ralph Stockman at the British Medical Meeting—see *British Medical Journal*, October 8th, 1898).—It is useful, indeed essential, that at intervals we should take stock of our therapeutic armamentarium, and it is the more needful in present days because of the rising tide of new remedies; hence the usefulness of these discussions. Whether much benefit results from the academic treatment of the subjects by the development of long series of rational formulæ in demonstration of the kinship between this and that group of synthetic remedies is perhaps open to doubt, but the temptation to do so is too great to be foregone. Dr. Stockman handles this part of his subject ably, and in discussing the ideal analgesic he suggestively argues that we can hardly expect to possess ourselves of that drug which shall alone dull either the pain receiving or conducting elements, and leave all other parts of the nervous system unaffected. For this very benumbing or depressing action, for which we select the drug, is more than likely to exert some depressing action on other but closely related or associated nervous structures. Hence, since we all differ more or less in our susceptibilities, we may expect to find individuals who, along with the desired effect, shall exhibit depressant respiratory, cardiac, and vaso-motor effects very far from desirable. The most he thinks we can do here is to diminish the margin of risk by employing drugs not too potent in their effects, or by a more careful ranging of the dose, and by a gauging of the susceptibility by a minimal dosage at the start.

Dr. Stockman thinks more seriously of the attendant risk from blood deterioration which obtains for many of these remedies, and he makes such danger more crucial in accepting or rejecting a drug. For this reason, and also because it is so easy to overstep the safe limits of the dose, he rejects acetanilid (antifebrin). Antipyrin he thinks very efficient and comparatively safe, but to phenacetin he gives the palm. Lactophenin, which in composition is closely allied, he places almost upon an equal footing.

Dr. C. D. F. Phillips, who followed in the discussion, thought that with very few exceptions it was doubtful whether the more recent synthetic products could rival the original analgesics, viz. antipyrin, antifebrin, phenacetin, and exalgin. The few exceptions to which he referred were salophen, phenocoll hydrochloride, apolysin, and methylene blue; the first he thought of exceptional promise.

Dr. Lockhart Gillespie advocated the addition of caffeine to such analgesics as antipyrin. He spoke well of migrainin as an analgesic which did not depress the heart.

Dr. Hamilton agreed as to the value of combining caffeine with antipyrin.

Dr. Leech considered that antipyrin and phenacetin were the best analgesics.

Dr. William Gordon and Dr. Frew both spoke to the value of antifebrin in carefully regulated dose.

Dr. Affleck saw fewer ill effects from phenacetin than from any other of these drugs.

Sulphonal Poisoning, Susceptibility of Women to (*Wiener klinische*

Wochenschrift, June 9th, 1898).—Dr. Pollitz, in an article in the *Vierteljahresschrift für Gerichtliche Medicin*, vol. xv, No. 2, records a case of prolonged sulphonal use in a woman. The doses were not excessive, 22 grs. at the outset, 15 grs. subsequently, these being the total daily administration. The drug was continued for over a year, with, however, frequent intermissions, occasionally for weeks. Loss of appetite, constipation, and marasmus led up to death; the urine was characteristically affected. The autopsy showed extensive disease of the secreting cells of the kidney. The interest of the communication lies in the reference which Pollitz makes to the relative frequency of sulphonal poisoning in women. Of 21 fatal cases selected by Schulz 20 occurred in women.

The Treatment of Epilepsy with Bromalin (Dr. Rohrmann, of Göttingen, *Monatsschrift für Psychiatrie u. Neurologie*, December, 1898). —The position of bromide of potassium is first accepted as the most potent remedy against epilepsy up to the present time. Its drawbacks are then enumerated; these are many, and in spite of various adjuvants, *e.g.* arsenic, aperients, and diuretics, they are frequently not to be avoided. The replacement of potassium by sodium and ammonium gives, according to the author, less active medicines. The combined use of opium and potassium bromide after the method of Flechsig is of doubtful advantage, and in many cases does not avoid an ultimate prolonged course of the bromide alone.

The question of operation, permissible in the Jacksonian type, is to be negatived unhesitatingly in the genuine idiopathic form; its results have been almost without exception fruitless.

Impurities in the sample of bromide, the presence of hydric bromate and of iodine, also of potassium chloride, may account for the undesirable by-effects in some cases, but in the majority of cases these must be put down to the bromide of potassium, and to it alone.

Féré's method of conducting a bromide course is certainly a step in the right direction; finding that frequent bathing and the combined use of arsenic were ineffectual in correcting the bromism, and having recognised that constipation and flatulent distension were often present, he sought in the bromism the consequence of auto-intoxication, and by the administration of β-naphthol and bismuth salicylate obtained certain striking results, viz. the disappearance of the tremblings, of the rash, and the digestive disturbances, the improvement of the appetite, and of the general sense of well-being. Féré gave daily, in two doses, 60 grs. of naphthol and 30 grs. of bismuth salicylate.

Bardet went a step further, and combined the antiseptic with the bromide in one dose. The salt chosen by him was bromethylformin, a compound with formula $C_6H_{12}N_4,C_2H_5Br$, which may be regarded as a combination of the base formin, $C_6H_{12}N_4$, with bromide of ethyl, C_2H_5Br. This compound has been re-named bromalin by E. Merck; it is crystalline, readily soluble in water, and readily decomposed by weak alkaline solutions into bromide of the alkali and formaldehyde, a powerful antiseptic. Bardet's experiments on animals and observations on man have proved the drug to be an excellent sedative. Féré tried it in four cases of epilepsy, and found that it could be given in a much larger dose than potassium bromide with equal effect, and with much less

likelihood of the occurrence of bromism. Laqueur employed it in seven cases of epilepsy with satisfactory results, recording that in double the dose of the potassium salt it was as effective as the latter without the unpleasant by-effects. With regard to the amount of *bromine* present in bromalin and the bromides he states as follows:

Potassium bromide	67·2 per cent.
Sodium bromide	77·67 ,,
Ammonium bromide	81·62 ,,
Bromalin	32·13 ,,

Other observers, among them Boehme, have recorded similar results, in particular the absence or diminution of bromism.

Rohrman then gives his own observations on five epileptics, and thus sums up his experience:—Bromalin is an efficient anti-epileptic remedy; it will not increase, and may lessen the symptoms of bromism already produced by a course of bromide of potassium; there is no fear of harm to kidneys or heart. He thinks it has a large sphere of usefulness before it, especially in those cases which have resisted the potassium salt, or in which severe bromism has followed the use of the latter.

Merck recommends the following formulæ for the administration of bromalin:

For adults.—Bromalin in powders each of 30 grains, administered in wafer-paper, dose 1—4 or more daily.

For children.—Bromalin 10 parts, distilled water 10 parts, syrup of orange peel 90 parts; of this a teaspoonful once or twice daily.

The Non-medical Treatment of Epilepsy (Dr. Hurd, *Bulletin of the Johns Hopkins Hospital*, December, 1898).—The writer refers to the often unsatisfactory treatment of epileptics by drugs alone, as well as to the failure of operative procedures in the majority of instances. He points to the variety of the causal conditions which appear to underlie the epileptic attack. He states that recent observations indicate that a disordered metabolism is present in many cases, and he suggests that poisonous bodies, perhaps leucomaines, acting upon an ill-balanced nervous system, bring about the convulsive seizure. It is not necessary to follow the theoretical side of Dr. Hurd's communication; more important are the facts of treatment. These are the provision made in many of the States of America for the care of epileptics in large colonies, and the treatment of the patients by the largest possible allowance of open-air life, with control of the diet so as to regulate in particular the amount of nitrogenous food supplied; further, the prescription of a judicious amount of labour and of occupation. As a result of such treatment he states that patients who have been subject to daily or weekly seizures will often, without any medicine, go a month, sometimes a year or longer, without a convulsion.

It would be interesting to have definite statistics as to the time during which this treatment has been in operation, and the number and nature of the cases so treated.

Contribution towards the Treatment of Somnambulism, by Dr. T. Hirschkson (*Therapeutische Monatsh.*, May, 1898).—The writer records his experience of galvanisation of the medulla oblongata in two cases of very pronounced sleep-walking. He was led to the treatment by the observation on a former occasion of the effects of this treatment upon a

hystero-epileptic case suffering from slight sympathetic palsy. The galvanisation in this case was directed to the cure of the palsy, but to Dr. Hirschkson's astonishment the peculiar postural attacks of the hystero-epileptic seizures yielded rapidly to the treatment. Dr. Hirschkson regards somnambulism as essentially hysterical, at least so far as the subjects are concerned, and remembrance of the case just cited led him to apply the same treatment to his case of sleep-walking, with excellent results.

On the Nutrition Value of a New Albumen Preparation, "Tropon" (Dr. H. Strauss, *Therap. Monatsh.*, May, 1898).—Every department of practice recognises the importance of treatment directed towards the alimentation of the sick, none more so than psychological practice. For this reason we shall welcome any new food preparation which combines a high nutrition value with palatability and easy digestion. Dr. Strauss has tested very carefully the value of "tropon," an artificial albumen preparation obtained from the factory of Mülheim, on the Rhine. In particular he has kept in view its acceptability to the patient—a practical point of primary importance, as has been found in respect of such preparations as carne pura, Mosquera's beef meal, patent meat powder, Norwegian fish powder, &c., which in the long run are apt to excite more or less loathing.

Tropon is a fine powder, meal-like in consistence, and of grey-brown colour; it is almost entirely free from smell and taste. It purports to consist of 90 to 97 per cent. albumen, 0·5 to 1 per cent. ash, and traces up to 0·8 per cent. of ethereal extractive; it is insoluble in water. In respect of price it compares exceedingly well with the other albuminous foods already in the market; thus, whereas—

1 kg. (2·2 lbs.) of albumen as eucasein costs about 11 shillings,

„	nutrose	„	20	„
„	pepton (Merck)	„	21	„
„	pepton (Antweiler)	„	40	„
„	somatose	„	50	„
„	pepton (Kemmerich)	„	61	„

1 kilogramme of tropon costs 4 shillings.

Recent observation seems to indicate that the solubility or insolubility of an albumen preparation affects but little its assimilability by the alimentary tract; and further, that even in cases of almost complete arrest of the gastric juice (achylia, apepsia gastrica) the bowel can deal adequately with and absorb the proteid group.

Tropon was tested upon a series of cases of damaged or deranged mucous membrane, the result of the action of caustics, of inflammation, ulceration, &c., as well as upon a number of cases of feeble digestion in convalescents. It was administered as a rule suspended in lukewarm milk, this being generally preferred to its suspension in bouillon. It was also given in thickened soups, in chocolate, and in cocoa, and, if there were no need to spare the mucous membrane mechanically, in mashed potato, boiled rice, with vegetables, or even in the form of biscuits or "zwieback," specially prepared with tropon flour. In these various forms it was generally well taken, complaint being rarely made of grittiness or of a taste of fish. The food was administered in some cases for periods of several months.

Dose.—One tablespoonful of tropon to the half-litre (rather less than one pint) of milk was found best suited, either simply stirred in or boiled with the milk. Twenty to sixty grammes were administered *pro die, i. e.* rather over one half to two ounces, without causing any disturbance of the appetite or other signs of irritation.

Three experiments, in which careful estimation of the nitrogen exchange was made, indicated that the assimilation of tropon was more complete than of the albumens of foodstuffs. The fine state of subdivision of the albumen of tropon will probably explain this. In two of these experiments the elimination of nitrogen as uric acid was found to diminish during the period of tropon administration—an important observation, should it be confirmed, as showing its suitability as a food in certain states, *e. g.* gout, gravel. These observations invite a serious trial of tropon in cases of malnutrition.

The Glycerophosphates as Nutrition Stimulants, in particular as Nerve Nutrients (*Merck's Digest*, No. 1, 1899).—Phosphorus and its compounds have long been regarded as stimulators of metabolism generally, of nerve nutrition more particularly. Whether all that is said is deserved is another thing, but that some decided powers do belong to phosphorus combinations must be conceded. We are accustomed to look for greater activity among the unsaturated groupings, *e. g.* the hypophosphites, than among the satuated salts, *e. g.* the phosphates; but for certain of the latter, viz. the glycerophosphates, a high degree of potency is claimed. The hydrogen salt, glycerophosphoric acid, $C_3H_5(OH)_2(PO_4H_2)$, is not used in medicine, but the ammonium, potassium, sodium, lithium, calcium, magnesium, iron, and quinine salts are all employed therapeutically. The indication for these salts is said to be each and every form of depressed nerve function; thus they are given in simple convalescence from acute illness, in Addison's disease, certain forms of sciatica, neurasthenia, &c. &c. Prof. A. Robin, who brought these salts into prominence, states that they increase nitrogenous metabolism chiefly, but sulphur metabolism to some extent, and further that they diminish the disintegration of nerve tissue. He administers the salt both by the mouth and subcutaneously; by the mouth he gives the glycerophosphates (in the form of cachets, pills, and syrups) in the dose of five to fifteen grains of the sodium, calcium, and magnesium salts; this stands for the *daily* dose. The iron salt he gives in two to five grain dose (per diem). He frequently combines strychnine or kola with the phosphates; the dose of the latter is given preferably with food. Robin's original observations date back some years, but more recently (1897) he urges again their claims, and particularly in sciatica.

Other observers, both in America and France, speak highly of the use of these combinations in sciatica, in Graves' disease, in hysteria, and various forms of debility and malnutrition.

The Abuse of Strychnine as a Stimulant (*Therapeutic Gazette*, May 16th, 1898).—In a leading article the above subject is dealt with, and attention called to the over-use of strychnine and nux vomica. The writer admits to the full the value of the drug as a temporary stimulant which will assist in a crisis, but he warns against the long continuance of the administration. Long before the development of any twitching of the muscles of the forearm, or of stiffness at the nape of the neck, a

condition described as explosive nervousness is or may be produced. Such patient may suffer from "fearful thoughts" and distressing apprehension of coming evil. Cessation of the drug brings about cessation of the symptoms. It is suggested that another symptom of over-stimulation is fever—witnessed in particular in the convalescent from typhoid. The article is too sketchy, but it should nevertheless serve to point a danger and make us wary. General experience will probably grant that in moderate dose both nux vomica and strychnine may be persisted in for long periods with benefit, but in ascending dosage, and indeed in any case, the action should be carefully watched. A stimulant should be essentially of temporary use, but only too often is it continued unnecessarily and harmfully through carelessness or neglect. This leading article concerns every department of medical practice.

The Use of Strychnine in Alcoholism (*Therapeutic Gazette*, November 15th, 1898).—Federoff (*Revue de Thérapeutique médico-chirurgicale*, June 1st, 1898) records twelve cases of beneficial action from strychnine in alcoholism. Strychnine moderates the catarrhal condition of the alimentary tract, and controls the neurasthenic symptoms, in particular the sleeplessness, so difficult to treat. The nervous restlessness of the alcoholic disappeared under the influence of the drug.

On the Value of Potassium Permanganate as an Antidote to Morphia Poisoning.—Messrs. Thornton and Ch. Holder have tested the statement made by Moor and others that potassium permanganate acts as an antidote to morphia even when injected beneath the skin. Their experiments upon dogs give a direct negative to this statement (*Therap. Monatshefte*, November, 1898; from *Therapeutic Gazette*, January, 1898).

The antidotal value of the permanganate when administered by the mouth is of course well established, and by direct experiment it may be shown that a fatal dose of morphia may be taken harmlessly if followed immediately by a few grains of potassium permanganate dissolved in water.

ITALIAN RETROSPECT.

By W. Ford Robertson, M.D.

The Use of Lactophenin as an Hypnotic.—Christiani (*Il Manicomio moderno*, 1898, No. 2) has recently very strongly advocated the use of lactophenin as an hypnotic in the sleeplessness of the insane. Although his paper has already been noticed in this country (see *Brit. Med. Journ.*, 1898, vol. ii, Epitome, par. 448), in view of the probable importance of the subject, and the fact that the alleged therapeutic value of the drug has received strong confirmation from the experiments of Namirez (*Brit. Med. Journ.*, 1899, vol. i, Epitome, par. 128), it may perhaps be useful to give an account of his observations here. He states that he has used lactophenin as an hypnotic in over two hundred cases of insanity, including practically all its various forms. He