

profession was jealous of him and wanted to put him out of business for fear he would cure all its patients.

When Father Maximilian Hell, the professor of astronomy at Vienna, became interested in the application of magnets as a new curative agent, the patients under his observation who were "cured" were usually those suffering from vague pains and aches in the neighborhood of joints or in large groups of muscles. His greatest success was with the chronic pain in the back that used to be attributed to kidney disease. It has been well said that except in very acute cases the kidneys give pain only in the newspapers; but the number of remedies, kidney plasters and applications of all kinds as well as internal medication without end that have benefited these pains in the loins is legion. Father Hell made his "cures" by applying magnets shaped like kidneys. Mesmer, pursuing his medical studies in Vienna, was attracted to Father Hell's results, and the consequence was his own development of special methods, including the famous "battery" consisting of bottles filled with iron filings connected by wires and placed beneath the water in a tub from which wires led out to be applied to the patients. The modern Oxydonor and Oxypathor are not more subtle fakes, and, though they have the advantage of a century's development in the art of advertising, they do not seem to be able to report so many "cures" as did that prince of charlatans. Mesmer made very little use of what we call mesmerism, and never produced the hypnotic sleep, but achieved his results by the use of supposedly wonderful physical effects.

When hypnotism began its most recent vogue in the latter part of the nineteenth century, it was taken up by Bernheim of Nancy, because he had seen a patient with sciatica, who for years had been coming to his clinic and for whom little could be done, cured by hypnotism under the care of Liébeault. This led him to study Liébeault's methods, and the Nancy school of hypnotism resulted. It might be added that a great many of the patients who proclaimed themselves benefited under

Dowie's care, or cured by poor Schlatter at the end of the nineteenth and the beginning of the twentieth centuries, were sufferers from these chronic painful conditions, usually complaining of vague aches in the neighborhood of joints or in large groups of muscles.

Evidently these patients have always been cured by anything that deeply and favorably affected their minds. It is not that they have no real ailment, but that their consciousness, focused on some slight physical discomfort, has room for little else, and hence, keeps them miserable until some distraction is obtained. Such patients go around from physician to physician, apparently benefited for a time, but not relieved from their aches, and indeed declaring often that it was only their anxiety for a cure that made them think for a time that they were better under the new physician. They help to swell the immense number of persons who go to quacks of all kinds, manipulators, chiropractics and the like, and then proclaim themselves greatly benefited. Evidently there is no class of affections with regard to which more care as to the reporting of "cures" must be exercised than these so-called rheumatic conditions. Manifestly, too, there is nothing that shows the lack of significance of "cures" so much as does this group which has been the subject of "cures" of all kinds for centuries, each "cure" in turn proving after a time to have no physical effect, though at first it seemed to be a wonderful remedy.

Accidents to Radium. The Berlin letter to the *Journal of the American Medical Association*⁴ refers to accidents to radium itself in its application.

"This refers not to injuries to patients by radium, but accidents which have happened to the radium itself in its application. The newspapers reported the loss of a tube of radium worth \$5,000 (20,000 marks) in a sanatorium in Charlottenburg. The tube was borrowed by the management of the sanatorium for the treatment of a patient. After its use it was laid in a small dish and later was thrown into the sink by a nurse who did not

(4) July 11, 1914.

know the importance of the costly article. Although the Charlottenburg water-works were immediately notified and several of the connected canals of Charlottenburg were searched by workmen and three machines in the pumping-station removed and thoroughly searched, the radium was not found. The management of the sanatorium has now the doubtful pleasure of paying not only for the radium which was borrowed but also for the searching of the Charlottenburg water-system.

"The other two accidents of a similar character turned out more fortunately. In a Munich hospital, in some unexplained way, a tube filled with radium valued at about \$5,750 (23,000 marks) was thrown into the garbage and collected by the garbage-wagon. Notice was immediately given to the station for sorting the garbage at Puckheim near Munich and luckily the tube was found.

"In a Strassburg deaconess' home, a patient had the misfortune to swallow a radium tube worth \$6,250 (25,000 marks). The radium had been fastened inside the mouth and was to remain there for seventy-two hours. The fear that the radium might produce some disturbance inside the body was not justified. It was possible by the immediate administration of a powerful cathartic to free the patient from the foreign body. These experiences are, at any rate, a warning to be careful in the handling and preservation of the costly metal."

Fortunately the radioactive properties of this metal form a test so delicate that it may frequently be recovered under seemingly unfavorable circumstances. In one instance a capsule containing a considerable amount of radium was thrown into the garbage wagon. An expert radiologist was called and by means of the electroscope located the radium in the wagon and by taking out the garbage in small quantities indications were obtained that the missing element was present in a certain pailful of the garbage. More careful search of this pailful led to the recovery of the capsule.

The Scaphoid Scapula. In addition to the "normal

scapula" with the convex medial margin described in text-books of anatomy, there are found types with a concave medial margin the "scaphoid scapula," first described by Graves. Such scapulæ also show other if less conspicuous anomalies of structure, and often are associated with abnormalities of other systems of organs (early arteriosclerosis, weakly developed musculature, thorax paralyticus, etc.).

V. Koller⁵ recognizes the following transitional forms:

1. Intermediate forms in a stricter sense (Fig. 1 D), with medial margin quite straight, angle between spina and medial margin approaching a right angle, and inferior angle almost exactly below the most medial point of the spina.

2. Secondarily modified forms, as developed in cases of scoliosis through severe rachitis, etc.; sometimes these have so adapted themselves to the changed conditions that their original form is not to be determined with certainty.

3. Scapulæ with approximately S-curved medial margin. These have medially below the spine a short concavity continued below into a longer convexity, curving quite sharply in some cases (Fig. 1 D). The scapulæ are mostly broad and stout, the lower angle is obtuse like the normal, and lies lateral of the most median part of the spina. These are the forms most difficult to classify. On the one hand we find continuous transitions to the normal type, in that the concavity of the medial border decreases; on the other hand, there are transitions to the scaphoid form. In one of these groups there is a process of cartilage or bone at the junction of convexity and concavity. In one bone prepared by me this prominence was connected with a tendon of the subscapularis. These S-forms may account of the statement of Reye that normal and scaphoid forms are observed in the same individual. The typical S-form is observed also not infrequently in old age and occasionally associated with well-developed thorax, two peculiarities common both to it and the normal form.

(5) Interstate Med. Jour., October, 1914.

4. Fetal types considered by Kollert as a developmental form.

Kollert believes that the scaphoid scapula is something fundamentally different from the normal form in so far as the one form never changes into the other during extra-uterine life. Man, therefore, retains until death the general form of scapula which he has at birth.

The probability of the new-born child attaining old age is decidedly greater if it has normal scapulae than if it has scaphoid scapulae.

Kollert concludes with the following summary:

1. The scaphoid form of scapula—characterized by a concave medial border and an angulus inferior lying in the perpendicular below the most medial point of the spina—is an abnormality originating in intra-uterine life. Its proximate conditions of development are still obscure. The form of the bone at birth remains in general unchanged during extra-uterine life.

2. The scaphoid scapula is the sign of a congenital constitutional inferiority of the individual. Its bearers die in early years mostly; hence the abnormality occurs very seldom in old age.

3. The morbidity from tuberculosis is great in persons with scaphoid scapulae; the acute forms of the disease seem to predominate.

4. Between the normal type with convex medial border and the abnormal form there are transitions which may be the cause of errors in classifying a given case. Both typical fundamental forms probably never occur in one individual during extra-uterine life.

Modification of Secondary Sexual Characters. Steinach⁶ has shown the peculiar effects which transplantation of ovaries and testes into young castrated animals of opposite sex could actually bring about. The potential male became converted after this exchange of genital glands into individuals of unmistakable femininity which manifested itself in the modification of form and in the deportment of the animals. The inherent impulse in the direction of a distinctive secondary

(6) *Zentralbl. f. Physiol.*, 1913, xxvii, p. 717.

sexual development, in which physical features and habits of behavior are pre-eminently characteristic and specific of each sex, can be completely checked and reversed under the influence of genital glands which are permitted or compelled to survive in a youthful organism.

Steinach has carried his observation far beyond the stage of puberty. Hyperplasia of the mammary gland and the inception of milk secretion attending pregnancy is commonly attributed to hormones originating in the developing fetus or in the placenta. If the transplanted ovaries find a firm foothold and succeed in maintaining their nutritive equilibrium in his "feminized" males the development of the female sexual characters is even accentuated. The growth alterations ordinarily expressive of masculine features are inhibited so markedly that the female type becomes more conspicuous than ever. The rudimentary mammary glands, always present in the male as in the female, may develop to a stage characteristic of the pregnant female. The surprising hyperplasia of the mammary glands and their appendages may readily reach a stage at which typical milk, not merely exudate, is secreted in abundance. Steinach and the radiologist Holzkecht have also attempted to stimulate the ovary of the normal virgin female so as to cause it to induce some of these changes just described as evoked by the overactive transplanted ovaries. By suitable exposure of the region of the ovaries to the Roentgen ray, the juvenile, virgin characters were made to disappear in the non-gravid female, and to be superseded by the phenomena of lactation-enlargement of teats, hyperplasia of the mammae, secretion of normal milk and hypertrophy of the uterus.

By a comparable procedure of testicular transplantation it appears to be possible to induce the exhibition of masculine traits and features in the castrated female. Sex characters are therefore not fundamentally determined in advance throughout all the parts of the organism that ordinarily gives exhibition of distinctive features.

These observations tend to confirm the view that the

essential factors for the production of the genital hormones are the "interstitial" cells found in both the testes and ovaries of various animals. The genital glands are thus believed to contain gland-cells of two distinct and functionally independent types. These interstitial cells, however, are apparently not universally present. It has been shown that by means of the Roentgen rays it is possible to destroy the germ-cells in either testes or ovaries, so rendering the animals sterile.

Some Extremes in Nutrition. As the result of an investigation of the dietary habits and metabolism of the Eskimos at the island of Disco in Western Greenland August and Marie Krogh⁷ observed that the normal ration of these people contains enormous quantities of protein and fat, whereas the intake of carbohydrate is very small. Half of the latter type of food-stuffs is taken in the form of the glycogen present in the meat consumed. The eating habits of the Eskimo approach those of carnivorous animals to the extent that the periods at which the diet is eaten are irregular and somewhat infrequent, the meal often being so large as to tax the capacity of the stomach. Despite this, no nutritive disorders are apparent aside from incidental furunculosis and frequent nose-bleeding in the periods of over-liberal food ingestion. The physical endurance of Eskimos nourished in this way is remarkable, as well as their resistance to the rigors of the climate. Diseases involving uric acid are extremely rare. The highest food consumption actually measured by the Kroghs was 1,804 gm. (nearly 4 pounds) of boiled meat in one day, corresponding to 85 gm. of nitrogen and 218 gm. of fat. The utilization of these large portions of meat is satisfactory, the loss of nitrogen in the feces rarely exceeding from 3 to 5 gm. per day. A urinary output of nitrogen amounting to 53 gm. per day was actually determined.

Hindhede,⁸ on the other hand, reports a case in which an excellent nutritive equilibrium and muscular effi-

(7) A study of the Diet and Metabolism of Eskimos, Copenhagen, Bianco Luno, 1913.

(8) Studien über Eiweissminimum, Skandin. Arch. f. Physiol., 1913, xxx, p. 97.

ciency was maintained through long periods of months on a diet principally of potatoes and oleomargarine. The necessary intake of potato was large, amounting to 2 kg. (4 pounds). On this diet it was actually possible to maintain nitrogen equilibrium with an intake of nitrogenous material amounting to only 3.62 gm. of digestible nitrogen a day, and with a daily intake of 3,900 calories. When hard work was to be performed the potato portion of the diet had to be increased to no less than 4 kg. (8 pounds) or more daily, together with liberal additions of fat, so as to bring the entire energy content up to about 5,000 calories with only 10 gm. of digestible nitrogen. There was no resultant dilatation of the stomach even from these meals.

Dr. Folena succeeded in his own case in effecting nitrogen balance on the minimum intake of from 33 to 39 gm. of nitrogen substance, a quota of about 0.6 gm. per kg. of body-weight a day. The protein requirement to induce nitrogenous equilibrium was not profoundly increased by hard work. It is evident that these figures must not be applied to the requirements necessary under conditions of growth or repair.

These investigations show plainly the adaptability of the human body to wide ranges of food possibilities.

The Expensive Sandwich.⁹ The wide-spread interest in scientific circles as well as in the ranks of social workers concerning some of the problems of nutrition among the masses is exemplified by current discussions regarding school lunches, institutional dietaries, economical menus for the household, and the cost of living. These are constantly bringing out the fact that diet customs are subject to wide inequalities in character in different parts of the world and in different strata of society; and they further make it clear that food habits are not so fixed as was once supposed, but are varied to meet economic changes and alterations incident to the shifting of population. Rubner has remarked that the scene of the changes witnessed in the nutrition of the masses lies in the cities, the country districts representing the con-

(9) Editorial in Jour. Amer. Med. Ass'n., March 7, 1914.

servative factor and adhering more closely to the dictates of tradition. It is in the cities that the most noticeable of the modern changes in dietary customs, such as the increasing consumption of meat and the introduction of ready-to-eat foods, have first taken hold on greater numbers of individuals. Furthermore, the questions of diet in large institutions—asylums, hospitals, etc.—almost always need to be solved with reference to the local market conditions.

Max Rubner, the eminent physiologist and hygienist of Berlin, has lately presented some interesting data on one of the many transformations in dietary custom which is peculiarly conspicuous in the cities of Germany. It is the rapidly growing tendency to introduce widely what corresponds in general to the American sandwich (*das belegte Brot*) into the daily food-intake. Anyone who observes carefully the eating habits of working men in this country and who has followed the enormous increase in the lunch-counter scheme of dietetics among our own population must admit that the sandwich is something more than a trivial incident in the nutrition of those who live in populous districts. Physiologically, it involves the supplementing of bread—the common “staff of life”—with considerable fat (butter) and animal protein (meat). The sandwich represents a new step in the evolution of bread-and-butter combinations. Rubner believes that the growing use of the meat-laden sandwich is attributable, in Germany at least, to the increased employment of tea and coffee, which require some substantial adjuvant, and also to the greater consumption of sugar and alcohol. The latter lead to a lowering of the protein of the diet which is thus equalized by the albuminous sandwich. Added to these factors is the growing tendency, especially among the unmarried classes, to eat outside of the home and to patronize the rapid-service, time-saving, sandwich-dispensing restaurants and eating-houses.

The average composition of the sandwich, if we may identify this for the purpose of argument with its German competitor, shows that it differs from plain

bread in the predominant addition of fat with some increase in protein. One can not attach too great value to the “average” composition of so heterogeneous a group of products as is represented by bread-and-meat mixtures of all varieties. Broadly speaking, the comparison afforded shows that 100 calories are distributed in the different food materials as follows:

	Calories		
	Protein	Fat	Carbohydrate
In bread	11	3	86
In bread and butter.....	5	58	37
In meat sandwiches.....	15	53	32

The great concentration of nutrients in a small volume in the sandwich at once becomes apparent here. The work of mastication is reduced and the entire make-up of the product encourages rapid eating with its possibly unfavorable consequences.

The sandwich, as here represented, exemplifies a tendency to increase rather than diminish the proportion of food of animal origin in the dietary of man; but aside from the fact that it is instituting a larger participation in the use of meat and is thus working contrary to what many students of dietetics regard as desirable, this form of food is not as economical as is popularly believed. It is true that a palatable sandwich can be purchased for a few cents. The same proportionate expenditure in the household or in the purchase of a warm meal that deserves the name will procure surprisingly more nutriment, even in the more expensive type of restaurant. It has been calculated, for example, that twenty-five cents will buy:

	Calories	Gm. protein
In a public eating-house.....	3,990	containing 108
In a good restaurant.....	1,990	containing 78
In the form of sandwiches.....	1,140	containing 30

The sandwich is frequently looked on as the “poor man’s lunch” and current practice is tending to increase its use. If it is really desirable to increase the purchas-

ing power of a small daily income so as to augment the part devoted to nutriment, the reform can not be instituted by pointing to the supposedly inexpensive lunch-counter. The boarding-house and the home wisely administered on the dietetic side still remain the most economical as well as most rational centers for food reforms.

Russian Attitude Toward Jewish Ophthalmologists.

The Berlin Correspondent of the *Journal of the American Medical Association*¹ calls attention to the agitation to prevent the success of the International Ophthalmologic Conference to be held in St. Petersburg, Russia, because of the exclusion of some and the limitations placed on other Jewish members. Because of the many withdrawals from the congress, which might have been expected as the result of the communication issued to the profession by Dr. Hirschberg of Berlin, the following announcement was made early in January by Professor Bellarminoff, the head of the congress at St. Petersburg: "The minister of the interior has granted, without exception, unhindered entrance into the empire and unlimited stay to all members of the Twelfth International Ophthalmologic Congress." Apropos of this message, the editor of the *Berliner klinische Wochenschrift* says:

"It can only be a matter of keen regret that this announcement came so late, or rather was issued too late. The experience with reference to the International Medical Congress at Moscow in 1897 and the unanimous opposition which the contemplated restriction of passports met from the committee of the German Empire on the initiative of Rudolph Virchow ought to have received attention at the right time; thus the authorities who have to do with the organization of the Congress of Ophthalmology would have been spared this disagreeable situation."

The History of Spectacles.² The earliest known pair of spectacles were thought to be those belonging to Willibald Pirkheimer in the Wartburg, but Greeff of

(1) January 31, 1914.

(2) Editorial in *Jour. Amer. Med. Ass'n.*, January 10, 1914.

Berlin has more recently described a still earlier pair, probably made before the year 1500, which were brought to his attention by Sudhoff of Leipsic. These were found in an old volume of incunabula by the well-known antiquarian bookseller, Jacques Rosenthal, and were presented by him to the Germanic National Museum at Nuremberg, where they are now to be seen in the sections devoted to costumes and personal ornaments. The frame is of tanned blackened leather, of obvious Nuremberg make, and, like the Pirkheimer spectacles, of the old traditional "nose-rider" shape, but they are clumsier and thicker than the Pirkheimer pattern of 1520-1530. The lenses are lacking. In view of these characteristics and of the fact that they were found in an old fifteenth-century folio, Greeff and Sudhoff seem to have no doubt that they were made before 1500.

Greeff also traces the evolution of the true modern spectacles from the old nose-riders (the originals of the pince-nez), and describes the binocles or *Scheerenbrillen* which came into fashion in 1796, consisting of two lenses mounted on a scissor-shaped handle, the originals of the modern lorgnette. The earliest form of the true spectacle glasses was invented and introduced by Monsieur Thomin, *marchand miroitier lunettier* of Paris, and were essentially "temple spectacles" (*lunettes à tempes*), the shanks extending no further than the temples. There were two kinds, one with a small end-platelet, which was represented in a portrait by Pelham, an English painter of the eighteenth century, of which a copper plate was made by J. Clark; the other, which is to be seen in Graff's portrait of Chodowiecki (1795), with a characteristic large circular fastener at the end of the shank, which held the spectacles against the temple. The next stage was that of the "ear spectacles," which at first had crude, heavy, clumsy shanks, jointed at the end, like those in the Beethoven House at Bonn, which were further improved by slitting the ends or by means of an olive-shaped fastener. The next improvement, consisting of a jointed appendage to the shank which passed underneath the occiput, was made in 1752

by the London optician J. Ayscough. A later variant of this joint passed downward and backward underneath the ear. Still another variety of this joint was so arranged that it could be bent suboccipitally, as in the first instance, but otherwise bent back *in extenso* when the glasses were not in use. These were called extension-spectacles (*Ausziehbrillen*). Up to the beginning of the eighteenth century the lenses were still very large and round; but after that time they began to be octagonal, square, rectangular and finally oval. About the same time the bridge began to change in shape, first assuming the form of a K placed sidewise.

The origin of the present fashion of large circular lenses set in delicate tortoise-shell mounts is a pastel portrait of the painter Chardin in the Louvre, executed by himself in 1760, the spectacles in which were copied with great success by recent French opticians and are known in Paris as Chardin spectacles. The same type is familiar to us in a well-known portrait of Benjamin Franklin. Four or five years ago, says Greeff, a young woman or lady of fashion would have been horrified at the notion of wearing spectacles of such an unsightly type. To-day she would regard it as not only chic, but the height of elegance. Plenty of people in America are inclined, no doubt, to revive the traditions of "old Ben Franklin's days" for similar reasons, although the optical advantages and the comfort of these large lenses are obvious.

Psychic Factors in Aviation. In considering the psychic factors of aviation, E. L. Ovington³ gives his experiences as follows:

"I have always believed in high flying. I am convinced that it is far less dangerous than flying low. In the first place the vertical air-currents which annoy the aviator at low altitudes have no effect at great heights. The horizontal air-currents, corresponding to the winds on the surface of the earth, have little effect on the machine, as once the aviator is off the ground his speed with respect to the air passing him is constant. His speed with

(3) Jour. Amer. Med. Ass'n., August 1, 1913.

relation to the surface of the earth of course varies with the velocity of the horizontal air-currents.

"The parties who made the tests under consideration put themselves in a cabinet with the atmospheric pressure corresponding to that of an altitude of 4,000 meters. Probably neither of them had ever been in the air. They, therefore, imagined all sorts of things that might happen. But let me tell you there is a great difference between two men cooped up in a little cabinet under artificial conditions and the same men flying free through the clear atmosphere at a height of two miles. The physiologic conditions may be the same in both cases, so far as the air-pressure is concerned, but the psychologic conditions are entirely different. The former must be depressed by the very nature of the trial, while the latter would be exhilarated in the highest degree.

"I do not know why, but it seems to be a general impression that an aviator has difficulty in breathing, owing to the high speed of his machine and the rarefaction of the air. This is not the case. I have been with Bruce-Brown at a speed of 109 miles in an automobile on the Florida beach; I have driven my own car at a speed of 86 miles at Atlantic City, and I have been in an aeroplane at the speed of over 150 miles an hour (with the wind of course) and I had no difficulty whatever in breathing in any case. Furthermore, an aeroplane, properly designed, is so constructed that a great deal of this wind is done away with.

"I have not found that the rarefaction of the air interferes with breathing, owing, I believe, to the fact that the aviator climbs so slowly that he has plenty of time to get used to the diminished atmospheric pressure. Another point which makes aviation different from mountain-climbing in this regard is that the mountain-climber is exercising and necessarily would notice rarefaction of the air before an aviator would who is sitting still.

"In coming down, however, it is a different proposition. If I cut off my engine at a two-mile height and drop suddenly to a mile from the ground, it seems as if some one were standing behind me and poking red-hot poker

into my ears. I had no difficulty whatever in going up because I went up slowly, but in coming down quickly I did not have time to become accustomed to the rapid change in atmospheric pressure. My usual practice, when I wished to avoid this inconvenience, was to drop a thousand feet as slowly as possible with the power off, turn on the power and circle around at that level, swallowing vigorously. I would then drop another thousand feet. In this way I could get to the ground from a height of two miles without any inconvenience.

"So far as the rarefied air paralyzing the action of the subjective mind is concerned, I do not think that there is anything in this report. My experience has been that the objective mind, at least, is stimulated by the excitement of rushing through the air at high speed, the great purity of the air at great height, and possibly by the greater actinic power of the sunshine.

"I found that I burned much more easily at great height than I did on the ground. This is probably due to the fact that the ultraviolet rays, which are of course the shortest in wave-length, are less reflected by the particles in the air at a height of two miles than at the surface of the ground. In other words, the dust particles intercept these ultra-violet rays, which are of course the most important in affecting the skin."

Popular Beliefs and Scientific Facts.⁴ Popular beliefs on scientific subjects apparently run in waves. Many of our readers remember the interest in hypnotism which followed the publication of "Trilby." Svengali with his "hypnotic eye" at once became a real and possible personage in the public imagination. The newspapers were full of stories of girls and women who had suddenly been fixed and paralyzed by the hypnotic gaze of some mysterious stranger with piercing black eyes and who had been compelled by his will to fantastic acts which they were powerless to prevent. Fiction writers took up the idea, and stories centering around hypnotic influence became common. It was used as a plea in criminal cases, various culprits alleging that they had been

(4) Editorial in Jour. Amer. Med. Ass'n., March 7, 1914.

hypnotized and compelled against their will to perform unlawful acts. All this occurred in spite of the fact, frequently stated and known by every scientific man, that the limitations of hypnotism are definite and well-recognized, that no person can be hypnotized unknowingly or against his will, and that few persons are so susceptible as to be capable of being compelled to perform acts beyond their own volition and knowledge.

Another popular fiction which later on took the place of hypnotism was that of instantaneous anesthesia. Stories appeared in the newspapers of women who had been accosted by strangers and, under some pretext, had permitted a cloth or a handkerchief to be pressed momentarily over their mouth and nose. Immediate unconsciousness was said to have followed, resulting in a period of insensibility and irresponsibility, varying from a few minutes to hours or even days. Chloroform sprayed into an open window by means of an atomizer, anesthetics tied to a rag on the end of a pole and thrown into a bedroom, instant unconsciousness following the administration of drugs unknown to physicians and pharmacists, were some of the variations of this idea. In the minds of physicians and nurses who see every day the administration of anesthetics, such stories only excite mirth. Any one who knows the difficulty and labor of securing unconsciousness through the use of anesthetics, even under the most favorable conditions and with every possible means of restraining and controlling the patient, knows how absurd such stories are.

A latter-day variation of these popular beliefs may be found in the "poisoned needle" stories which have been going the rounds of the press recently. A woman goes to a moving-picture theater, enters a crowded elevator, a street-car, or elevated train, or is caught in the press of a crowd. Suddenly she sees, close beside her, our old friend the "mysterious stranger," with the piercing black eyes and the compelling manner. At the same time, she feels a sting and knows that she has been stabbed with a poisoned needle. She immediately becomes unconscious, dazed or irresponsible for a greater

or less period of time, during which she experiences a number of marvelous adventures or hair-breadth escapes.

It is not possible to say that no woman was ever without her knowledge given a drug hypodermically which produced unconsciousness. It can, however, be said very positively that there is no drug known to scientific men which could be administered in the manner or which would produce the effect described in recent newspaper reports.

One of the laws of hysteria is that when any peculiar phenomenon is reported, similar instances immediately appear throughout the country. We may now expect a spring crop of magazine stories and popular novels based on the poisoned needle as a motive. Scientifically, the thing is as ridiculous and impossible as hypnotism of an unwilling subject or instantaneous anesthesia. Popular beliefs travel in waves, and hysteric and excited imaginations help them along. The history of popular delusions, from Salem witchcraft to present-day vagaries, is full of such instances.

Expert Testimony. The *Journal of the American Medical Association*⁵ discusses the ethics of expert testimony and urges the display of more discretion in the choice of occasions for utilizing technical knowledge in courts of law. There is first of all the effect which the willingness to appear frequently in court is likely to have on the professional reputation of the witness himself. The expert who allows himself to form the habit of accepting any and all offers to "testify" will surely awake some day to find himself involved in a maze of contradictions which will hardly be helpful in maintaining his scientific standing.

An instance of incautious conduct in this respect was afforded in a recent case in Washington, D. C., where the question of milk standards and the interpretation of analyses came to the front. One witness, who holds a high position in a leading Eastern technical school, testified that he "could not say that milk was dirty" unless

(5) June 20, 1914.

he "could see actual dirt in the milk." The same witness in a case at Providence, R. I., a few months before (July, 1913), had passed summary judgment on a score of analyses read to him from the records of the United States Department of Agriculture, and had not hesitated to condemn roundly samples of milk on the basis of reported analyses alone.

Apart from the wreck of individual reputation there is the responsibility that men of science should feel both to the community and to the professional body of which they form a part. This sense of responsibility should be rooted in a steadfastness of conviction which not only should make it impossible for these men to run with the hare and hunt with the hounds, but also should make them scrutinize the essential character of the cases and causes for which they are willing to appear in public. No one knows better than the skilled investigator how much uncertainty there still is concerning many matters on which definiteness would be of great practical importance. All the more reason why he should not utilize his expert knowledge of the factors of uncertainty to confuse public-health issues and throw dust in the eyes of the uninformed. To defend dishonest or careless milkmen by invoking the well-known technical difficulties in the way of interpreting bacterial analyses seems a questionable proceeding.

The modern man of science owes his standing in the community in large part to the reputation for probity, candor and clear-headedness of the professional body to which he belongs. Every act of his tends to raise or lower in the public estimation the prestige and influence of the body of scholars with whom he is associated. He has obligations to his profession. Again, the non-technical public deserves from him an unwillingness to ally himself with doubtful causes, a clearness and steadiness of conviction and especially a disinclination to envelop scientific fact and interpretation in a cuttlefish murkiness of doubt and ambiguity.

We are aware that with regard to some questions public-health practice has outrun scientific judgment

and needs to be set right. We know that the manifestation of personal pique and aggressiveness sometimes makes it necessary for scientific men to interpose in the interests of common fairness.

We appeal for a higher standard in this important field in which science has an opportunity to interpret itself to the community by making evident its disinterestedness and its desire most effectively to serve its time.

Liability for Operations. The *Journal of the American Medical Association*⁶ considers the liability for operations performed without consent in charitable hospitals.

"The Court of Appeals of New York affirms a judgment for the defendant hospital in this action wherein the plaintiff sued for damages alleged to have been sustained from an operation alleged to have been performed on her in the defendant hospital without her consent. The court says that, taking the plaintiff's version of the case, she went to the hospital suffering from some disorder of the stomach, and later consented to an examination under ether in order that the character of a lump which had been discovered might be determined, but that there must be no operation; yet, while she was unconscious, a tumor was removed. Her testimony was that this was done without her consent or knowledge, although that was sharply contradicted. Following the operation, and, according to the testimony of her witnesses, because of it, gangrene developed in her left arm, some of her fingers had to be amputated, and her sufferings were intense.

"The Court says that every human being of adult years and sound mind has a right to determine what shall be done with his own body; and a surgeon who performs an operation without his patient's consent commits an assault, for which he is liable in damages. This is true, except in cases of emergency when the patient is unconscious, and when it is necessary to operate before consent can be obtained.

"The fact that the wrong complained of here was trespass, rather than negligence, distinguished this case

(6) August 22, 1914.

from most of the cases that have preceded it. In such circumstances the hospital's exemption from liability could hardly rest on implied waiver. Relative to this transaction, the plaintiff was a stranger. She had never consented to become a patient for any purpose other than an examination under ether. She had never waived the right to recover damages for any wrong resulting from this operation, for she had forbidden the operation. In this situation, the true ground for the defendant's exemption from liability was that the relation between a hospital and its physicians is not that of master and servant. The hospital does not undertake to act through them, but merely to procure them to act on their own responsibility. The wrong was not that of the hospital; it was that of physicians, who were not the hospital's servants, but were pursuing an independent calling, a profession sanctioned by a solemn oath, and safeguarded by stringent penalties. If, in serving their patient, they violated her commands, the responsibility was not the hospital's; it was theirs. There is no distinction in that respect between the visiting and the resident physicians. Whether the hospital undertakes to procure a physician from afar, or to have one on the spot, its liability remains the same.

"It is also true of nurses, as of physicians, that, in treating a patient, they are not acting as the servants of the hospital. The hospital undertakes to procure for the patient the services of a nurse. It does not undertake, through the agency of nurses, to render those services itself. Whatever the nurse does in the preliminary stages is done, not as the servant of the hospital, but in the course of the treatment of the patient, as the delegate of the surgeon to whose orders she is subject. The hospital is not chargeable with her knowledge that the operation is improper, any more than with the surgeon's."

New Edition of British Pharmacopeia. The London letter to the *Journal of the American Medical Association*⁷ states that the last edition of the British Pharma-

(7) June 27, 1914.