

reflex hyperæmia of the ovary occurs, its bursting is hastened. This explains the cases in which ovulation is coincident with menstruation. If no ripe follicle is present, however, ovulation does not occur. In lower animals the rutting season and ovulation are synchronous. The periodicity of menstruation, then, is independent of ovulation. Pflüger's theory assigns the cause to the periodic formation of the decidua menstrualis. The reflex hyperæmia does not cause menstruation unless the decidua menstrualis has been completely formed.

If Pflüger's theory or the theory of internal secretion is correct, menstruation should cease after castration. Cases are repeatedly found in the literature in which it is said to have continued after the operation. In such cases it is probable that a portion of the ovarian tissue has escaped the operator and remained in place. In some cases this may have been in the form of accessory ovaries. These have been found at autopsy in such a relation that they might readily escape removal at operation. It seems that only a small amount of ovarian tissue is sufficient to continue the functions of the ovaries. A case has been reported in which a multilocular cyst developed after pan-hysterectomy. Pfister,* Clark,† and Kelly‡ believe that complete castration always results in absolute and permanent cessation of the catamenial flow.

Following the operation of castration, it has been observed in some cases that the succeeding menstrual period has occurred, but has begun earlier than usual. According to Pflüger's theory, there should have been no succeeding period. Pfister regards it as a result of the severe mechanical stimulation of the ovarian nerves that necessarily takes place during the operation. This takes the place of the stimulation normally produced by the enlargement of the Graafian follicles.

The normal periodical flow has continued for a time after castration in some cases, and has then ceased at an earlier stage of life than normally. Here the operation has undoubtedly been incomplete. The early cessation is to be explained by the exhaustion of the remaining ovarian tissue. The number of Graafian follicles is limited and the supply gives out at an earlier period than normally.

Still another anomaly may be explained by Pflüger's theory. Menstruation may cease for a time after castration, and then may be re-established. In these cases the remaining ovarian tissue contains possibly only very young follicles. It is conceivable that these develop only very slowly at first. Later, when they become more mature, their growth is sufficiently rapid to bring about the necessary stimulation of the ovarian nerve endings.

It is significant that most cases in which menstruation persists after castration present technical difficulties at operation. These are often of such a character as to render it practically impossible to remove all of the ovarian tissue. They often take the form of dense adhesions to surrounding structures. Pfister reports two cases of unicornate uterus. Menstruation persisted after unilateral castrations. He believes that the "Anlage" and development of the ovary were bilateral, and that the anatomical relations of one organ were so atypical that it could not be discovered at operation, and consequently remained to continue its functions.

Following castration there are sometimes so-called vicarious hemorrhages. In a series of 116 cases Pfister noted their presence in 12. Two of these, in which periodical bleeding from the intestine occurred, he regards as genuine. In the other 10 cases the patients complained of periodical nose-bleed continuing for from one to two years.

The effects of the operation upon leucorrhœa are usually beneficial, and the condition improves or disappears. The change is not noted at first, but develops gradually with the retrogressive changes in the genitalia. In cases in which myomata are present the diminution is not

* *Op. cit.*
† Clark, "Influence of Castration upon the Female Constitution," *Progressive Medicine*, ii., 141, 1899.
‡ Kelly, "Operative Gynecology," ii., 163, New York, 1898.

so marked as in other cases. This is probably to be explained by the presence of submucous myomata, which possibly mechanically continue the process which leads to the exudation. In the case of submucous myomata there are usually increased blood supply and hypertrophy of the endometrium. Castration results in a decreased blood supply and atrophy of the mucosa. The improvement after the operation suggests that leucorrhœa is a result of this increased blood supply and hypertrophy.

Molimina Menstrualia.—This term designates the unpleasant sensations which often take the place of menstruation after castration. The etiology is possibly associated with a continuance of the periodical formation of the decidua menstrualis. The absence of stimulation from the ovary, however, prevents menstruation. With the gradual atrophy of the uterus the decidua menstrualis is no longer formed, and the symptoms disappear. Clark* believes that the decidua menstrualis is not formed at all after castration. According to the theory of internal secretion the symptoms are to be explained by a discontinuance of this function. The view that auto-intoxication is responsible for the molimina has also been advanced. Hippocrates believed that menstruation was a cleansing process for the purpose of ridding the system of impurities. The Hebrews† considered their women to be unclean during and for seven days following menstruation, and imposed severe penalties in cases of sexual congress during this period.

The sensations are local and general. They are variously described by the patients. There are sensations of heat, chilly sensations, dizziness, meteorism, pain in the back, pain in the abdomen, drawing pains, especially at the sides of the uterus, pain in the abdomen which not infrequently radiates to neighboring parts, sensations as of blood rushing toward the pelvic organs associated with feelings of fulness, weight, and dragging. Pfister noted their presence in thirty per cent. of the cases of his series. They were most pronounced shortly after the operation, persisting in some cases as long as two years.

Effect on the Sexual Life.—The normal physiological phenomena of the sexual life may be expressed in terms of Pflüger's theory. The tension of the Graafian follicles stimulates the endings of the ovarian nerves. This brings about a state of increased irritability of centres in the lumbar region of the spinal cord. Under these circumstances the patient is very susceptible to sexual stimuli. Cutaneous and other stimuli may now arouse the sexual passion. At other times much greater stimuli may be necessary to bring about the result. In coitus the erotic sensations are produced by the mechanical irritation of the glans clitoridis. The glans contains a rich network of nerve fibres. These end in peculiar structures known as Krause's tactile corpuscles. The mechanical stimulation probably brings about the erotic sensations in the lumbar region of the spinal cord. The irritability of these centres is probably increased by the stimuli from the ovaries passing through the ovarian nerves. This increased irritability is expressed by an increase in the intensity of the erotic sensations.

According to Pflüger's theory, then, castration results in complete extinction of the sexual passion leading to sexual impulses, and of erotic sensations during coitus. Pfister found that in forty-three per cent. of his cases the sexual passion no longer existed, and that in fifty-two per cent. there was a cessation of the erotic sensations. He notes also that Gläveke and Liesau arrived at similar conclusions. In the case of young individuals, he finds that the theory always holds good. He also quotes Beimler as having a similar experience. He offers an interesting explanation of the discrepancy. In the older individuals the sexual function has been active for a greater or lesser period of time. This has led to the development of a new factor. There have been formed in the central nervous system memory pictures of previous experiences—the libido centralis. These serve to awaken and maintain the sexual passion independently of the

* *Op. cit.*

† Leviticus xv., 19.

libido sexualis, which has for its basis the centres in the lumbar cord. The sexual life loses then the character of a purely physiological function. It comes to be partially dependent upon psychological influences. In support of this view he quotes Beimler's experiments upon dogs. Some of the dogs were castrated after one or more pregnancies, and others were castrated before any pregnancy had occurred. The former showed symptoms of heat after the operation, while the latter had no such symptoms. He offers a similar explanation from Keppler's case also. This was the case of a prostitute upon whom the operation of castration had been performed. She afterward continued her vocation. When her chosen lover was indifferent to her she submitted herself to him passively. When he was capable of arousing her interest, however, the sexual passion was aroused. Clark* reports the case of a variety actress who had suffered from gonorrhœa for a number of years. The sexual passion had been almost abolished by constant suffering. Double pyosalpinx and severe pelvic peritonitis finally necessitated a double salpingo-oophorectomy. Two or three years after operation, with renewed health, the sexual passion had returned with almost double force. In the same way may be explained the persistence of the sexual passion in some normal individuals until after the sixth decade.

Certain general considerations also have a bearing upon this point. In the male sex the degree of sexual inclination is fairly uniform. In the female, however, the degree varies greatly. "Concerning this point Prof. von Rosthorn, of Prague, made the startling statement to me, in a conversation upon this subject, that of all the women who consulted him at least seventy per cent., he felt convinced, had been indifferent to the sexual approaches of their husbands or lovers, even while they were yet in perfect health. In view of such statements it at once becomes evident that the post-operative side of this question cannot be determined definitely without control records of the sexual proclivities of the patients before they became ill."† As a rule the sexual passion decreases with the approach of the climacterium. In many cases the post-operative state may be a result, not so much of the operation, as of the approaching menopause. In other cases it is possible that an inflammatory process may vicariously take the function of the ovary in stimulating the ovarian nerves. The sexual impulses and the erotic sensations are usually affected to an equal extent.

The Effect upon the Genital Organs.—In the normal climacterium there is an increase of the connective tissue in the ovary, associated with the disappearance of the follicles. The other genital organs, especially the uterus, become atrophied. A similar result follows castration. The epithelium of the endometrium loses its cilia and becomes cubical, and the interglanular tissue becomes atrophic and cirrhotic. If myomata are present they take part in the general atrophy. The atrophy of the vagina, of the clitoris, and of the labia majora is less constant, but in some cases corresponds to that of the climacterium. This relation of the vagina and the external genitalia is especially interesting when considered in connection with the effect of castration upon the sexual passion and the erotic sensation. The origin and persistence of sexual inclination and the trophic relations of the vagina and external genitalia are not so dependent upon the function of the ovary as are the uterus and menstruation. Cases in which this general atrophy does not occur must be regarded as instances of incomplete castration. Occasionally, as a result of atrophic changes in the vagina, sexual intercourse becomes very painful, or even impossible. Clark‡ reports such a condition in a woman who was previously neurotic. The dyspareunia resulted in abandonment of the woman by her husband. In young animals the uterus does not develop after castration. This is probably a result of the absence of reflex hyperæmia from the ovaries.

There is a tendency of the breasts to take part in the

* *Op. cit.*† *Op. cit.*‡ *Op. cit.*

general atrophy. Mistakes may arise, however, as a result of a general increase of subcutaneous fat.

General Effects.—At the time of the natural menopause the female organization undergoes considerable changes. There is an alteration of the general form of the body. This is, to a certain extent, a result of the general increase of the adipose tissue. The changes in the face are conspicuous. The cheeks and the lower part of the chin become broader and more massive. There is an increase in the general contour of the body. The trunk and especially the hips and gluteal regions become thicker and wider. It is largely the distribution of the subcutaneous adipose tissue which lends to the youthful female form its peculiar charm. After the menopause the condition is changed. The connective tissue which separates and supports the fat lobules becomes loose. As a result the skin and subcutaneous tissue hang more loosely. The hair tends to lose its pigment. Chloasmata frequently develop in the skin of the face and scattered bristle-like hairs often make their appearance. There is a general increase of fat in the breasts, in the abdominal region, and in the extremities. Many of these changes contribute toward bringing about the characteristic matronly appearance.

After castration one might expect similar changes. A decided tendency toward greater deposition of fat is present. In a few cases this reaches an extraordinary degree. It must be remembered however, that the general health of most of the patients before operation is very poor. Convalescence, then, may be, to a certain extent, responsible for the result in some cases. The distribution of fat, however, is somewhat different. Except in the case of the patients who are at the age when the organism is preparing itself for the natural climax, the matronly appearance does not develop. The distribution of the fat is more like that of the youthful form. The patients appear brighter and more youthful. The complexion is clearer, the pigmentation of the skin is less marked and more uniform. The hair does not often turn gray early, pre-existing chloasmata often disappear.

The breasts are not dependent. The nipple is often atrophic, and its areola frequently loses its brownish pigmentation and becomes pink. The growth of hair upon the face does not take place.

As in the natural climacterium these changes require a number of years for their accomplishment.

Effect on the Nervous System and the Psychological Effects.—The effects of castration upon the nervous system vary greatly in character. Flushes in various parts are among the most common symptoms. Often, however, they have been present before operation, suggesting a tendency toward hysteria. They are described as sensations of heat passing from the pelvis toward the heart and lungs, even to the head. With these may be associated palpitation, dizziness, and tinnitus aurium. The skin becomes hyperæmic and even while the face, for example, is flushed and feels hot, the patients complain of sudden chilly sensations, especially in the back, passing up along the spine. Sweating occasionally occurs. The flushes are most marked shortly after operation, commonly with exacerbations corresponding to the menstrual periods. Varying much in intensity in the different cases, they usually sooner or later disappear.

Headache is often complained of. Where it has existed before operation, the patients frequently assert that the intensity is increased.

Occasionally nausea, vomiting, neuralgia, especially in the lumbar plexus, palpitation, sleeplessness, convulsive coughing, or chronic hoarseness supervene.

The nervous symptoms are more pronounced than in the normal menopause. This is probably a result of the sudden and complete removal of the ovarian tissue, in place of its gradual exhaustion by normal processes. Often the patients have been in poor health, possibly for years, before operation, and no doubt the long-continued suffering has effected a permanent injury to the nervous system.

Especially in the consideration of the psychological effects the previous state must be taken into account. Often the suffering has been so intense and long continued, and the general environment has been so depressing, that the patients are eager to submit themselves to a dangerous operation that offers any prospect of relief. The immediate rise in spirits may be simply a result of convalescence. As a rule the improvement develops only gradually as in the natural menopause, which is often introduced and accompanied by mental depression.

A weakening of the memory is frequently complained of. This may be simply a momentary forgetfulness of immediate occupation or an increase in the difficulty of recalling past events and experiences.

Severe nervous disturbances may result from the removal of the ovaries even in the forties.

Insanity does not follow castration any more frequently than it does other surgical operations.

Therapeutic Results.—In most cases the results are good, and in a few cases even ideal. The large majority of the patients lead an endurable life after years of suffering. Most of them are able to work after being in a state of partial or complete disability. As a rule they are satisfied with the results of the operation and often express their gratitude for their restoration.

The results of course differ with the indications for operation. The least complicated results follow in cases in which castration has been performed for inoperable myomata. Almost without exception atrophy of these tumors takes place and they may even entirely disappear. Myomata are poorly vascularized and their disappearance is no doubt due to the decreased blood supply. The results are equally beneficial in cases of ovarian or mechanical dysmenorrhœa caused by displacements of the uterus and atrophy of the vagina.

Hysteria appears to be practically unaffected, even when the organic disease is relieved. The same is true of hystero-epilepsy.

The death rate from the uncomplicated operation is practically nil. The pathological conditions which necessitate castration are so frequently complicated, however, that the mortality is raised somewhat. The death rate then becomes that of the complication.

Kelly,* in making a plea for conservatism in gynecological operations, speaks of the effect of unilateral ovariectomy. He presents an analysis by Dr. J. H. Durkee, of 228 cases of unilateral castration, in women under 40 years of age, and draws the following conclusions: "The comparison of the advantage and disadvantage of leaving in an apparently sound ovary is—in each case the average chance of having one child as contrasted with the risks of a recurrence of the disease in 2.6 per cent. of the cases. If the mortality of ovariectomy is 5 per cent. then the risk of death is thirteen to one against it even if the disease recur."

"Ovulation and pregnancy under suitable conditions, are, to a degree unappreciable to the male mind, essential elements of woman's happiness. To dwell upon this point would be but to reiterate what any attentive surgeon may gather from his daily experience in the consulting-room, and to rehearse well-known facts in the history of womankind.

"C. Schroeder stated that one of his reasons for the preservation of part of an ovary was to preserve the function of ovulation, even if it were accompanied by but a theoretical possibility of conception."

After unilateral castration pregnancy may occur if only the tube of the opposite side is present.

As in the case of other bilaterally symmetrical organs, the removal of one ovary results, in the rabbit at least, in a compensatory hypertrophy of the opposite organ.

Interesting experiments in ovarian transplantation have been reported by a number of investigators. Normal pregnancies are said to have followed the operation performed on castrated animals. It has not been shown whether all of the functions of the ovary are per-

* *Op. cit.*

formed under these abnormal conditions. Schultz* performed transplantation experiments upon guinea-pigs. Corpora lutea were formed in the ovaries under the new conditions. He showed that the female organization is not necessary for the growth of the ovary, but that ovaries transplanted to the male animal will adapt themselves to their new habitat. He found no evidence of the formation of corpora lutea, however.

Many reports of the beneficial results of organotherapy after castration have appeared in the literature, but no such brilliant results as in the case of athyria have been obtained. Favorable influences upon almost all of the unpleasant symptoms have been claimed, but reports vary considerably. Ovarian and thyroid extracts have been used.

The beneficial effects of castration in cases of osteomalacia have been referred to above.

The question has also a sociological aspect. "My own continued experience only serves to confirm my opinion that the castration of women is often a direct cause of domestic unhappiness and that it has been repeatedly used by men as a good reason for breaking off engagements, and for the violation of marriage vows, and the abandonment of wife and children."† Many of the effects upon society in general are readily conceived.

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CATALEPSY.—The cataleptic state, or one analogous to it, has been observed in a number of living beings in ascending the scale of evolution from the *Drochocephale Virginiana* to man. Owing to the protean forms assumed by catalepsy, and the presence of frequent complications, not to mention the strange theories advanced by ancient authors, and the comments thereon, it is difficult to define the malady with clearness and precision. But among the more important writers of the present age, whose tendency is to substitute the scientific interpretation of morbid phenomena for the scholastic rendering of apocryphal knowledge, the cataleptic condition is understood to mean a remittent neurosis of the cerebro-spinal system, unaccompanied by fever, and characterized by attacks of variable duration, during which there is almost always suspension or perversion of consciousness and of sensibility, and always interruption of voluntary motion, with general or partial tension of the muscular system, and aptitude of animal life to receive and to keep different degrees of contraction impressed by extrinsic force or assistance.

GENERAL CHARACTERS.—Much of the present obscurity concerning this curious neuro-muscular trouble is owing to the theories of a mythical pathology when the study of hysteria was but little advanced or the diagnosis of the neuroses was vague and only depended upon the stigmata described by the school of Salpêtrière. Some regard catalepsy as a malady, others as a symptom, while still others deny its existence outside of alienation. Since the time of Galen, who appears to have been the first to recognize its coexistence with mental troubles (Comm. ii., in Hipp. Præd. edit. Kuhn, t. xvi., pp. 682-684), three successive theories relative thereto may be noted: 1. A neurosis that may complicate certain mental maladies. 2. A simple symptom that may supervene in all mental diseases. 3. One of the principal motor troubles of tension characteristic of a special disease, as katatonia or stuporous melancholia.

Idiopathic catalepsy, as wonderful as it is rare, is an apyretic brain malady manifested by remittent attacks separated by intervals of health. Its special physiognomy is owing to the waxy position and plasticity of the limbs, and it is the only neurosis in which muscular contractions are possessed with abolition of the will. Either sex may be attacked, and the disease may occur in childhood or occasionally in advanced age, a case being noted in a man of seventy-five years; but women are more subject than men, and it occurs mostly about puberty or between the twentieth and thirtieth years, generally in per-

* Schultz, Centralblatt f. allgem. Path. u. path. Anat., xl., 200, 1900.
† Kelly, *Op. cit.*

sons of dull minds and sluggish physical organization. Cataleptic paroxysms may be spoken of as atypical. The fantastic characters of the cataleptic state render all clinical description absolutely obscure; so that the actual observance of a single case, or the study of a series of well-reported histories, will do more to throw light on the question than all the symptomatic enumerations that form the basis of these descriptions.

SYMPTOMS.—Systematic observance of cataleptic symptoms relates chiefly to the three orders of pathological phenomena of the mind, sensation, and motion. An attack coming on in a nervous or melancholic individual may be sudden and all the functions of the life of relation appear entirely abolished. There is complete suspension of mental action, with cutaneous anesthesia, loss of thermic sensibility, and rigidity and inertness of the limbs, which retain the position given to them. This rigidity is described by the old Latin authors in such picturesque locutions as *stipitis* or *trunci instar*, and *mortui ritu jacens*. In some cases the attack may have such precursory symptoms as headache, insomnia, vertigo, hiccup, epigastric pain, a feeling of constriction in the throat, trembling of individual muscles, an undefined sense of discomfort, and different hysteriform nervous troubles. When suddenly attacked the patient remains motionless in the attitude had at the moment when struck. Patients have become cataleptic while drinking tea, playing cards, ascending a ladder, during attitudes of devotion, and the like, and have retained the position held at the time of attack. The various positions a cataleptic may be made to assume have been compared to those of a manikin, to a statue with springs or with limbs of soft wax, which preserve any constrained position or inflexion given to them for a comparatively long period. The muscles of the breast and the inspiratory muscles are unaffected during a cataleptic seizure; and it is probable that the digestive functions go on regularly, although the phenomena of absorption and nutrition operate with extreme slowness. The secretions and excretions are lessened, and even suspended, cataleptics having been known to go for twenty-five days without a voluntary evacuation and to undergo long abstinences, leaving them in the condition of hibernating animals. Consciousness, though mostly abolished, is not so in all cases, the suspension of sensorial function being more apparent than real. With the general disturbance of the vital processes there is almost entire abolition of the functions of special sense. The mucous membrane of the nose, however, retains its sensitiveness slightly, and the act of swallowing may be performed when the substance to be ingested is placed deeply in the pharynx. Reflex irritability is sometimes lost, but the electric contractility of the muscles remains. Respiration is slow and tranquil; the pulse normal in rhythm, though sluggish and at times almost imperceptible. The pupils are dilated, and the fundus of the eye shows paleness of the choroids, with straight and attenuated retinal vessels. The temperature being lowered two to four degrees below the normal, the patient becomes icy cold, deadly pale, and expressionless—a condition that may easily be mistaken for death. In fact the annals of medicine record illustrative cases of apparent death from this cause, in which the victim has narrowly escaped burial alive. The old schoolman, Duns Scotus, is an instance of a resuscitated cataleptic. A case often quoted is that of a woman who was placed in a family vault, presumably dead, and having regained consciousness during the night, and fortunately finding the vault unlocked, returned home to her husband, and after this strange episode lived to bear a large family of sons and daughters. The event is commemorated by a monument and an inscription in the Lutheran cathedral at Magdeburg; and it is suggested that the possibility of such occurrences may account for the custom that obtains in some parts of Germany of placing a bell above the public receptacles for the dead, and fastening the hand of the ostensible corpse to the rope, that it may be rung in the event of consciousness being regained. An instance is related in France of a cataleptic who was on two occa-

sions the chance victim of hastily rendered funeral honors. Now and then one reads in newspapers of women being taken away for burial while in a cataleptic trance, and only recovering consciousness when being lowered into the grave. A woman in a trance having been buried alive in Naples, the court sentenced both the doctor who signed the certificate and the mayor who authorized the interment to three months' imprisonment for "involuntary manslaughter." Such mistakes could hardly happen nowadays, provided ordinary precautionary measures are taken to discriminate real from apparent death, such as the auscultatory signs, the indications furnished by the thermometer, the electric contractility of the muscles, and the ligature of a finger or a toe.

The attack over, the patient suddenly regains consciousness, sometimes after epistaxis or the appearance of the menses, and there is usually no recollection of what has happened during the attack. Headache and general lassitude generally follow for a short time. The attack may disappear and be transferred into another neurosis or into a vesania. There is great variability in the number and duration of the attacks, which may last for minutes or hours, or entire months. The malady has been known to disappear after one attack; while in another patient as many as seven hundred paroxysms have been counted. The attacks may, moreover, be very irregular in manner, or they may be periodic, and even occur during sleep. There is no mental disorder in the intervals of simple catalepsy; but when the catalepsy is a symptom of profound nervous disease it may be associated with ecstasy and somnambulism, or the occurrence of hysterical convulsions, delirium, maniacal attacks, and hallucinations. For this reason it is generally held that cataleptics are responsible for their acts during intervals, except when there is a complication.

The condition represented by the picture outlined in the foregoing remarks is often modified or softened down into the incomplete form, which, though not having all the symptoms of what may be called ideal catalepsy, exhibits nevertheless, in a different degree, the motor and sensory disorders, and electrical reactions characteristic of the disease in question.

COMPLICATIONS.—Catalepsy may be associated with another nervous affection, such as hysteria, ecstasy, somnambulism, tetanus, mania, hypochondria, and lypemania; or with a disorder of an entirely different nature, as pneumonia, typhoid fever, meningitis, rheumatism, intermittent fever, etc. It is complicated and mixed in *hystero-catalepsy*. Without doubt hysteria developed independently of mental alienation is the neurosis with which catalepsy affects the most frequent relations and narrowest affinities. As one and the same morbid state they proceed from a common origin, and doubtless are closely related. Muscular rigidity in this form varies as to the degree, not being in positive relation with cutaneous anesthesia, but almost always proportional to the depth of lethargy and to the volume of the muscles concerned in the movements of the articulations. Persistence of muscular tension, with absence of sensibility and fatigue, are spoken of in connection with this state as a new variety of perturbation of voluntary motility. Systematic writers describe hystero-catalepsy as general or partial, complete or incomplete, and transitory or permanent. In rare cases it is unilateral.

Ecstatic catalepsy has been often observed in ecstatic women and in priests. The records of sorcery and demography abound in instances, historic and modern, of women becoming cataleptic during certain religious observances, of priests who become so at certain stages of the mass, and of monks who throw themselves into prolonged cataleptic ecstasies. No less a writer than Balzac speaks of profound meditation and fine ecstasy as catalepsy in the bud. Doubtless many of the queer sects mentioned by Dr. Hepworth Dixon, in "New America," are made up of individuals whose mental condition is more or less influenced by this disordered state. Anthropologically and pathologically speaking, the same remark would apply to various so-called religious ceremonies that