Thesis

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A Study of certain forms of Dyspepsia and allied Gastric neuroses, dependent upon the intimate relations that exist between the Stomach and Cerebro-spinal nervous system; with a Special Consideration of "Apepsia hervosa".
The term 'Nervous Dysepsia' may be generally applied to various conditions of impaired digestion, which depend upon the intimate relations existing between the Stomach and Cerebro-Spinal Nervous System.

In order that we may come more fully to a realization of these conditions we must first briefly take into consideration the wide general sympathy which exists between the whole nervous system and the Stomach, and which therefore must be reckoned of the highest importance in the clinical study of all pathological gastric conditions. But every careful student of the relations between the two will often find it impossible to draw a line of distinction between sympathy and direct cause and result.

The Nervous System is so connected with every individual structure that it sympathizes with changes in any of them, and may
be thrown into a state of disturbance by comparatively trifling injury, and nowhere is this more strikingly illustrated than in a consideration of certain pathological gastric changes. By sympathy we mean, that an organ of the body may become functionally disturbed by irritation of a structure external to itself; in this way pain and abnormal sensation may be induced in parts far removed from the original seat of disturbance. This sympathy will generally be found to be governed in proportion to the direct nervous connection of one part with another, and the extensive connection of the stomach with the parts of the system by means of the ampullae of its supply of nerve-filaments, lead to frequent disorder of its function from disturbance in other parts. Although it is not my intention
To describe in detail the nerves that supply the stomach, it is nevertheless advisable to indicate here the two sources which constitute this supply. The first source from the large branches of the vaso-motor nerve of the semilunar ganglion of the thoracic abdomen, by which it is connected not only with the adjoining viscera in the abdomen, but with nearly every part of the body—in fact connecting spine, rise to senses of sight and hearing, to the intellectual and sensory centres generally. The second is from the pneumogastric nerve which also supplies the lungs and the heart. With such clear knowledge, it is not difficult to perceive that the cerebro-spinal system with which in its relations to the stomach we have chiefly to deal exercises a most important bearing upon that organ in certain forms of disease. Numerous cerebral diseases induce gastric irritation, e.g. after concussion of
The brain a very common symptom is violent vomiting. Most irritable conditions of the Stomach have been witnessed in connection with Cerebral Abscess. Violent vomiting is also pathognomonic of hydrocephalus in children where it has been mistaken for bilious vomiting, and of cranial tumours, and is often a preliminary sign of Applexy. In mania a distinctive feature is the peculiar alteration of the appetite and digestion, when sometimes the strangest substances are swallowed.

The pneumogastric nerve, one of the most important nerves in the body from the character of the organs to which it is directed, is largely distributed both to the Stomach, the lungs, the heart as we have remarked, in addition to this it has two terminal ganglia which send branches to the Stomach, abdominal viscera is a very intimate one with the pulmonary and cardiac ganglia of the Vaso-motor nerve. The return of the lungs and the heart in the
Circulation of the blood, has a direct effect on the function of digestion, for if the blood be impeded by disease of these organs, the portal system of vessels becomes necessarily congested, the secretion of the mucous membrane is changed and digestion is embarrassed.

From these reasons we can define the very close sympathy of the stomach with the lungs and heart. Similarly the sympathy of the stomach with the urogenital organs through the nerve-union of the hypogastric plexus with the semilunar ganglia is well-known, that it scarcely needs comment, while the stomach is closely connected with the liver in the function of digestion, that one organ can scarcely disorder, without the other becoming more or less implicated — their connection arising in a great measure from the from the intimacy of the gastric the pani c and vaso-motor nerves.
Another cause of sympathetic affection of the stomach is disease of the spinal cord, but more frequently the pain at the cardiacus cordis, and flatulent distension of the stomach and abdomen are really signs of irritation of the peripheral extremity of the spinal nerves. - The art of paralysis which prevents the muscles forming the abdominal pancreas, and the involuntary muscular fibers of the intestine from contracting in the normal manner.

In young children the susceptibility of the nervous system during first dentition is universally acknowledged, and we have often found young persons between the ages of eighteen and twenty-five affected with vague nervous and dyspeptic symptoms during the passage of the wisdom-teeth through the gums. We have infrequently heard of young girls, in whom consumption appears to have been brought on by

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* (See p. 49)
an unfortunate love-affair. If we accept the view that consumption depends upon the presence of the tubercle bacillus, we might at first sight think that there could be little or no connection between consumption and disappointed love; but the depressing effect of the disappointment will lessen the digestion, impair the nutrition, and render the body more likely to afford a suitable niche for the bacillus.

Different emotions appear to affect different parts of the digestive apparatus. Thus disgust affects the stomach causing vomiting. Fear is seen in some of the lower animals to affect the rectum causing defecation, and in man to cause drying of the mouth. Compassion affects the small intestine producing hiccoughs. Worry and anxiety, too, they act upon the stomach and lessen appetite.

*(Santa Brunton on Emotional Dysphoria)*
appear to have a very special influence on the liver, producing jaundice, diabetes, sometimes glycosuria. Disorders of the genital organs give rise to mental depression, combined with digestive derangements e.g. A blow on the testicles causing sickness & vomiting.

Let us now come to a consideration of three forms of indigestion and mal-assimilation which are secondary conditions, due first to direct, and second to reflex nervous influences. These, however, are so intimately associated with the sympathetic relations between the stomach and nervous system, which we have already endeavoured to illustrate, that recapitulation in some slight measure is almost unavoidable.

There is no form of common ailment that comes alone, and in more varied guise under the direct observation of the general practitioner.
Know that form of dyspepsia which takes its origin in overwork, worry, anxiety, suspense or emotion. Here the encephalic disturbance interferes with the digestive act. We remark upon a patient's thinness and attend appearance, only to elicit the response that he has been "a good deal worried of late," or that he has had extra work and a preponderating amount of mental anxiety. Such is the effect of prolonged mental disturbance. Acute indigestion is the result of sudden perturbation. That the secretion of gastric juice is affected in a very marked manner by condition of the nervous system is indicated by the effect of the mental emotions in putting an immediate stop to the digestive process when it is going on in full vigour. * Suppose we are seated at breakfast and a black-edged envelope proves to be the too certain precursor of news of gravest

*(Carpenter, Physiology)
import, we suddenly feel a lump rising in the throat, a nauseating feeling in the epigastrium, and an unmistakable inclination to continue the refrain. This is the effect upon perfectly healthy persons, but it is much more marked upon those who have a tendency to gaseous weakness. Here there may occur either vomiting or diarrhoea, or the undigested material may prove a source of discomfort for some time afterwards, both by its mechanical presence, and its reaction upon the nervous system.

The flow of saliva is
stimulated by the light, smell, taste, or even the thought of food (Carpenter), especially of such as is of a savoury character. On the other hand, violent emotion may supplant the salivary secretion, as is shown by well-known tests often resorted to in India for the discovery of a thief amongst the servants of a family—thot of compelling all the parties to hold a

* (Johns Gill on Indigestion)
certain quantity of rice in the mouth during a few minutes; the offender is generally distinguished by the comparative dryness of the mouthful at the end of the experiment, this being due to fear or the dread of discovery. There is much reason to believe that the secretion of the gastric fluid is affected in the same manner as that of the saliva, by the impressions made by food upon the senses, for it has been ascertained by Bidder and Schmidt that it is copiously effused into the stomach of dogs that have been kept fasting, when flesh or any other attractive food is placed before them. Powerful mental emotion on the other hand, seems in cases to have the converse effect, that is, in entirely suspending the gastric secretion, and in consequence the digestive process in active operation. Although a cheerful state of feeling is known
To be decidedly favourable to the performance of the digestive function by exerting a beneficial influence both as to quantity and quality in the secretion of gastric fluid, chill, grief, and sudden joy, or intense pleasurable excitement seem to militate against the digestive process by inhibiting the gastric secretion and lessening the appetite for food. Melancholy and jealousy have a tendency not only to increase the quantity and vitiate the quality of the bilious fluid, but a persistent indulgence of these feelings produces a decidedly morbid effect, by disordering the digestive processes, and thus acts upon the nervous system by impairing its healthy nutrition. This throws much light upon many cases where there are evidences of mal-nutrition of the nervous system. This transient disturbance perturbs the assimilative
processes, and these in turn lead to persisting mal-nutrition of the nervous system. Violent terror may produce a severe and even a fatal disturbance of the organic symptoms, with the general symptoms closely resembling those of toxic or poisoning, as to make it highly probable according to Spaulding's theory that the blood is directly affected by the emotional state through nervous agency. This seems to hold true in a marked degree to primary disturbance in the secretion of the mammary gland. The habitual state of emotional sensibility has an important influence upon the perfection of the nutritive processes as is shown by the well-nourished appearance usually exhibited by those who are free from mental anxiety, contracting forcibly with the lean and hungry look...
of those who are a prey to continued
disquietude.

In considering the question of how
emulsion affects the digestive process
let us cite the experiments of
Bernard and Longe. They found
that the salivation of the pneumopectine
capsule produced an abundant flow
of gastric juice. Again Bernard
found that an division of these nerves
there was an instantaneous check
to the secretion of the gastric fluid,
painless and placidity of the stomach,
and but slight superficial digestion.
He also noticed that there was a
sudden change in the reaction of
the urine from alkaline to acid, the
latter being the normal condition
in the fasting state, and therefore
showing that all action on the food
must have stopped. Longe comes
nearly to consider that vagus cection
operates in paralyzing the muscular
movements of the stomach.
From these we learn that both
disintegration by the muscular movements, and the production of the
solvent gastric juice are arrested, a two-fold inhibition which proves
an effectual hindrance to the
normal process of digestion. Such
probably are the effects of fear
and sudden depressing emotions.
Persisting emotions act in the
same way but less definitely,
producing the same results though
longer and slower operations. Thus
continued worry and anxiety, care,
and the depressing influences
cause not only persisting loss of
flesh, but gradually lead to a
condition of impaired digestion
and nutrition.

Atrrophy of the gastric glands is,
according to W. McGill, often the
direct outcome of mental
disturbance. The widespread
deterioration of the digestive
processes due to nervous influences
becomes more and more apparent.
as we consider the terrific demand upon the nervous system in the present day struggle for existence and fight for a competency, and in this age of competition, the "survival of the fittest" seems to depend upon the strength and resisting power of the nervous system to the increasing chains laid upon it. In several cases that have come under my immediate notice, the disturbance of the nutritive processes has been in direct proportion to the amount of the continued mental strain; and here let me quote a case from an eminent writer which illustrates this theory to a marked degree.

It was the case of a Gentleman—a returned East Indian, who came of a healthy stock, was a well-educated person, took a very high place in the examination for the Indian Civil Service, continued his labours, for all stripping his competitors, with the
Reculver that his digestive apparatus were thrown into permanent & complete disorder. There was malaise, lethargy, inactivity for exercise, a disturbed state of the bowels, purulent tongue, a bitter bitter taste in the mouth on waking, and all the other evidences of combined dyspepsia. His bodily comfort was destroyed, and his prospects so clouded, that if he were not a man of high moral principle he would have been driven to suicide. In former times a man used to be satisfied with having earned a competency at sixty, now he schemes to retire at forty-five with a fortune. It is the pace at which we live that outtaxes our organic processes, and the digestive system breaks down under the strain. There is another aspect of the subject — the effect of mental attitudes upon the organic processes which I will here refer to. This has reference to that class of individuals who bear the misfortune to be victims of hypochondriasis, or in the word labour under imaginary
maladies, or give too much time to their subjective sensations, and here let me quote Dr. Parke on this matter:—

"The influence of the state of expectant attention in modifying the processes of nutrition and secretion is sometimes manifested in an extraordinary degree. The voluntary direction of the consequences to a part, independently of nervous excitation, suffices to call forth sensations in it, which seem to depend on changes in its circulation; and if this state be kept up automatically by the attraction of the attention, the change may become a source of modification, not only in the functional action, but in the nutrition of the part. There can be no doubt that real disease often infers upon fancied ailments, especially through the indulgence of what is known as the hypochondriacal tendency to dwell upon uneasy sensations—these sensations being in many cases purely subjective."

But here the danger is as imaginary, and when the sensations of discomfort
are present, it is well not to let them absorb the attention, as dangerous results may follow in their train, for cases have occurred where persons who have long been troubled with indigestion have died of cancer in the stomachs. Either the pastime cancer had a far-reaching history of indigestion preceding it, or long-standing functional disorder led to structural change. The hypochondriac feels his cæsions in the part to which he refers them, just as other cæsions are experienced which are unreal. But probably the primitive sensation is in the cerebral area, not the part to which it is referred; but the persistent direction of the attention to the stomach may in time lead to actual functional disorder which in its turn may set up structural change. In ordinary hypochondriacal cases, this is such fullness in the vaso-motor nerve, leading it may be to a deficient secretion of gastric juice. A similar state is produced in sixty persons. In these instances the whole attention is occupied
with the diet, the mind is depressed, and its energies enfeebled—on change after another is tried but pain and discomfort equally follow. The stomach is usually exceedingly irritable, the bowels are ever anxiously watched, sleep is unrefreshing and life rendered miserable.

A great amount of science is being collected to show that task of that portion of the brain which is devoted to intellectual processes leads to deterioration of the stomach and the viscera which form part of the organic life. The viscera which provide the foundation for the intellectual processes, i.e., the brain, become affected in time by the demand upon them, and give way under the strain. More pronounced is this effect when the posterior lobes which are linked with our subjective states and our emotions are involved—as for example, loss of appetite and of the power of all digestion is the common outcome of acute grief.
There is another form of indigestion due to nervous disturbance elsewhere, in which constipation is a most common symptom. This is due to a tender ovary, usually the left. This lies near the rectum, and the passage of feces causes pain. The pain inhibits the movements of the bowel, and constipation is the result. The accumulated feces keep up the ovarian tenderness, and the vibrating of them produces still more pain; and so the action and reaction work in a downward direction. Such indigestion is properly termed 'reflex'.

This malady was first described under the name of 'Ovarian Dyspepsia' by Magill in 1848, and has since been mentioned by Negrier, Barnes, and Lombe Atwill.

Digestive disturbances connected with the reproductive organs of women during that period of their life when they are functionally active also occur through indirect nervous relations. We know that the gravid uterus,
especially in the early months of gestation, before it has escaped from the pelvis, often produces a persistent cough, or more commonly very troublesome vomiting, and gastric irritation is often a reflex nervous outcome of uterine flexion. So important and so common are these maladies, that I cannot an inquiry into their manner of production may be here briefly studied with advantage. In the first place, as we have already noted, the stomach has different nerve-fibres, those from the Vagus, and those from the Sympathetic. Bernard, as we have seen, found stimulation of the Vagus caused Gastric secretion; in addition he found that an electrical stimulus applied to the Sympathetic fibres coming from the Limicolar Ganglia caused a diminution and complete arrest of the secretion. The action of sympathetic nerve-fibres is to excite contraction of the arteries and arterioles; that of the Vagus to cause their dilatation. Consequently we can readily
understand how currents coming in by the sympathetic tracts from pelvic or the irritation may contract the gastric arterioles and arrest the flow of gastric juice. If the irritation be sufficiently powerful then vomiting is set up. In ordinary digestion the gastric blood vessels are dilated, and there is a free flow of gastric juice. The irritation coming in from without checks both these processes, and then imperfect digestion with pain or nausea is the result. This may not proceed further than loss of appetite, dyspepsia, or nausea; or there may be severe persistent vomiting set up by the introducing food into the stomach, till a very serious condition may be reached. Such is the dyspepsia so common in women. Primary dyspepsia is no more frequent in women than in men, and presents the same features in both cases. But reflex dyspepsia has this and quite different associations. In
both forms there may be constipation or diarrhoea excited by the undigested food irritating the intestines. In
reflex dyspepsia there are usually the intercostal neuralgia with the three tendons, right, left, and middle, of Valence, one under the
mammary, another at the base of the left
scapula, and the third at the root of
the patients half of the back or seventh
intercostal nerve from the spinal column.

In reflex dyspepsia of ovarian origin
there may be erotic dreams, - many
the indications of reflex excitability;
but in many cases, the disturbance
is mainly gastric, and commonly
takes the form of the most intractable
vomiting.

* Haeckel lays great stress
on the fact that most important cause
of Atmié dyspepsia will be found in
exhaustion of the cerebral spinal nervous
system, and this like various the
forms of so-called nervous dyspepsia
already referred to might arise by mental
shock and excitement, physical fatigue
* (Haeckel in Disease of the Stomach)
Let us describe a typical case.

As we must anxiety, mind, close intellectual application increases; the impress of the mental state is stamped upon the whole physical organism, the lineaments of the countenance portray the operations of the mind, the somnolent eye, the contracted pupil, the careworn expression, the listlessness of manner; all show that the mind has been taxed beyond the power of the body. In a subject of this kind there is pallor, broken and disturbed sleep, headache or giddiness, the tongue is slightly injected at its papillae and has a whitish fur—sometimes it is loose, indented and clean. The pulse is weak, compressible, thready; there are present palpitation of the heart and throbbing sensations. Occasionally nausea or actual vomiting, the bowels are constipated or irregular, the appetite is diminished or entirely absent. The food taken is felt as an undigested mass, producing a feeling of weight and
pain often followed by extreme faintness. There is general languor or dreariness. Undigested portions of food may pass into the pylorus or duodenum, producing violent cramp or spasmodic pain, or they may be retained in the stomach for hours or even days in a crude undissolved state. Here the irritation produced by the retained food aggravates the ailment, setting up decomposition or fermentation with flatulence, pain, heartburn, or even gasteralgia. This imperfect solution, however, may arise from excess of food rather than from diminished colent power of the gastric juice, though after any sudden mental shock, the smallest quantities of food may excite pain, headache or distress. The heart already excited in action may soon to actual syncope, or there may be colic or vomitings with the bosom confined and often irritated. It may be said that in this condition of nervous exhaustion the stomach...
receives an insufficient supply of blood, and that the mucous membrane is in an anemic state. But there can be very little doubt, as we have already stated, that the intimate connection between the vaso-motor or sympathetic nerve of the stomach with the cerebro-spinal centres determines this marked effect upon the digestive function. The large nerve supply of the alimentary canal in cases become directly involved, leading to exhaustion of the nerve of organic life, and preventing the production of that amount of nervous energy required for the digestive process. This form of so-called Atone Dyspepsia is a very common occurrence among those who are in circumstances of poverty and want. Hard labour and corroding care, insufficient rest, and forcing hunger produce a form of nervous and gastric
debility which is very characteristic. The spare appearance, the dejected
and care-worn countenance, the faded complexion and sunken eyes, pain
at the "stomach end" of indigestion are here again distinctive, combined
very frequently with such sensitiveness of the stomach that immediate vomiting
on ingestion of food and diarrhoea supervene.

In early womanhood with rapid growth, signs similar to the above are often present
also inactivity of body and faintness
of digestion, and the mind often
becomes dejected and melancholy,
the subject continually finding in
all around her calamities to
feed her mental depression.

In women after excessive
childbearing, and especially when
that is followed by prolonged
lactation, a peculiar form of
nervous hysteria often occurs,
marked by great exhaustion of the
whole power of the nutritive system.
In these cases the nervous phenomena are especially prominent. The face often becomes irregularly flushed in patches, the headache is severer, either at the vertex or the temple, there are ringing noises in the ears, the eyes are intolerant of strong light, the stomach and bowels are most irritable, causing diarrhoea, vomiting or both. The appetite is poor with a sensation of abdominal exhaustion and great fatigueness. The mind gets singularly depressed, disturbed by vague apprehensions or prompted to suicidal or homicidal acts. Dyspepsia of this description may be caused by severe haemorrhages from excessive menstruation and rheumatoea, the prolonged use of mercurial medicines or the immediate use of tobacco. The state of the nervous supply to the mucous membrane of the chest and its glands is the probable cause of these symptoms. Large branches are sent
from the semilunar spongy upon
the coronary arteries to every part
of the stomach, and it is by their
influence that the gastric juice
is forced out at its proper time
and in its proper quantity. The
mere presence of food in the
stomach will not induce further
gastric secretion of nervous energy
be wanting. The refilled state
of the nerve power is not known
limited to the stomach, but the
heart and its cardiac plexus are
in a like state, and the supply
of blood to the stomach is thus
rendered insufficient. The
attacks of faintness and syncope
may be explained in the same
way—namely, that a large supply
of blood being sent to the stomach
less is conveyed to the brain
causing a temporary failure
of power. This may be observed
when urging exhausted patients
to take solid food, and the state
Of the Vaso-motor nerve. Causes the forbiddance of digestive seen in persons who are inordinately stout. We shall now briefly look into that form of imperfect digestion caused by fatigue. When we start on a walk, it does not matter much whether the road be rough or not, and ordinary obstacles are avoided with care; our nervous system is in full vigour, and preserves perfect coordination amongst the movements of the different parts of the body, so that we help the other and all difficulties are surmounted. But when we are tired, the case is very different; a little roughness in the road will cause us to stumble, and an unexpected stone may give us a sudden fall. The weakened nervous system no longer co-ordinates the movements of the various parts of the body, so that they no longer work together for a common end. The stomach, usually in harmony,
by various symptoms indicative of disturbance. Let us mention in connection with this, the peculiar condition which comes on about two hours after meals, commonly met with in persons belonging to the upper classes who live largely upon meat, characterized by a curious feeling of weight in the legs and arms, with dyspeptic symptoms, which were discovered by Dr. handing Brunton to be less after meals consisting of farinaceous food only. This he attributed, in his Lettoman lectures, to a peculiar sort of alkaloidal poisoning (possibly dyspeptic) affecting the nervous system very powerfully, and analagous as he pointed out in his experiments to the symptoms met with in poisoning by curare.

Sir William Roberts, in his lectures on dyspepsia lays great weight on the importance of studying the idiosyncrasies of dyspeptics, and the cure with which these existing
must be attended to in the consideration of individual cases of dyspepsia. In some cases we observe at the cause resembling hysteria as shown by flatulence, loss of appetite, sensibility of the surface of the abdomen, leanings almost amounting to 'flebas hystericus', disturbed cerebral function, depression, anaesthemia, incapacity for exertion.

In other cases the head is badly formed and the forehead narrow, showing that the brain is likely to be easily disturbed, or there is hereditary tendency to mental disease as mania, melancholia, and epilepsy. The body is well nourished, but the patient complains of pain at the dorsum of the back, or in various parts of the body; the mind is depressed and the appetite irregular. In this respect the appearances and symptoms are normal. It would seem that dyspepsia has arisen from ordinary causes, but the
sympathetic nerve reacts upon the cerebro-spinal centres, and these being easily disturbed from their healthy balance, again react upon the sympathetic nerves, perpetuating and aggravating the original and slightest malady.

And now we come to a careful consideration of those cases which may be classed under the head of "Hypochondriac Dyspepsia", and so-called "Anpepsia or Anorxia hervora.

Some writers apply the term nervous dyspepsia chiefly to such cases as become implanted on pre-existing forms of Jejuné derangement e.g. Acute Colitis of the Stomach, Jejuné Ulcer &c. These form a varied group of cases in which the nervous manifestations, at first remaining in abeyance, at a later stage become the most prominent phenomena in the respective Conditions. This we may touch upon in the following
Other writers define "nervous dyspepsia" to mean that important group of dyspepsias which are peculiar to persons of the "nervous temperament" or "nervous diathesis." This definition is especially applicable to those cases with which we have presently to deal. All such cases are markedly distinguished by the great intensity of the symptoms of the stomach included under gastalgia + gastodynia, hyperesthesia, spasm, and vomiting. Gastalgia and gastodynia especially are regarded as of the character of neuralgia and exist sometimes as the only manifestation of gastric disturbance. It is a very common affection amongst the poor, and is a great deal more frequent in women than in the male sex.* The nervous temperament, and the hysterical, hypochondriacal, and many other dispositions predispose to this affection.

*(Parry on "Digestion and its disorders")
It is common in females who have either been born, or had passed most of their lives in tropical countries. * Gastrodynia is a frequent attendant maternal derangement. It sometimes occurs in men, but often paroxysms accompanied generally by a feeling of distension, much anxiety.- In females it is often combined with hysterical symptoms, and in some forms comes to depend upon over-dilatation of the stomach, and is often very severe and intractable. * The pain of gastrodynia in nervous and hysterical persons is described as being often times exasperating. The situation to which it is referred is the part of the stomach, and complaint is made of its extending through the body to the back between the shoulder-blades, which forms the region for pain associated with stomach affections. In general it occurs as a variable period after eating food, and may last for some hours. Sometimes

*(Freewick in "Diseases of the Stomach," in Atkinson's Dictionary.)*
*(Also referred to as "Disease of the Stomach.")*
it is upon an empty stomach that the pain is experienced, and taking food affords relief. The pain may come on suddenly and as suddenly disappear, the patient during the interval enjoying perfect ease. It may be at first difficult to distinguish it from the pain of chronic inflammation, ulceration, and malignant disease, and the diagnosis depends upon the fact that the pain is not aggravated, but even on the contrary eased by pressure. It is unattended with tenderness or fever, and does not lead to the production of that inflammation and cachexia which from accompaniments of structural disease. Neuralgic pain affecting the stomach independently of the disease is comparatively a rare complaint. Hyperesthesia of the stomach is a very common accompaniment of various gastric disorders, and its
intensity in subjects of a nervous and hysterical temperament often lead the practitioners to suspect the patient is affected with some grave organic disease of the organ. Gastric of the stomach is a frequent symptom, and chiefly occurs in females who are the subjects of asthma and who dyspepsia. This is also much intensified by the nervous temperament. It may be produced by flatus, but it may arise from a hypochondriac condition. In the former case, the stomach is the becomes over-distended with flatus which it has been unable to expel as account of a spasmotic contraction of the cardiac orifice, or in account of the distension; the entrance of food excites a contraction which the exhausted muscle is unable fully to execute. "Suff in the stomach" is also described as a peculiar systemic nervous epa, occurring in forty persons, J. Brinton.
however denies this theory, and Sir Thomas Watson says that the so-called 'sick in the stomach,' in which the pain comes on in sudden and severe paroxysms, and is removable in some by laudanum and brandy, is nothing more or less than species of syncope persons from the accidental presence of indigestible food in the stomach. Dr. Alcmenius mentions a violent affection of the stomach occurring chiefly in females of an irritable habit, and assuming a spasmodic or nervous character which seems in general to be relieved by opiates.

That most important and most intractable form of gastric neurosis—namely vomiting, Spurzheim has to consider in connection with the dyspepsia peculiar to the hysterical temperament and the nervous abstraction, endeavouring to exclude as far as is practicable, vomiting as referable to the many other causes.
described so Lyttaematically by Haldorson in his excellent treatise on Diseases of the Stomach p. 30.

In young persons, especially those affected with hysterical susceptibility with dysmenorrhoea or leucorrhea, a state of extreme irritability of the stomach is sometimes induced, to which, both in its milder and more aggravated forms some writers have given the name "Hysterical Dyspepsia." In this variety the contact of any substance with the mucous membrane of the stomach, is followed by instant reaction, and this may take place without previous nausea or pain, and what is still more remarkable than may be very little association for weeks or months. Sometimes pain at the cardicus cordis exists but most frequently the pain is of a neuralgic kind and is situated beneath the left breast. The pulse is irritable, the tongue has generally more or less injection of its papillae,
and the bowels are confined. It is to this state that Sir Henry March has applied the term of "Ressurgimente Disease" because the food is rather ressurgimented than vomited. These cases may however be associated with gastric ulcer, where the pain or pressure, or more persistent symptoms of that state will be also present. This hysterical vomiting may come on whilst the patient is eating, or almost immediately after the meal is finished; the person may leave the table suddenly, reject what has been taken and often complain again of hunger. What is vomited is hot food, and seems to consist only of food in the state it had been in just before being swallowed. The wonderfully small amount of pain and emaciation may be explained by the hypothesis that only a part of what is taken is returned. The "ressurgimente disease" of March, he associates
with uterine or ovarian mischief, or to irritation of the pulmonary branches of the vago-acting in a reflex manner upon the nerves of the stomach. The reflex nervous act of vomiting may of course not only be excited by causes acting on the stomach but also by causes acting in a variety of other parts.

Pawly, in common with many others, finds irritation of the pneumogastric nerves as the main cause of all vomiting.

Certain impressions acting on the special organs of sense, as for example a pulsating light, or a disgusting smell or taste are capable of exciting the performance of vomiting, even the thoughts of such sensations— and therefore an impression starting from the brain and originating in the mental operation, may suffice in a susceptible disposition to afford the requisite stimulus for exciting
The accomplishment of the phenomenon. The influence upon the cerebrospinal fluid may be the motion of the body is probably the cause of the vomiting of seasickness. Swinging, waltzing, or more may produce the same effects from the same cause. These phenomena may be seen in many healthy persons, but are especially characteristic of, and intensified in persons of hysterical or nervous susceptibility.

It will be of advantage here to note the effect on the stomach in pathological conditions of the brain and spinal cord which we have before referred to while treating of the sympathetic relations.

In a diseased condition of the spine vomiting is produced by means of the splanchnic nerves passing from the cord to the large splanchnic ganglion of the abdomen, though often, when there is great irritability of the stomach, this occurs by disturbance
are often present. Vomiting may be induced not only by irritation of the peripheral branches of the pulmonary nerve in the abdomen, but by irritation of its peripheral branches in the chest, and at its origin in the brain. The irritability of the stomach is sometimes so great that vomiting is at once produced when the patient is raised from a recumbent position. The importance of these foregoing remarks is due to the extreme difficulty of diagnosis of these cases when commencing with symptoms of true gastro-enteric disease, and in many cases have been referred to one of our greatest authorities to these dyspepsias affecting persons of a nervous temperament. Here it would not be out of place to quote a few lines from Dr. Snave's "Clinical Medicine" as an aid to diagnosis in such cases: "In all nervous complaints where during the course
The stomach becomes irritable without any obvious cause, and where vomiting occurs without any epigastric tenderness, you may suspect congestion or incipient inflammation of the brain or its membranes. It would also be well to remember that in simple cerebral disease the abdomen is generally collapsed; in primary abdominal disease, there is on the contrary, distension. Lauder Brunton remarks that the enormous distension of the bowels in hysterical cases, and the rapidity with which it occurs, has been such a puzzle to medical men, that it has led some to think that the only possible explanation is a rapid evolution of gas from the blood. From the observations of Böeke and Zeekendorf, however, it seems more probable that the true cause of this enormous dilatation is to be sought in a paralysis of the pylorus, which
allows the air to pass freely from the stomach into the intestines.

Dr. Playfair in his instructive 'Hypo on the
Prostration and Hypotonia, mentions the
difficulty of successful treatment in these cases of hypotonia where the
phenomena of unpaired nutrition are most prominent. These usually are:
- wasting of the fatty tissues, combined with anaemia; the patient's
  appetite is excessive, insatiable, or
  vitiated. Associated with these are
  very marked dyspeptic symptoms
  too often aggravated by the
  pernicious habit of deadening
  pain by chloral, morphia, or
  stimulants. As a necessary
  consequence of such a state, and
  partly, no doubt, from local pain
  all exercise is abandoned, and
  the patient becomes entirely
  confined to the house or even to
  bed. These conditions naturally
  aggravating those of an emotional
character which are consistent in such cases.

Pervasive conditions of the appetite are present in exaggerated neurasthenic conditions, and are of three kinds: (1) Excessive appetite. (2) Vitiated appetite. (3) Loss of appetite.

An inordinate appetite, in addition to being an occasional symptom in hysterical dyspepsia, is sometimes observed in insanity, and chronic cerebral diseases. Vitiated appetite is, according to Parry, sometimes noticed in children, frequently in idiots, and is an occasional phenomenon belonging to hysteria, pregnancy, and chlorosis. Sometimes these cravings have been of the most terrible and disgusting descriptions.

Anorexia or loss of appetite also occurs as a symptom of dyspepsia and is especially associated with a particular form of the neural diathesis, and
It is a study of several cases of this particular variety which have come prominently under my own observation during the last six years, combined with a perusal of the experiences of Sir William Gull and Dr. Stephen Mackenzie, also Dr. Playfair on the subject, that has led to my election of the subject of this Thesis.

Sir William Gull, in an address on medicine delivered at Oxford in 1868 referred to a peculiar form of disease to which he at different periods gave the names of — Anorexia nervosa — Apepsia Hystonica and Anorexia Hystonica. This disease he observed, occurred mostly in young women, was characterized by extreme emaciation, restlessness and activity, and more or less complete anorexia. He next referred to it in 1873, and his
report of two cases was published in that year*. His first case was that of a young lady aged 17, with the following symptoms:— Extreme emaciation (it was stated that she had lost 33 lbs in weight) amenorrhoea for nearly a year, no vomiting or diarrhoea, abdomen shrunk and collapsed, symptoms otherwise generally normal. The most prominent symptoms were (1) Complete anovulosis, with rarely for a day or two voracious appetite. (2) A striking expression of the nervous state, shown by extraordinary restlessness and activity.

The second case was that of a young lady aged 18 who was brought to him full as a case of latent tubercle. Her symptoms were similar to the former case with great emaciation, and a still more uncontrollable restlessness. In fact it seemed hardly possible that a body so wasted could undergo


[Asp.]
Such an amount of exercise, in the same year, 14 Lægge read a paper on the same subject in Paris, which was published in the Medical Times of Sept. 6th to 24th, 1893. Sir W. Gull gave his definition of the malady in the following terms. "The want of appetite is, I believe, due to a morbid mental state, and that its origin is central not peripheral."

That mental states may destroy appetite is notorious, and it will be admitted that young women of the ages named are specially susceptible to mental perversity. We might call the state "hysterical without committing ourselves to the etymological value of the word, or maintain that the subjects of it have the common symptoms of hysteria. I prefer, however, the more general term "nervous" cuire. The disease occurs in males as well as females, and is probably
rather central than peripheral. In the same year Sir W. Gull saw another case of a girl aged 16 with symptoms similar to those aforementioned, in addition to which the mind was weakened and the temper obstinate, and the family history revealed the fact that the maternal grandmother had had peculiar nervous symptoms. This case, Sir William at that time attributed to a failure of the power of the gastric branches of the pneumogastric nerves. Later in the history of this case the patient was troubled with great sleeplessness. The greatest difficulty was to keep her quiet and to make her eat and drink. Every step had to be fought; she was most logocious and obstinate, anxious to overdo herself bodily and mentally.

In the "Lancet" of March 17th, 1888 there appeared a clinical note by Sir W. Gull on a case of "anemia..."
hermaphrodite. Miss K. R. aged 14 had an aunt, the subject of various peculiar nervous manifestations, and a cousin epileptic. She was a plump, healthy girl until the beginning of the previous year, when she began, without apparent cause, to evince a repugnance to food, and soon afterwards declined to take any whatever, except half a cup of tea or coffee. In two or three months she became so emaciated that she was an object of remark to the passers-by. Her extremities were blue and cold. Otherwise her symptoms were normal without organic disease. The most remarkable points were his excessive emaciation and his persistent wish to be on the move. This case Sir W. Gell defined to be what he termed "a perversion of the 'Ego'," that being the cause and determining the course of the malady. Here we find that
Sir William took a deeper view of the nature of such cases than he did in 1873, when he attributed the disease to a failure of the power of the ganglionic branches of the vagus. Mr. de Bardi Howell in criticising the article, gave precedence to the term "hernia" as against "hyposthenia." In all these cases a cure was effected by three things viz. Rest, Warmth, and the regular and frequent introduction of food by an efficient nurse, in utter disregard of the commands or the wishes of the patient.

A similar case was described by Dr. James Adams in the "Lancet" of March 31, 1883. In the following month a case was narrated by Dr. Stephen Mackenzie, in conjunction with whom several of the cases that have come under my own observation, and which I will shortly describe, were treated.

Dr. Stephen Mackenzie in a paper on the "Difficulties of Diagnosis of Gastric Ulcer" read at the Medical Society in 1885, alludes...
to some extent. In one case of 'aphemia
krania,' he had previously treated, in spite
addition gave the details of the following one.
Miss — was a female aged 19. Here
there was great consumption, anemia and
weakness; she complained of weakness only,
and stated that on account of pain she
had been taking insufficient food until
she had really starved herself into
her present condition. About two
years previously, she began to be troubled
with indigestion, had pain after
eating, with feelings of nausea and
heart-burn, also faintings and flushings
of the face. Her appetite left her in
the preceding march, and she had
gradually eaten less and less. She
then noticed that she was more easily
fatigued, and suffered much from
headache, had entire loss of appetite
with loathing of everything except a
little bread and butter. Her abdomen
was retracted, and her periods only acted
once a week. Catarrhia had always
been irregular and scanty, and had
been absent for two or three months. She complained of pain in the back and cedars hea, and said that food even in small quantity caused her a feeling of fulness and pain in the stomach. She was ordered milk and beef tea, eggs, pudding, and brandy mixture at regular intervals with instructions that if the food was not taken each time it was offered, it was to be administered by the stomach-pump or enema. A good deal of pressure had to be exercised at first to get her to take the food, but this was accomplished, and fish and flesh were soon added to the dietary. She steadily gained flesh, colour, and strength, began to menstruate regularly, eventually for well and robust.

In the "Lancer" of Apr. 28th 1888 Mr. Playfair wrote an article on the case of Lt. W. J. Full above mentioned, in which he to a certain extent differed from the views by him expressed, and urged that the so-called Apepsia heretofore was one type only of the multiple varieties of
Functional neurasthenia which was apt to occur "under conditions still imperfectly understood", and that the true medical cause for such was only one of many coexisting indications of a profound alteration of the nervous system, and that others were: the suppression of menstruation, the change in mood, and tendency to over-fatigue, leading to the exhaustion so easily produced in the starved body. He further held that if the history of these cases was carefully followed out, it would be found that the anorexia was rarely the primary symptom, but generally secondary to some well-marked cause acting on the nervous system, such as severe study, domestic bereavements, disappointments in love, which led to a great number and variety of functional neurasthenias, and that these were accompanied by a profound alteration in nutrition dependent on the condition of the nervous system, and for which he proposed to use the term "neurasthenia". He argued
that Sir W. Pink’s cases — as well as the “Lancet” leads on the subject, missed
the essential point which was necessary in dealing with such cases, viz: that they
must be removed entirely from their usual domestic surroundings, involving,
as they almost always did, much
that was unwholesome for the patient,
and tending directly to foster that which
Sir William called the “Perversion of
the ‘Ego’.” He — Dr. Playfair maintained
that.retreat or removal to the country
or hospital was the main point in the
treatment of such cases, and with due
attention to that factor, that this
peculiar form of neurosis could admit
of certain cure. Here it will be
seen that Dr. Playfair considered these
cases as forms of “hysteria” rather than
“neura;

In the same “Lancet” appeared a
Contribution from Dr. Edge of Manchester
with reference to a case, which, while
in many respects possessing the features
already described, presented a mental
condition not noted in the former cases. A girl aged 19 was admitted into the Salford hospital on 26th October 1887. Her physical examination showed only, in addition to a condition of extreme anaemia, one pathological change viz extreme lateral spinal curvature. At first she voluntarily swallowed small quantities of food of a liquid nature, but later on she became stupid, had complete anorexia and everything had to be forcibly administered to her. She then became completely silent, refusing to speak to, or answer anyone. The characteristic restlessness was manifested by her setting out of bed whenever she was not watched and standing motionless in the centre of the ward. She next began to discharge the contents of the rectum and bladder in bed. On the 18th she commenced taking her food voluntarily and even with apparent relish, and a few days later solid food was taken and agreed well. On Nov 6th she began to speak occasionally
to the other patients. On being re-examined with upon her discharge of urine and faces during the night, these irregularities soon ceased. In the beginning of December she began to answer questions, afterward talked more and more readily, and was eventually dismissed after disappearance of all abnormal symptoms, except of course the spinal curvature. Her weight had meanwhile increased from 4 to 6 stones.

In December 1855, Dr. Stephen Mackenzie read another paper upon *Gastric Ulcer* and the difficulties that attended the diagnosis of certain cases from (a) cases of ordinary *Aplepiia* herea, and (b) the same disease in addition to the presence of *Gastric ulcer*. He mentioned several illustrative cases. In the case of a boy aged 17, who was brought in as a case of *Gastric ulcer*, there was emaciation, tenderness, pain, and vomiting without retching was the main symptom. Temperature was subnormal, and the respiration was slow. There was constipation.
He was seven weeks under treatment. Post-mortem examination revealed marked cardiac atrophy. There was no gastric ulceration, and only congestion with much mucous secretion. The diagnosis was 'peptic haemorrhage'.

The case of a woman aged 39. Thirteen years before her death, she had pernicious; she also suffered from gastalgia; three times, whilst at work as a nurse, she was laid up for ulcer of the stomach. There was marked hematemesis, also anemorrhoea; she complained of severe localized pain, which, when she walked about, radiated in many directions. In spite of treatment, the vomiting, pain, and haematemesis continued; the attack lasting 10 weeks when death terminated the case. At the necropsy no sign of disease or ulceration could be detected. The diagnosis was first limited to (a) an ulcer that had healed sheet no trace, (b) a case of chronic gastritis, and (c) some disturbed...
innervatin of the pneumogastries. Dr. Mackenzie regarded the case as one of 'Apepsia hysteric'. The important information from this case is, that if Dr. Mackenzie's view was correct, then haematemesis was not so important a sign of organic disease of the stomach. The case of a young woman aged 22. The main symptoms were vomiting, haematemesis, pain, retracted and tender abdomen, almost complete anorrhea, and a subnormal temperature. Ophthalmia tensori. The ovaries were reported to have existed, but were treated as fictitious; the case was treated as Apepsia hysterica, and the patient recovered. Dr. Ord related a case at the same meeting of a lady who acted as a nurse, who was the subject of vomiting and pain. She ate nothing but large quantities of mashed potatoes and butter. Rude tenderness and great emaciation were marked symptoms. She sometimes vomited fourteen times a day.
Recovery took place after treatment of the case as one of 'peptic herosa'. The ingenious theory of Dr. Angel known as 'stretch disease' is, that in many such cases, the cause perpetuating the ulcer of the foot of young women was a condition superadded to that of previous peptic herosa. And that this was explained by the fact that in every case of peptic ulcer, the corresponding side of the nervous system was in an aconstant state, and like perpetuating ulcer of the foot, was an example of nervous dystrophy.

In the course of private practice during the last six years I have personally treated carefully ten cases of this malady, and here I will briefly describe 4 of the most typical, only giving in detail any symptoms that may have been present in addition to, or differing from those cases of Dr. Stephen Mackenzie's which I have described fully.
I. Miss S— came under my care three years before I treated her as a regular patient in 1885. Some years previously she had had an unfortunate love affair which completely changed the tenor of her life, and was followed by symptoms of a markedly dyspeptic character. The nervous system as well was so shaken that the mind became temporarily unstrung, and she had to be placed under close confinement for nearly a year. After her return she was very much troubled with obstinate dyspepsia, and consulted many eminent medical men with little or no advantage. When she first consulted me, her symptoms very much resembled those of Nishizawa’s case on p. 54. Refractory vomiting during meals was a common symptom, while localized pain was more or less constantly present, and there was almost complete anorexia. She accounted for her complaint, ‘when the pain was not on pressure – nor was the vomiting — usually immediately after food; it often went without anv vomiting’.
Emaciation by the fact that she was first obliged to starve herself on account of the infection of food always causing intense pain, and later on she had all desire for food. Under a modified Weir-Mitchell method of treatment (this I will particularly refer to further on) her strength and weight increased. But signs which at first made me suspect the correctness of gastric ulcer did not decrease as I would have wished, and although her hemorrhages were away, and her demeanour became cheerful and hopeful, still her appetite became perverted; insomia or excessive appetite was the chief symptom. E.g. I found her having eaten a whole chicken at a sitting, and sometimes nine eggs in a day. One day I was called in to see her, and found her suffering from all the signs of perforation of the stomach; this soon ended in peritonitis which caused her death. There is no doubt whatever that * although easily fatigued, her comparatively uneventful course deserves great distinction to her excotic body.
the distension and irritation of the stomach by the ingestion of these huge masses of food was the immediate cause of the ulcer, ending so rapidly in perforation. This opinion, and the diagnosis of the case as gastric ulcer superimposed upon peptic ulcer were confirmed by Dr. Stephen Mackenzie who saw the case with me in consultation.

II. I was first called into Miss [Miss, aged 66, for extreme weakness, emaciation, and suspected tubercle]. Her weight was less than six stone, and she was positively dying of asthenia. Her again the patient accounted for her complete anorexia by the excessive pain she experienced on the ingestion of food, followed by a distressing feeling for all food of every description except bread and butter. Here there was no vomiting. She had a peculiarly uncertain hereditie temperament, but without hysteria.*

All her brothers and sisters were

* Her the periods of extreme restlessness alternated with intervals of extreme lethargy and disinclination to rise from the recumbent posture.
The subjects of peculiar nervous symptoms; the listers also were all troubled with dysmenorrhoea, while the brothers were more or less the victims of psychic disarrangement. Miss A. had peculiar moodful fits of depression and was sometimes much agitated and excited by sensational literature or tragical recitals. Here began operations by allaying the psychic pain and excitation by the exhibition of opiates, alkalies, and stimulants. Having begun by experiencing unmistakable benefit from these, she believed to a certain extent in my ability to allay her discomfort, and late as her faith made her accept my affirmations that she was being gradually cured and that her appetite and weight were increasing. (I will further refer to this phase of treatment also.) Next I had recourse to the Weir-Mitchell plan of treatment, and eventually ordered a species of isolation to the country, four months
months afterwards her weight was JsonObject
9 stone 6蒲 0.5. She had got up to 7½ stone
and had lost all her nervous symptoms
before I sent her away, and I have
the satisfaction of knowing that ever
since she has continued well
and happy.

III. Miss C.—aged 23, residing
at Swindon, came to consult me
with all the usual symptoms. The
nervous and dyspeptic phenomena
in her case were fostered by irregular
meals; her daily surroundings (she was
a forewoman over a large number of
female operatives in a low
establishment in which the moral
tone was far from healthy) were
unsatisfactory, and she suffered from
mental anxiety owing to the
unsatisfactory progress of a love affair.
Anxiety in this case was almost
complete, and she stated that most
articles of food caused her the
utmost pain. Shortly after beginning

treatment, another nervous phenomenon
Sciatica was developed to a very painful degree. This entirely cured after consultation with St. Julius Althaus by salvernum and message alone. In this case also the feeding under the Weir-Mitchell System was almost miraculous in its effects; she regained her health, weight, and spirits, and for several months she has enjoyed perfect health. In this case the symptoms of extreme restlessness was the first to disappear.

IV. Was the case of Mrs. B—, aged 40, who, by her own account, had "sent the round of the doctors and was worse than ever." She came to me suffering from great mental depression and disappointment at having found no alleviation of her painful dyspeptic condition. Her occupation had been that of a secretary and amanuensis, but she had given up her situation on account of ill-health. The majority of the symptoms already given were present in her case. There was
excessive restlessness and abnormal activity, also loss of concentration and severe gastralgia. There was complete anorexia, great weakness and emaciation, she was disposed to be hysterical. She stated that she had not eaten with any degree of comfort for several years, nor during the three years since she had sustained a severe pulmonary loss. Preliminary sedative treatment, followed by a modified Weir-Mitchell method, completed her cure in a few months, since when she has never required any further medical advice.

These cases all speak for themselves, and I shall refrain from any comment upon them, merely remarking that, typically exemplifying and thoroughly giving me what I have already stated with regard to this peculiar form of 'nervous dyspepsia'.
Although I have briefly given my method of operation in the last four cases, it is not my intention in this paper to discuss the treatment of the many and various dyspeptic conditions connected with the Cerebro-Spinal Nervous System, making, however, two important exceptions. (1) What has been denominated by Playfair, 'The Weir-Mitchell System'; and (2) what I can only imperfectly describe as 'the endeavouring to bring about - or assist in bringing about a cure by inspiring in the patient faith, and the confident expectation of a cure'.

1. In speaking of the disorders of digestion, one of the most important modes of treatment, and one which often gives results little short of miraculous, is the method first introduced to the medical profession in America and England by Dr. Weir-Mitchell of Philadelphia in his book on "Fat and Blood, and How to Make Them". In this country it attained little notice until it
was taken up and carried out by Dr William Playfair. It consists essentially in passive exercises and abundant feeding, and in most cases the use of the interrupted current. We all know how active exercise increases the appetite. Tissue change goes on more rapidly in the organs, waste is more abundantly excreted, and more food is easily obtained. But there are many weak, flabby persons who cannot take exercise, or if they can, will not. Moreover there are others who are quite willing to exercise the voluntary muscles of the limbs, yet cannot exercise the involuntary muscles of their internal organs. Now treatment by massage, and in suitable cases, electricity helps both of these. It increases the nutrition both of the voluntary muscles and of the internal organs, and under its use patients apparently hopelessly incurable completely recover. The wonderful success that has attended Dr Playfair in the
Carrying out of this method has been chiefly with hysterical women, especially in the case of those suffering from dyspeptic symptoms. But now a wider scope and a more extensive field have been successfully offered, and many other forms of dyspepsia, especially those in any way connected with the cerebro-spinal cavities, have particularly before us have been unrecoverably benefited thereby. Dr. Lander Brunton mentions a case of neurasthenic dyspepsia in a man in whom all medical treatment had proved useless. The pain and vomiting could not be checked, and emaciation increased until he was reduced to the appearance of a living skeleton, worthy of being exhibited in any show. In conjunction with Dr. Playfair he resorted to the treatment by massage and forced feeding and soon the man's muscles enlarged, became hard as pieces of wood, and from being a living
Skeleton he became a well-developed man fit to join any Highland kilted regiment. One important point to remember in this treatment is isolation, and many cases in which this method may not be perfectly successful when tried at home, will completely recover upon removal to a different atmosphere and surroundings.

In many of my own cases I have noticed that removal to the country or the sea-side has materially aided and perfected the cure. Certain parts of the treatment have been separately advised and more or less successfully practised, as for example massage and fanning without isolation, or isolation and judicious fanning and moral management alone — these may be termed "modified Wei-Mitchell treatment." Though the claims of the Wei-Mitchell to originality in the introduction of this system have naturally been often
contested—massage and electricity being now household words—still as Dr Ross of Manchester admirably summed up in his remarks at the Meeting of the British Medical Association at Worcester: "Dr W. Mitchell's treatment, though not new in the sense that its separate recommendations were made for the first time, was new in the sense that these recommendations were for the first time combined so as to form a complete scheme of treatment." The principle of the treatment which must be admitted to be perfectly physiological and reasonable, is that of removing the patient from the unwholesome moral atmosphere in which he or she has been living, combined with the renewal of the vitality by exercise feeding, which under ordinary circumstances could not be assimilated, but which is rendered possible by passive muscular exercise obtained through the systematic
use of Shampooing with Electricity

In the treatment of all suitable cases, the following are the chief points to be carefully studied:

First. Entire seclusion and removal from the morbid atmosphere of invalid habits, and the injudicious sympathy and constant tending of friends, in order that道德 influence over the patient be gained which is really essential to success.

Second. Rest both bodily and mental; in bad cases repose in bed for several weeks, the repose being lessened as the curative process proceeds.

Third. Massage, consisting in systematic Shampooing and exercise of all the muscles, both of the trunk and extremities, at first for half an hour twice daily, and very soon for at least an hour and a half night and morning.

Fourth. Electricity. In suitable cases the interrupted current is
employed twice daily, from half to three quarters of an hour. The poles armed with wetted sponges are placed on the muscles to be operated on in turn—about 4 inches apart, and slowly moved until the muscle is fully and freely contracted. Commencing with the foot, the whole body, except the head, is thus systematically done over.

Fifth. Diet and Regimen.

These form the most important and most characteristic part of the cure. It is perfectly astonishing, how when the points just mentioned have been strictly attended to, a nervous, anaemic, and wasted dyspeptic able to eat next to no food, can be brought to consume, and not only to consume, but perfectly to assimilate an almost incredible amount of nourishment. The patient thereby gains flesh, weight, and strength so swiftly, that the change is almost apparent to the eye from day to day, and this takes place without the slightest
Feeling of dyspepsia or discomfort, this in occasional cases the anemia and wishes of the patient must not only be ignored, but firmly combated.

The first step after excluding the patient with the nurse before the message is commenced, is to place her in a diet of milk alone given at intervals of three hours. At first three or four ounces are given at each feeding, but in a couple of days or so, the amount is increased to eight or ten ounces, so that within three or four days, she is consuming two or three quarts of milk within the twenty-four hours. Often little or no difficulty is experienced in getting the patient to take this quantity, and the dyspeptic symptoms rapidly disappear. After the first three days when the stomach is settled, the message is commenced and along with it an increased amount of food is administered, beginning with bread and butter, an egg or the like for breakfast. Then in a day or
two a chop finely cut up with some vegetables is given at mid-day, and so on progressively, until in from ten days to a fortnight, though in some cases it may be a slightly more lengthened period, three full meals daily are given, besides two or three quarts of milk in divided quantities, and a considerable amount of soup made from raw beef after a receipt in Dr. Mitchell's book. It would be incredible to anyone who had not personally applied the treatment, to watch the amount consumed at a meal, and the appetite with which in the latter stage it was consumed. Of course certain difficulties are apt to be met with, but change to raw, nausea or oppression are rarely experienced from this apparently excessive diet, and should sickness happen to supervene, a temporary return to milk alone for a day or two will be sufficient to settle the stomach. This is a brief resume of a method, which I have not only
found to be a curative process of the most satisfactory nature, and in several cases to have been absolutely marvelous in its effects.

(2) The mental state may operate beneficially in checking a morbid action, and restoring a healthy condition. That the confident expectation of a cure is the most potent means of bringing it about—doing that which no medical treatment can accomplish—may be affirmed as the generalized result of experiences of the most varied kind extending through a long series of ages, as numerous cases on record can clearly testify. For though there can be no doubt that in a great number of cases, the patients have believed themselves to be cured when no real amelioration of their condition has taken place, yet there is a large body of trustworthy evidence, that permanent amendment of a kind obvious to others, has shown
itself in a great variety of local maladies when the patients have been sufficiently possessed by the expectation of benefit, and by faith in the efficacy of the means employed. It is quite clear in this matter that the confidence of the patients will rest upon the confidence with which they are told they are being, or will be, cured. If the euris believe not in the cure, he cannot inspire the patient with faith. If the modern man speak to the patient with doubtful accents and hesitating utterances, he does not inspire confidence; he even distracts. This gives the key in many instances to the successful treatment of one man where another has failed, the same remedial measures being employed. One carries the patient with him to the restoration of health; the other intensifies a morbid state, and tends to make it permanent. This is a matter, the importance of which is not properly estimated, nor sufficiently attended to. The respect of M. C. I believe, accounts for the want
of faith in medicines that has now for
some time existed, but I think a wave
has now begun to set in that will
turn the current of public opinion into
more healthy channels. Quacks, charlatans
flourish through want of faith in the
medical profession. When a man is
sick, what he wants is to get well, and
it is a matter of comparative indifference
to him whether the instrument be
a M. D. or a notorious charlatan.
This principle have always argued
holds especially good in cases where
irregular intellectual or nervous
conditions are very prominent
manifestations, and in these cases it
is very often possible to change the
mental attitude of the patient from that
of marked indifference or depression
to a state of trusting helpfulness, and
expectation of eventual cure. And when
this is accomplished various experiments
leave me no room for doubt that
temporary amelioration leads in the
majority of cases to permanent amendment.
In cases of dyspepsia dependent on, or associated with nervous or hysterical symptoms, the preliminary exhibition of powerful sedatives causes unmistakable relief, and consequently engenders a certain amount of faith. Next by powerfully restricting your conviction that there is steady and marked improvement, your nervous subject will become equally imbued with the same conviction. This, together with the real improvement which now begins to manifest itself to the patient in many unmistakable ways, leads to the eventual result that in more than three fourths of the cases there will be permanent return to health.

I unhesitatingly attribute to this mode of operation, combined in many cases with the application of the Weir-Mitchell system the success I have been fortunate enough to experience in the handling of cases of nervous and hysterical dyspepsia, and other ailments also
in which phenomena connected with the cerebro-spinal system have been chiefly prominent.
I do not yet know sufficient concerning hypnosis to venture to apply it to cases which might seem suitable for the former mode of procedure. But I believe emphatically in the experiments carried out so successfully by Mr. Maine Brunwell. I read in April last, and I heartily concur with Mr. Bridgman, that after witnessing the success of those experiments, remarked: "I feel sure that the time has now come when we shall have to recognize hypnosis as a necessary part of our study."

Addendum

In the preparation of this paper, I am indebted in a great measure to the writings of:
Lawes Brunton; Pavy; Firth and Gil;
Chambers; Halsman; Playfair; 
Carpenter; Sir William Sull; 
Alcorn (sic); Wilson (sic); 
Ramsay; Bridget; Stephen MacKenzie; 
Henry (sic)

While I owe much to 
one or two valuable hints afforded 
me by my friends 
Dr. Mitchell Bruce & Dr. Stephen MacKenzie.