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An/ ESSAY / on
MORBID SENSIBILITY /of the/
STOMACH & BOWELS,
as the proximate cause, or characteristic condition
/of/ INDIGESTION,
Nervous Irritability, Mental Despondency,
Hypochondriasis, /etc etc./
to which are prefixed,
Observations on the diseases and regimen of invalids,
on their return from hot and unhealthy climates.

by James Johnson M.D.
of the Royal College of Physicians etc.

London:
Printed for Thomas & George Underwood,
32, Fleet Street,

1827.

*also
Knight
& Broune*

P.3. Part 1.
Observations / on the /
Diseases and Regimen /of /
INVALIDS
on their return from
HOT & UNHEALTHY CLIMATES.

P.41. Part 11.
on
MORBID SENSIBILITY /of the /
STOMACH AND BOWELS.

Class of complaints of paramount importance, disturbs
both moral & physical nature, mind & body. Many
causes, many shapes, many strange & contrary effects
difficult to give it name or describe varying features
"wide-spreading evil - Proteian enemy.- some connecting
link, prevailing error embracing everyone. Numerous
designations but not real nature only symptoms.
Indigestion most hacknied & erroneous, no signs in
worst forms. Dyspepsia or difficult digestion as bad,
both only one feature (alvine evacuations natural).
Hypochondriasis no just idea of nature though group
of prominent phenomena understood.

Cullen wrong in defining Hypo as "Indigestion, with languour, sadness and fear, from uncertain causes, in a melancholic temperament". Many most exquisite specimens of Hypochondriacism no indigestion.

Falret wrong in making brain seat of Hypo.

Biliary disorder vague and as erroneous, only one feature. Other designations - spleen, vapours, melancholy, nervousness, irritability, mental despondency etc. all forms so sagacious friend Dr.

43. Marshall Hall gives generic name Mimoses or imitators not nature.

In C.N.S. have Cer.Spnl Ns & Ganglionic Ns.

Do not feel impressions made on latter as long as

44. 'within range of salutary action'. Stomach sensitive to stimulus of food but feel nothing, sim diff organs and diff parts of alimentary tract - undigested food stim stomach, irritates bowel as regurgitated bile upsets stomach. Capsicum gives heat in stomach not plain water.
45. Conscious sensation in Stomach either pleasurable or painful means violence to it. Plain food pleasant
- 46 sensation thro whole frame. More we excite ganglionic nerves more we disqualify voluntary ~~nerves~~ muscles for action, and intellectual system for deep thought and other mental operations. Food & wine pleasurable sensations over mind and body but no direct sensation in stomach. However same stomach nerves when disordered can excite most gloomy thoughts in mind, and painful sensations in body by same meal with or without unpleasant sensations in stomach. Sim. agents can
- 47 irritate healthy nerves e.g. tartar emetic - languour mind & body, face pale not red, mind unsteady & depressed, muscle power diminished, head aches or confused, heart slow or intermits, prostration of all corporeal & intellectual powers, before any disagreeable sensation in stomach. Then Nausea & vomiting take place, reaction then restoration. Digitalis - head giddy, sight imperfect, strange noises in ears, dreadful depression of spirits experienced, with feeling or fear of dying, irregular action of heart, sinking at pit of stomach etc without sensation in stomach.
48. Symptomatic or sympathetic affections of organs dep on morbid condition os stomach & bowels - those with conscious sensation in those organs of digestion & those without - latter more prevalent & distressing.

Various disorders, mental & corporeal, have origin in gastric or intestinal irritation which is not sensible to individual.

49. Dyspepsia , Hypo etc take too much food or uncertain quality then symptoms aggravated. Abstain whole day, cut quantity, no wine or vegetable, mitigated. Be abstemious and take little medicine to restore natural sensibility of stomach.

51. On
MORBID SENSIBILITY (of the)
STOMACH & BOWELS,
attended with
Obvious Disorder in the Digestive Organs.

Morbidity of gastric & intestinal nerves
(1) with pain etc. (2) masked and only shews in a
52. variety of morbid feelings and conditions of other
organs and parts, as well as in the intellectual
functions. 1st group -

Symptoms -

- Too much food taken - distension, eructations, not
changed into bland and healthy chyme in two hrs &
passed into duodenum but retained in stomach for
53. several hours. Restless at night, night-mare, more
symptoms in morning - fit of intemperance ultimately
causes indigestion. Nervous system and liver repay
with interest after a time the injuries they receive
from the stomach.
54. Stools show disturbance in hepatic function & both
form Indigestion a conventional term. Use term
'morbid sensibility of the stomach & bowels' disorder-
55. ee condition of gastric & intestinal nerves, acute,
obtuse or perverted.
Liver & Stomach affection - appetite variable, dis-
tention discomfort or pain until evacuation. Bilious
& dyspeptic anxious for aperient - temporary relief,
dislodges irritating secretions. Calomel at night
black draught morning keeps up irritation. Scybala
& undigested material lurk in cells of colon despite
daily purge, & keep up irritation manifested in
56. distant parts. Not energetic purges but irritation
allayed by hyoscinum & opium then mild cathartic.
Viscid, tenacious, ropery bile in faeces which irrit-
ates intestinal nerves, produces uneasy sensations
& irritability. If in upper bowels where n's numerous

- & sympathies extensive induces state of mental dispondency & perturbation, impos to describe - blue devils. Some get bilious colic. Mind may be suddenly overcast with a cloud - dreadful imaginary evil impending, real evil magnified. paces in agitation doleful soliloquies, or to friends. Runs from wretched feelings. Chronic complaint thought incurable & family ruined & orphaned. Heart threatened. Frightful dream. Continues 48 hrs then discharge of viscid acrid bile with horrible fetor dissolves spell due to poisonous secretion on intestinal ns. When predisposition to morbid sensibility, by mental anxiety, vicissitudes of fortune, disappointments in business, failure in speculation, domestic afflictions, - moral ills wh render mind & body susceptible to disorder. Suicide takes place, due to
57. real physical cause for momentary hallucination of judgment, in irritation of organ of mind, through sympathy with organ of digestion - connexion & reciprocity between intellectual & corporeal functions
58. Minor physical symptoms of serious mischief in lining of stomach or bowels. Intimate sympathy between external surface of body & stomach & liver. Emaciation
59. when liver much involved. Sense of debility & prostration of strength due more to irritation of ns of stomach (primae viae). More distressing than real weakness, & out of proportion to emaciation- passes off when food passes. Not tonics or stimulants but
60. with soothing medicine & diet. Tenderness in Epigastrium more often in functional disorders. Dr. Philip "organic affection rarely takes place in the original seat of the disease but in other organs with which stomach sympathises". Affections of distant parts sympathetic with stomach end but rarely in organic disease contrary to Dr. Philip.
61. Dyspeptic Phthisis - called into action rather than produced by disorder of digestive organs. Tenderness of Epi. due to irritation not inflammation - indiscriminate application of leeches often aggravated. Blister or tartar-emetic plaster better for this morbid sensibility of gastric & duodenal ns. Tonics & bitters better than leeches & blue pill.- simil pain in Stomach. Dr. Philip - hardness of pulse
62. indicates change from irritation to inflammation. - does not agree. Pulse quicker when food digesting Dyspeptic better in evening.
- 63.
- 64.
- 65.

66. Remove & prevent organic disease of structure by correcting disease disorder of function. Differs from Dr. Philips who regards tenderness in Epi. & hardness of pulse as change in indigestion from irritation to inflammation, functional to organic.
67. Fever more characteristic of inflammation so no objection to leeching Epi. & cooling saline aperients. But fever may be caused by irritation alone.- children
68. Brain first to sympathise with disorder of abdominal viscera. Pain & intellectual functions - confusion of thought, defect of memory, unsteadiness of mind, irritability of temper, fickleness of disposition more often than pain, deafness, vertigo, defect of vision or affections of mere sensations. Former into gusts of passion, fits of despondency, brooding melancholy, permanent irascibility, & higher grades of intellectual disturbance, till point of temporary alienation & suicide. Tic douloureux sympathetic of stomach disorder caused by irritation of ganglionic ns - cures by alterative and aperient medicines esp carbonate of iron wh removes morbid sensibility of ns. Sim many cases of Epilepsy cured by purgation by purgation & lunar caustic, former removes irritation latter the morbid nervous sensibility.
69. Sympathetic disorder of brain or membranes if long continued get inflammation first & change of structure after.- not distinguished from idiopathic disease.
70. Caution bec cause Headache & Epil for years with no traces & organic changes of immense extent in brain with little pain or disturbance of intellectual functions. Hearing - Noises in ears, partial deafness, may disappear for time after tea coffee dinner or wine - symptomatic of stomach. When aggravated by eating & drinking more permanent disorder in head. Vision sim - Muscae volitantes, indistinctness of sight, uneasiness in eyes when reading or glaring light.
71. Heart & M.M. of Lungs next sympathise. Irregular action causes alarm, to hypochondriac or dyspeptic. Structural disease occasional due to liver. Must auscultate.
72. Dyspeptic Phthisis - cough from irritation of stomach - may cause ultimate disorganisation. Liver affects contiguous lung. Sympathies with other parts, kidneys, bladder, urethra rectum, organs of sense, skin etc. Unaccountable feelings suspect chylopoietic irritation.

73. On MORBID SENSIBILITY / of the /
STOMACH & BOWELS,
without any obvious or well marked symptom of disorder
in those / organs themselves.

Causes of morbid sensibility in stomach & bowels
both physical & moral, latter more predominant &
effective.

Physical Causes -

- Very numerous from whole body external & internal.
Stomach greatest centre of sympathies. Every
impression on skin, cold heat humidity drought
74. influences function.- climatic. Cities - millions
of miasmata etc. Sedentary habits, impure air,
late hours, mental perturbations with recourse to
high-seasoned dishes & stimulating drink.
75. Food & drink plus moral cause. Any discomfort then
morbid sensibility commenced. Any discomfort of
body, irritability or despondency of mind after
food & drink, hour, day or two or three days then
quantity too much or quality injurious.
76. Vegetables irritating. Gruel least irritating then
tender animal food. 'Whole nations like Hindoos and
Scotch, live and thrive on food almost exclusively
farinaceous; while others, as in some parts of South
America, live well upon animal food, and that almost
alone.' Water only fluid without stimulating or
irritating qualities.
77. Beer, wine or spirits set up morbid sensibility
ultimately.

Moral Causes -

78. Moral impressions all reflected on organs of
digestion. Interest in politics, religion, commerce
literature and the arts - temporal concerns in
perpetual vacillation; spiritual affairs excite
great anxiety, speculative risks, & mental perturb-
ations. Anxiety or tribulation of mind; mental
emotions.
79. Single look and few words from tyrant monarch, gave
ambitious Wolsey a fit of indigestion which
terminated his life. Mental Anxiety - whole
alim. tract canal from cardiac orifice to valve of
colon in state of irritation.- may be no pain or
uneasiness there but exasperation of mental miseries.
so put down to imagination & individual hypochondriac.

80.

Hypochondriasis -

Aristotle - all great men of his time hypos. Described by physicians & poets from Hippocrates till present. Cullenian doctrine in this country but indigestion not essential to Hypo. France - Broussais depts on chronic gastro-enteritis - sim Dr. Philip, untenable.

81. Falret seat in brain, but more often secondary - may terminate in monomania or insanity on a single point then prob that dis of brain or membranes has taken place. None of modern doctrines new - Hippoc. Galen & Aretaeus, black bile & hepatic doctrine Diocles seat in stomach - others liver, mesentery & spleen. Willis affection of brain & N.S. (Falret) Sydenham debility & irregularity of animal spirits. Boerhaave tenacious matter obstructing vessels of hypochondria. Lower, state of blood. Hoffman chronic inflam of m.m. intestines (Broussais). * see Louyer-Villermay, Traite sur les Maladies Nerveuses - 1816. - affection of vital properties of nerves of stomach affected in their organic sensibility - agree.
82. Symptoms - sense of uneasiness & distention after eating, slow & difficult digestion, eructations of air, acid or portions of food, flatulence etc etc as indigestion. If continued or cause be moral then disappears under sympathetic affections of remote parts, corporeal & mental a/c to cause. Palpitation, irregularity, cough, pain, heat, confusion, giddiness noise & sensations about head - pain kidney, bladder rectum etc - not a spot exempt. More advanced - esp by moral affections, intellectual functions disordered, sensations, perceptions & meditations. Sensations exaggerated, so imagination makes serious organic disease. Avoids society or perpetually describing complaints to friends.
83. Becomes dupe of quacks. Looks on death as deliverer from incurable ills. Hypo..iacism passes into monomania & despair of relief drives him to death. less severe char by mental despondency, fits of passion, irritability of temper, gloomy anticipations, melancholy moods, alternate good & bad spirits etc. * Common in retirement from lack of exercise of body & mind.- no distinct pursuit. " In civilized life, indeed, what with ennui & dissipation in the higher ranks - anxiety of mind arising from business, in the middling classes - and poverty, bad food, bad air,
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- bad drink, & bad occupations, among the lower classes there is scarcely an individual in this land of liberty and prosperity - in this kingdom of 'ships, colonies and commerce,' who does not experience more or less of the 'English Malady' - that is to say, a preternaturally irritable state of the nervous system, connected with or dependent on, morbid sensibility of the stomach and bowels." When alteration in temper or moral feelings with no adequate moral cause, suspect some physical cause.-
86. watch effects of food. If from moral cause then increased by physical diet, reacts on mind & some
87. days loss borne better than others. Irritating purgatives may exasperate. Avoid friends till fit over. Physician can prevent reaction of body which makes moral affliction more difficult to bear.
88. Treatment -
89. Withdraw sources of irritation. Regulate diet not purgatives. 4 ozs Gruel every 6 hours reduce down to this if food or drink irritate ns of stomach.
90. $\frac{1}{2}$ pint gruel t.i.d. Reduce until no exhilaration immediately after dinner, or of discomfort some hours after meal. May commence with trial meal &
91. if inclined to exercise rather than nap has hit the point. Abstemious diet with no augmentation of suffering prevents aggravations of complaint - cause may be long standing or moral.
92. No danger of starvation on $\frac{1}{2}$ pint gruel per day. Beef tea may be mixed with gruel then $\frac{1}{2}$ oz chicken - stop if uneasy feelings mind or body in 24 hrs. Increase to 8 ozs with stale bread. Water increased also. Mutton or game not more than $\frac{1}{2}$ lb. Lamb, hare, beef, tripe - no languor after eating, no unpleasant sensation mind or body during digestion. * Abjure fish, turns rancid & irritates. Shell fish much less injurious.
94. Cave mealy potatoe (sic), & fruit & vegetable. Cheese pickles, nuts, onions are rank poison. Best drink is water, mix with brandy till taste for water acquired. Breakfast - well toasted bread, butter cold meat. Cup of gruel best supper. Personal - immunity from terrible feelings of mind and body engendered by that worst of human afflictions
96. Medicinal Treatment -
97. State of secretions. Evacuations different with different aperients. Remove daily to reduce irritatio

No purgation, one solid daily motion.

- P.98 Aloes & Sulphur on colon & rectum. Jalap, calomel salts, senna antimony etc. disorder along whole course with copious secretion also from liver.

Combination of several mild aperients - habitual one -

R/ Ext Aloesgr IV.

" Jalapi (resinos). gr VI.

" Col. compos.....gr X.

Pil Hydrarg. gr VI.

Ipec. Pulv. gr I.

Ol. Cassiae gt lll.

M. ft. Pil. X. Capiat l.ll vel lll hora somni

3-5 grs Ext Hyosciamus if irritation caused.

99. Prescrip for Purge, milder aperient, & where acidity.

100. If biliary secretion deranged then mercury otherwise prescrip for Taraxicum. * Hepatitis may 'touch the mouth with mercury' - blue pill till mouth sore or evacuations yellow & feculent.

Injectons if needed.

101. Counter-irritation - small plaster tartar emetic & Burgandy pitch to pit of stomach - 2-3 days copious crop of pustules, discharge for week, much relief.

May have few leeches before if tenderness on pressure.

102. Anodynes to stomach. Acrid bile into duodenum - shudder - 2-3 grs hyosciamus, 1/2 gr blue pill, 2 gr comp. powdr. ipecacuanha every 6 hrs. Tepid bath.- sympathy with ext surf of body.

Veg bitters & tonics - when irritability reduced or

103. may change it into inflammation. Many driven into insanity by stim of wine & tonics, may soothe for short time but reaction produces suicide.

Medicine not previously applied to this - Nitrate of Silver several grs for months in Epilepsy - only remedy on which dependence placed. Case of Epil & dyspepsia both cured. Ep. very often depends on morbid sensibility of gastric & intestinal nerves so nitrate sometimes cures, by lessening sensibility of nerves. Convulsions stop when worms removed.

- 105 Nitrate with small doses of quinine sulphate - up to

106. 4 grs Nit per day, for 3 months as auxiliary.

1/2 gr AgNO3 & 2-4 ext rhubarb or ext camomile or gentian at night increased to 3 grs daily.

Bitters - best quinine sulphate 1/2 gr t.i.d. dis in tea-spoonful comp. timct gentian dil with toast water soothes nerves, cleans tongue, improves appetite, strengthens digestion, tone & tranquility mind & body.

107. Not given till irritation lessened & not as pill
want action on stomach. * Follow purge in Chorea.
108. Sympathetic irregularity of heart no anxiety.
109. Symp. disorders of kidney, bladder, urethra &
rectum. - strictures & pain & smarting - subside
110 but grist for charlatan.

Moral Remedies -

- Physician sees operation of these causes but can
only combat physical effects & prevent reaction on
111. mind. 'None have such opportunities of observing
the devastations committed on the body by the
workings of the mind, as the medical philosopher.
None can see the intimate connexion between mind
and matter as he can. If metaphysicians had been
physicians, they would not have issued into the
world so many absurd speculations on the nature of
the mental faculties, which the descant upon us
independent of the corporeal organs through which
they are manifest!' 'Little benefit from moral lectures
of the philosopher, or even the devine, on the virtues
of patience, resignation, and calm submission to the
dispensations of Providence and vicissitudes of
fortune! Time it is true, effects a mitigation of
our sorrows, and the mind, like the body, becomes
accustomed to painful impressions, and ceases, at
length, to feel them with such poignancy' ... 'At all
events, the physician can only work through physical
agency, leaving to others, if such can be found, the
pleasing task of curing the wounds of our spiritual
nature by the balm of friendship and the consolation
of religion'.

Combination of moral and physical reme/
dies and especially exercise -

- Moral cause - engage in any pursuit that can occupy
his attention and exercise his body.
112. Persuaded to gradually increasing exercise - stairs.
113. Pedestrian better than equestrian.
Travelling best incentive for affluent.
114. Tour of Europe for health.
117. Moral effects of - Abstraction from cares and
anxieties of life.. & conflicting passions which
harrass the mind & wear the body by succession of
interesting objects which arrest attention and
absorb feelings with hope of health. Serenity &
evenness of temper by strangers, not intimate enough
for contradiction.

118. Best for removing or ameliorating influence of bad health & disordered states of digestive organs in producing depression of spirits, or mental despondency, far worse to bear than corporeal pain.
119. Strongly exercise the body & cheerfully excite mind. Moral causes derange functions of body through the intellectual functions - 'The same functions may be made the medium of a salutary influence'.
- 120 ... abstract the attention of the hypochondriacal traveller from hourly habit of exaggerating his own real or imaginary sensations, and thus help to break the chain of morbid association by which he is bound to the never ending detail of his own suffering. Prevents suicide & mental derangement. At extremities of Egypt 2 temples dedicated to Saturn to which melancholics or hypochondriacs were sent. Priests worked on body as well as mind, by real influence of medicinal agents & pretended influence of supernatural. Miraculous cures daily performed. Romans sent invalids to Egypt for change of scene & Hippocrates recommended those afflicted with chronic diseases, to change the air & soil.
121. Physical Effects - Corporeal feelings made less sensible. Morbid sensibility of N.S. obtunded or reduced. Hill climbing in Alps, with ice & storms
123. on mountains. Also good for phthisis. Account of
124. strenuous journey. Good influence on Digestion, & assimilation. Most inveterate dyspepsia (no organic disease) with all its multiform sympathetic torments would be completely removed by a 2000 mile journey through Switzerland & Germany combining active & passive exercise.
125. Marked influence on absorbent system - fluids from bowel rapidly taken up into circulation, and thrown off by skin, whose increased function exerts salutary influence on internal organs, with which surface is sympathetically associated e.g. secretion of bile. Oedema also absorbed.
126. Lose adipose tissue & gain muscle with freedom to heart & lungs. Increased activity of absorbents powerful agent for removal of morbid growths, tumours, scrofulous swellings etc. Effect on circulation. Not for enlarged heart. Many cases morbid irritability of heart, from sympathy with other organs, stomach, liver etc. - passive then

- active travel. Produces equal distribution of
127. blood to all parts so corrects undue determinations of blood to any particular organ.
Influence of constant change of air on blood itself - great differences in air as far as human body is concerned.- languishes in same air tho⁸ pure, sim stomach languishes on same food & fails to derive nutriment.
128. Change of air & exercise to muscles while travelling for health.
System of exercise in open air - colour to cheeks, firmness to muscles, tone to nerves & energy to minds.
-

Observations /on the/
Causes, Symptoms & Treatment /of/
DERANGEMENT OF THE MIND,
founded on an
Extensive Moral and Medical Practice
in the
TREATMENT OF LUNATICS.

by
Paul Slade Knight, M.D./Formerly a principal
Surgeon in the Royal Navy, many years Surgeon of the
Lunatic Asylum for the County of Lancaster Etc. Etc.

Together with the Particulars of the sensations and
ideas of a gentleman during his mental alienation,
written by himself during his convalescence.

London:
Printed for longman, Rees, Orme, Brown & Green;
and Robinson and Bent, Manchester.

1827.

P.72. He immediately became excessively abusive, and
I directed some restraint to be placed on him; and
he was secured with hand-muffs which I invented,
and which I shall subsequently describe.

P.112. On the method of securing / Lunatics.

The mode of securing a mad-man, so as to/prevent
him from injuring himself or others, has
been the source of no slight difference of
opinion; and several years since I procured
from various places, particularly recommended
for their humane methods, the apparatus of restraint
straint used in them respectively; by which it/was
was obvious, that the intention to avoid injury
was the leading object, but the execution of
that intention singularly deficient. Strong lea-
ther straps, carefully padded and covered with
soft wash leather, were used to secure arms
and legs; and as it is possible this mode may
still be followed in some receptacles for luna-

- tics, I shall point out one or two palpable defects in the construction of these straps. First +
 no padded strap can be buckled sufficiently
 P. 113. secure round the wrist or arm, so as to prevent a violent lunatic from working his hand out, without producing a painful pressure on the limb, and a partial stoppage at least, of the circulation; added to which, the warmth of the speedily produces perspiration (padding), this soaks the leather, and makes it, in some considerable degree, stick to the skin; in this state it produces much friction, so that in fact it cannot by any means be securely used in the high state of delirium, and indeed, it has always appeared in my practice, that this padded apparatus never could be used with propriety. I never could secure the violent with it, and others of course had no occasion for it. The strap round the arms, as used in the Dublin Lunatic Asylum, is much better than these padded wrists straps, etc. but I have frequently been obliged to have this taken off, from the pressure, necessary to secure, or produced by the exertions of very violent lunatics, being too great to permit free circulation; and the old straight waistcoat was on these accounts certainly preferable to either of these modes. But there are many powerful objections to the straight waistcoat; in hot weather particularly it is very oppressive to the patient, it cramps him exceedingly, and is at all times peculiarly offensive. After trying various methods, the
 P. 114. most effectual as to security, the easiest as regards bodily constraint, and the least liable to erode the skin I have represented in the lithographic sketches annexed.

Fig. 1. Represents what I have termed the Muff, it consists of two strong pieces of leather sewed together at the sides, with a thinner piece of leather running diagonally across, on the inside, to separate, and thus to prevent the lunatic from tearing his own hands, which he would frequently do but for this contrivance; the edges of these strong pieces of leather are secured to the patent iron wrist lock - the lock being made on

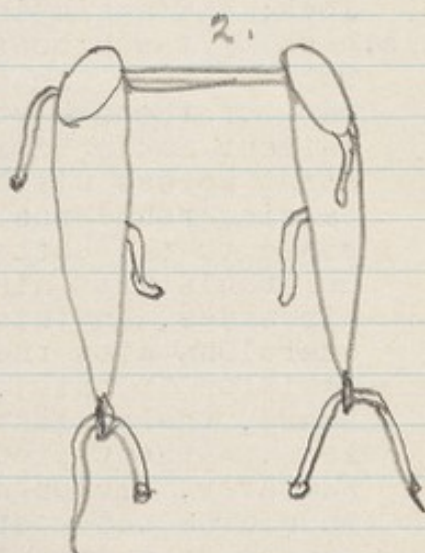
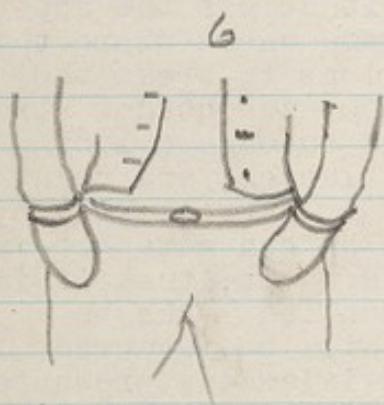
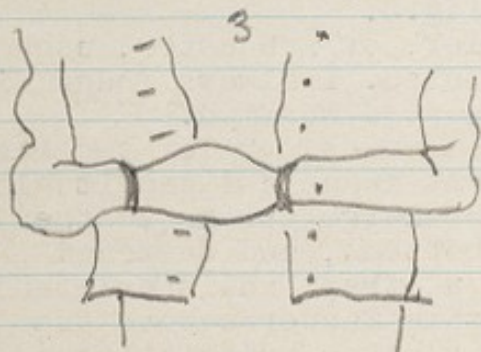
purpose.* The hands being introduced into each pocket, the lock is shut upon the wrist, and the patient is effectually prevented from tearing or destroying things, or taking off his clothes, nor can he strike so as to effect any injury; at the same time he has nearly the full and ordinary use of his arms. - See fig.3.

* Mr. Cornthwaite, saddler, of Lancaster, used to make the / Muff, etc. that I used. I always found him a very moderate man, /and a good workman.

P. 115. Fig.2, Represents the Sleeves, by far the best mode of securing a violent lunatic I can imagine It simply consists of two large strong leather sleeves, closed at the bottoms, and fastened across the shoulders by a strap, and staple and lock; and again in the same manner across the back by the elbows, the sleeves being attached in front by a broad short belt across the upper part of the breast. In extreme cases where the patient makes violent exertions to break the strap across his back, I also add another strap, passing round the thigh, and through a loop sewed to the bottom of the sleeves, and then he stands with his arms, as it were loosely by his sides, in this position he can make but feeble exertions with them. It is evident, that if in addition to this, the common leg locks be power-added, the patient ~~patient~~ will be rendered almost less, without producing any injurious pressure whatever, although the exertions of the patient should be the most violent and incessant. Patients have worn these sleeves for months, without sustaining the slightest injury from them. If at any time, they, or the muffs are found too warm, small holes may be easily punched in them so as to admit of ventilation. See fig.4, front view with straps round the thighs, and fig. 5, the back view, without straps round the thighs.

Fig.6, represents a man with pocket muffs, which are made on the same principle that the other muffs are made, one is attached to each side like a pocket, and they are fastened in this position by a strap round the waist. It will frequently please a patient to give him his choice between the muff and the pocket muff.

I am firmly convinced, that leg and wrist locks are infinitely preferable to leather straps. The iron locks possess numerous advantages, 'but the clinking of the chain should be, by all means, prevented, for I have known it impress lunatics with the most gloomy apprehensions.



Observations on Derangement of the Mind - 1827
by Paul Slade Knight, M.D.

P 1. Pathological & Physiological Observations.

Hippocrates asserts that the humours of the brain sometimes become acrid & corrosive, that the system is much disturbed, the whole body affected, and that the mind is thereby deranged * (Lib. de Morb Sacr. p.354). "The nerves of phrenetic patients are principally affected, the fever is continual" says

P.2. Aretaeus. "It is indeed very likely that phrenitis is occasioned by an excitement of the spirits, rather than by an inflammation of the brain" (Willis Cap X de delirio et phrenitide) - Dr. Alexr. Crichton (Vol I.p.168) suggests that all impressions, conveyed to & from the brain, in phrenzy & deliria, must arise from a peculiar morbid action of the vessels which secrete the nervous fluid. The learned, accurate & modest Cullen, also, considers the proximate cause of derangement of the mind to be a peculiar state of the nervous system. ... I concur in this doctrine. In every case of deranged intellect the disease proceeds immediately from corporal disease. Anatomical investigations have shown no morbid appearances but evidence of excessive vascular action. * (For morbid anatomy see Appendix to "An Inquiry into the Nature & Origin of Mental Derangement etc" by Alexander Crichton, Vol. 11. p,349 - 1798.

P.7. I consider the soul to be the remote cause of all the phenomena of mind; - this is my belief.

Symptoms of Insanity -

A confusion in the intellect, with some degree of correctness of perception & consciousness; the confusion being frequently in the early stage of the disorder, manifested more by actions than words.

P. 11. Dr. Esquirol's paper on Insanity in Dictionnaire des Sciences Medicales. "In mental derangement the sense of delicacy is obliterated; and people of the finest previous feelings will deliver themselves up to the most indecent and culpable actions, without the consciousness of impropriety". Don't agree.

P.14. Refrain from giving a general or particular description of - delirium, mental derangement, insanity, the high state, low state, mania, monomania etc.

P.15. Dr. Robert Darling Willis before Committee of House of Commons - " In Delirium the mind is actively employed upon past impressions, upon objects and former scenes, which rapidly pass in succession before the mind, resembling in that case a person talking in his sleep: there is also a considerable disturbance in the constitution, great restlessness, great want of sleep, and a total unconsciousness of surrounding objects. In Insanity there may be little or no disturbance apparently in the general constitution the mind is occupied upon some fixed assumed idea, to the truth of which it will pertinaciously adhere, in opposition to the plainest evidence of its

P. 16 fallacy, and the individual is always acting upon that false impression." "In Insanity also, the mind is awake to the objects which are present. Taking Insanity, therefore, and Delirium, as two points, I would place Derangement of Mind somewhere between them ". What Dr. Willis terms Insanity is that species termed by some nosologists - Monomania.

Never seen Delirium pass into insanity or alternate with it - in fevers. Many cases with some correctness of perception & consciousness - 'raving Madness' terminate in what Dr. F. Willis calls Mental Derangement.* (A treatise on Mental Derangement by Francis Willis M.D. P 45). Dr. Monroe's accurate description of 'high state'. Dr. F. Willis relative- "To constitute derangement of the mind, his aberrations must be attended with bodily indisposition. If the latter be not apparent, the chance of cure is hereby diminished; the case then partaking more of insnsity than derangement. If, on the other hand, the symptoms of bodily indisposition encrease Delirium ensues and then the patient (p.50-1) begins to rave, and talk wildly and incoherently, swears as if in the most violent rage, and then, immediately after, bursts out into fits of laughter, talks obscenely, directs offensive and contemptuous language against his relations, and those around him, spits at them, destroys everything that comes in his way, emits loud and discordant screams,

P.18. and continues in this way until he is quite exhausted ... If kept in strict coercion, he has often so much command over himself as to behave mildly and modestly ...".

Dr. Crichton (Vol 1 pl60-1). says nothing about total unconsciousness but that patient has "often so much command over himself as to behave mildly and modestly so as to impose on many of the bye-standers, and make them imagine that the state of phrenzy is over" corresponds to own definition of peculiar symptom.

P.20. Total unconsciousness in delirium more particularly characterises the delirium of fever, particularly typhus, and that some degree of correctness of perception and consciousness characterise the delirium of insanity.

P.21. Of the Causes of Insanity -

Dr. Esquirol in Dictionnaire states " all the phenomena of insanity shew the vast influence of the passions in this affliction. they are always impetuous, whether they be of the gay, or sombre cast in mania, monomania and melancholia" does not agree.

p.26. Depends on handling - Few confined or coerced in his hospital but more violent than calm in report of Paris hospitals.

P.28. Bicetre for men doctor M. Hebreard; La Salpetriere for women under M. Esquirol. Moral Causes - 1807-13. Bicetre - Religion 55, Ambition 78, Love 37, Misfortune 116, Political events 24, Trouble 99, - 409, less 2 in 7. La Salpetriere - Religious excess 20, Love, crosses in 122, Reverses of fortune & misery 96, Political errors 15, Domestic trouble 216, Anger 20, Fear 64, Conscription & war 27, - 508. 2 in 7 mess.

P.32. On the Moral Causes of Insanity -

May have for original moral or physical cause, affection of the mind or disorder of the body. The moral influences, however, very rarely produce insanity, and this is also the case with regard to religious feelings.

P.36. Over zeal for religion, or a violent excitement of some one of the passions, is frequently the inevitable result of the corporeal affections.

P.38. Same moral means of treatment under similar affections of the mind will be proper and necessary, whether

P.39. the corporeal ailment be very different or whether it be ascertained or not.

Physical Causes & Treatment -

P.40. Diseased action of the nerves, particularly those distributed to the carotid arteries and parts more immediately connected with the brain, create an increasing action of those vessels and thus produce

- P.41. a determination of blood to the brain which by Drs. Arnold, Cox and Mayo has been itself considered as the proximate cause of insanity. * (similarly Epil. sudden, violent and transitory action). Practice does not give sufficient support to this opinion. Dr. F. Willis - in delirium too much blood-letting.
- PF42. Dr. Hallaran * (Practical Observations etc.) 2nd Edit. p. 73-4) "Bleeding to any great extent does not often seem to be desirable; and, except in recent cases, does not even appear to be admissible.."
- P.43. Haslam x-(Observations on Madness & Melancholy P313)
 "Where the patient is strong and of a plethoric habit and where the disorder has not been of long continuance, bleeding has been found of considerable advantage, and, as far as I have yet observed, is the most beneficial remedy that has been employed. The melancholic patients cases have been equally relieved with the maniacal by this mode of treatment. When the raving paroxysm has continued for a considerable time, and the scalp has become unusually flaccid, or where a stupid state has succeeded to violence of considerable duration, no benefit has been derived from bleeding: indeed these states are generally attended by a degree of bodily weakness, sufficient to prohibit such practice, independently of other considerations".
 Maniacal paroxysm is exactly the high state of Drs. Crichton & Willis. Dr. Mayo says "The patient is in danger from exhaustion. Depletion has a direct effect in weakening him, an indirect effect in preventing his weakness by lessening excitation". Chap 3.
 Hill on Insanity P.287 - "It is an undoubted truth that in 50 maniacs, labouring under the highest
 P.44. degree of the sthenic form, not more than from 7 to 10 of them will require this most powerful means of reduction of the vital power; and let it never be forgotten that sudden & profuse bleeding, is always (even in this form however furious) highly dangerous and never necessary".
 Ph. Pinel, trans Davis P.252 - "Bleeding practised as it is without rule or bounds, is found to exasperate the complaint, and to cause periodical & curable mania to degenerate into dementia or idiotism".
 M. Georget - De la Folie P.36 - "This stage does not require violent treatment: bloodletting has been much abused in it, and has produced the worst effects"

P.45. In 'high state' as described by Crichton never saw bleeding lessen the paroxysm, but, on the contrary, I have seen the excitement augmented by it. Similarly Puerperal insanity.

Idiopathic Insanity -

Early in life & incurable. Cause unknown - organic lesion of brain or membranes, frequently succeeded by epilepsy, hopeless & may continue for years.

Med. of very equivocal use in idiopathic insanity if

P.46. with Ep. - small quantities of blood, taken either by leeching or cupping, or by the lancet from the jugular vein or the arm, to have a constant good effect in mitigating the severity & shortening the duration of the Ep. fits - vide Dr. Cooke, History and method of cure of Epilepsy, p.110. Should precede fits. If no Ep. then moral treatment which should be commenced by mild & firm discipline.

P.49. Sedatives

Digitalis - on first administration a stimulus like brandy or geneva. Few days reduces pulse in force or number or both. It gains in velocity and loses in power then dangerous as vital powers are giving way.* Dr. Halloran, Practical Observations, p.98 for more.

P.50. Dr. Withering has the honour of being the first to suggest the use of this powerful plant in cases of mental derangement, and by due attention to his directions, relative to state of fibre especially, .. no disappointment. Powerful drug exerts beneficial effect in allaying the maniacal paroxysms, & reducing irritability, exactly in proportion as it reduced the pulse, whatever might be the mental action, gay or melancholy * I have gathered the Digitalis Purpurea as late as end of August, long after plant had ceased to blossom; & by selecting the leaves those plants which were vigorous & the leaves of which were covered with a downy coat, and which had not blossomed that year, I found they possessed the sedative power of the plant in great perfection.

P.52. Case - Tinct Digit increased grad to M.LXX t.i.d. in 8 days - Sick with nausea, more rational & tranquil and liberated from coercion.

P.53. I frequently combine amphor with digitalis and have found its effects rendered more certain and uniform.

Opium - Esquirol - "As maniacs sleep badly, opium, and other sedatives have been employed; but they are

P.54. now proscribed by unanimous consent, as dangerous remedies. Regimen & exercise are the only somniferous measures, which can be safely recommended: they are generally successful too" - Dictionnaire.

Dr. Hallaran - Chapter on Opium, 2nd Ed. p.127 - under certain given data, of infinite utility, although for insane most objectionable of anodynes.

Dr. F. Willis uses henbane, hemlock, & foxglove to allay irritability. Illustration powerful effect Hyosciamus, case - Excitement combated with small doses of camphor & aether, & $\frac{1}{2}$ lb blood from neck; then Camphor gr X. Opii p gr l. Nitr. gr V - Fiat Bol. vel Haustus 6 q.q. hora sum. 5th night Extr. Hyosciam. gr xxv hora somni sum - more

P. 56 tranquil. Frequently given Extr Hyosciamus gr v. quarta vel sexta quaque hora for tranquillising very restless lunatics and 20-30 grs at bed-time. Aretaeus & Trallianus - wine most efficacious in mitigating the fury of a paroxysm & in promoting tranquil & refreshing sleep.

P.57. Purgatives.

Rarely require more powerful than other persons. Suppository of Elaterium, Calomel Gamboge & Soap. Emetics.

Pulv. Ipecacuanhae 1 scruple, Antim. Tart. gr l.

P.58. Alteratives etc.

Pilulae Hydrargeri denounced as improper for insane, but in great number of old cases (never for redent) no bad effect. Conjoined it with Carbonate of Soda, digitalis or colombo - not devotee to mercury. Would apprehend mischief in all recent cases with excite-

P.59. ment except as active purgative. Opiates & mercury auxiliaries in cure of insane, of far to great moment to be laid aside, merely because the authority of great names is against them. Caution inexperienced never to use medicines of extraordinary power in cure of insanity - as hydrocyanic acid & colchicum.

P.60. Pulse is guide to digitalis but if given at time suggested by Withering & in doses prescribed by disciples & nausea & vomiting the signals for suspending death would have been sequel.

Of Baths.

Shower bath frequently relieves headache & irritability in old cases, when skin hot & dry. Allays irritability and restlessness of some eps. Fit frequently postponed. Tepid bath 96deg. grateful to twice weekly

P.61. Cold bath, plunging or otherwise not so useful as shower.

Circular Swing.

Physical than moral action. It is a mean (sic) in the cure of insanity possessing immense power. 'Speedily affected with giddiness & sickness, and the peristaltic motion of the whole alimentary canal seems to be excited, & in some instances to such a degree, that the patient vomits, and passes faeces in rapid succession and great abundance, along with his urine.' Extremely beneficial in obstinate constipation, & dyspeptic complaints with much acid. Apoplexy can not occur 'if the patient be not in a furious state when put into the swing: but if he be the excitement of the mind will counteract the effect of the swing, wonderfully powerful as it is. The act of turning him will exasperate him still more if possible; he will struggle violently, and neither stomach or bowels be affected, at least for several minutes, if at all; and the visible bloodvessels of the face and neck have become exceedingly turgid by the paroxysm of fury and exertion: but even in this case, it is more than probable that arterial action is checked. When giddiness is felt, the stomach is speedily affected, and the pulse is lowered both in frequency & strength

P63. - a process not likely to terminate in sanguineous apoplexy, the only species to be apprehended. With this single exception, or precaution, I consider the circular swing perfectly safe'. Best time little before retiring for night, as unloading of the alimentary canal, the powering of the pulse, and the relaxation of the skin, very generally predispose to sound and refreshing sleep. might be useful in G.P. for inflammation of viscera & commencing fevers.

Of Epileptic Lunatics.

Epilepsy conjoined to insanity - compound disease

P64. supposed incurable. Reasonable results, 1 in 7, re-

P65. covered - used Spirit. Terebinth rect as recommended in Edin Med & Surg Jrn by Dr. Percival (Edward).

Checked circulation of blood with foxglove & aided Stomach & liver with Carbo. sodae pil. hydr. & col-

P 66. umbo (sic). Also cuprum ammoniata, argent. nitrat. valerian etc no benefit from use. 4-6 ozs blood from arm or better from jugular vein, uniformly good effect in shortening duration of fit & rendering much less violent - taken before fit. Bowels active not purged.

Straightening the hands & limbs has frequently appeared to put a stop to the progress of a fit.- a vulgar practise. Read Dr. Cooke on Epilepsy 1820.

- P.68. Of the moral treatment of the Insane - Improved so greatly, honour to age in which live.
- P.69. Daily duty of Superintendent 'to soothe the irritable, repress the insolent, cheer the desponding, calm the excited, check the forward, encourage the timid, resist the importunate and petulant, but carefully to attend to reasonable requests; for he has daily causes to try; and he must, at one and the same time, be counsel, judge and jury'. Quarrels of lunatics from same malevolent passions as the more sane.
- P.71. Do not argue but fix attention on neutral topic.
- P.72. Benevolent and forbearing spirit. Mild and firm manner with a calm dignity. Hand muffs invented.
- P.73. On no account should a patient be beaten: strict coercion in a dark room is generally sufficient for very unruly lunatics', if done in a mild & determined manner'.
- P.75. 'Sometimes found, even in the best regulated establishments, that the necessity for coercion has arisen out of some mismanagement in the prior moral treatment'. Strict coercion generally in early stages, the delirious stage, before medicine acts and before resentment.
- P.81. Amusements - Moral influence of particular occupations, both useful and amusing. Rafts. Nine-pins
- P.83. 'Should never be encouraged to write'. Introduce own insane notions. P. 84. Walking, not alone.
- P. 85. Labour - 'Some stated task should be imposed, which they should if possible, be made to perform'. P.86. Wheelbarrow.
- P.90. Field labour. Women, cooking, washing, ironing, mangling, cleaning & making & mending clothes.
- P.91. Number of noisy violent and unruly women compared with men in same species of insanity as 2 to 1. Men with straw.
- P.92. Religion - "Divinity that stirs within us" seeks a higher intercourse.. This emotion of the soul..prompts him to seek communion with the creator of heaven & earth.
94. Not safe for clergyman to be daily visitant and spiritual adviser unless skilled in moral treatment.

P.95. Should be undivided authority - the physician.

96. Dr. Monroe - Not recent cases but many of incurable - Report of Special Committee & on the expediency of appointing a Chaplain to Bethlem Hospital 1817 p33-4.

97. Observations - 1. Satisfaction of performance of sacred duty. 2. Orderly conduct depends on moral management. 3. Pleasing solemnity of Day. 4. Recent allowed if not prone to excitement. 5. Benefit to convalescents. 6. Allays restlessness of not attending worship.

98. No psychological opinion given. 'Solemn duty to yield to religious desires of patients in every degree, that will not endanger their intellect or impair their health'.

Music -

99. Good effect in general but not tried on recent & excited cases. Psalm & hymn singing adapted.

103. Esquirol - Phys to La Salpetriere "Music well managed acts with considerable power both on moral and physical frame".

Of the classification of Lunatics -

104. Epileptic, noisy, dirty, quiet, curable, incurable, very insane, monomaniac all separate segregated. - no advantage. Many curable violent & many Eps quiet.
105. Vicious & violent restrained - noisy secluded in dark
106. room. Peaceable, decent & convalescent together. Sometimes unruly, talkative & obtrusive & slovenly in one class. Offensive habits another.

107. Of the disinclination to taking food -

108. Patience & address. 'Force can be but very rarely
110. justifiable'.

" Mr Charles Newington M.R.C. etc Syringe with curved tube of silver for inserting behind last clenched molar tooth.

111. Mouth opened by Key - Handle, oval part of iron $\frac{1}{4}$ " edges round & polished to fill cavity of mouth. Hole in middle through which fed by pump. Do not need to compress nostrils to force him to swallow before he can breathe.

112. On the method of securing lunatics - v. ante.

116. Miscellaneous Remarks -

Sensations in the skin.

117. Wounds heal more readily. Sloughing ulcers of bed-ridden improved or healed by Cataplasma Fermenti & dressing with Spirit Tereb rect. & Cerat. Resinae.

Hydrothorax -

119. Symptoms of Dropsy of chest extremely obscure.

Bowel complaints -

Simple diarrhoea to severest dysentery very frequent and fatal - water used, added to the contiguity of the building to boggy ground were chief causes. Dr. John E. Greding in Medical Aphorisms on Melancholy etc - diarrhoea more than costiveness in old maniacs. Bad water & marsh miasmata are very efficient agents.

120. Atrophy -

Last days frequently closed with wasting with no marked disease.

Appetite for food -

Eat voraciously & need more.

Vision

121. Devil coloured should be black - diseased perception.

Smell

Smell of lunatics familiar for many centuries. J. Van Swieten & Herm Boerhaave insupportable smell on opening heads. Not insupport., sim to cats' urine. or pts with Digitalis & Pil Hydrarg for Hydrocephalus.

122. Smell of Person sympt of mental disturbance.

On the atmospherical vicissitudes -

Winter - foggy close weather great restlessness & uproar and increase of Ep.fits. Fine fresh weather tranquility and less fits. Summer - Fine with high east wind same as foggy. Cold wet quietude. Only

123. 2 successive years. Lunatics much disturbed by sudden & frequent atmospherical changes.

Cold -

Strange ignorance re the indifference of lunatics to cold. Cannot bear cold as well as healthy.

124. Of the moon -

More noisy due to light - no other influence on lunatics or eps.

Attendants -

Prepossessing persons and manners, not to be ridiculed.

On the Tables of Classification -

125. Moral and physical causes both obscure. Easy to construct tables with an imposing array of moral and physical causes .. serious errors would have

126. resulted. June 1824 - under alteration of management decrease of improvement alarming.

128. "To keep the deranged in mind cheerful, is of paramount importance." of cheerful class 2/3rds recover of melancholy $\frac{1}{4}$.

129. The system of management infringed and 'the gay and cheerful demeanour which I had, by every means in my power inculcated and fostered, both amongst the patients and among the attendants, was quite superseded'.

130. Large no of deaths because all admitted and treated

131. to the end. 9 out of 10 recent cases will recover.

132. Tables of Lunatics admitted, discharged & remaining in Lun. Asylum for County of Lancaster from opening on 28.7.1816 to 24.6.1823.

Classification of cases conformably to the

Predominance of Mental Emotions -

Irascible.

" & Cheerful.

" " Melancholy.

Cheerful.

Melancholy.

Sometimes Cheerful at others Melancholy.

Epileptic.

Fatuous.

Idiots.

What Asylums were, are, & ought to be:

being the substance of

FIVE LECTURES

delivered before

THE MANAGERS

of the

MONTROSE ROYAL LUNATIC ASYLUM.

by

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Edinburgh:

Adam & Charles Black,
and Longman, Rees, Orme, Brown, Green & Longman,
London.

MDCCCXXXVIII

THIS WORK
is dedicated,
with sincere respect & gratitude,
to

ANDREW COMBE, M.D.,

Phys to their majesties the king & queen of the
Belgians; / Author of "Observ on Ment Derangement";
"Principles of Physiology as applied to Health
and Education", etc.

as an acknowledgment
of the benefits conferred on society,
by
his exposition of the application of Phrenology in the
Treatment of Insanity and Nervous Diseases;
and
of private benefits conferred,
as
the most enlightened preceptor, the most disinterested
adviser and the kindest friend,
of the
AUTHOR.

P Vlll

Preface.

" To those who are acquainted with the doctrines of Phrenology, the extent of my obligations in this case, and throughout the work, will be readily recognized; and to those who are still ignorant of these doctrines, I have to offer the assurance that Insanity can neither be understood, nor described, nor treated by the aid of any other philosophy. I have long entertained this opinion: i have for many years put it to the test of experiment, and I now wish to record it as my deliberate conviction."

Lecture 1.

What is Insanity -

- P 3. So far as our present purpose is concerned it may be sufficient to know, that the mind consists of four classes of powers. The first of these are mere instincts or impulses, manifested by us in common with the lower animals, capable of being directed by reason, or the moral feeling, to great and noble ends, but in themselves prompting merely to love, to combat, to acquire and so forth. The second class comprehends the sentiments where there is a vivid emotion superadded to a propensity to act; among these are feelings of pride, vanity, veneration, hope, etc. The purely intellectual powers constitute the third class. By them we recognise the relations of ideas, of the impressions of the mind itself; we are enabled to trace effects to their causes, to ascertain the difference or agreement of propositions, and to conduct what is commonly called a process of reasoning. In the fourth class are observing powers, those by which we perceive the qualities and relations of external objects.
- P 4. Lastly it is proved that the health and integrity of these powers depend upon the structure of the brain and its coverings;... In what manner this connexion between mind and matter is effected is not here inquired into. The link will, perhaps, ever escape human research.

P. 4. From the admission of this principle, derangement is no longer considered a disease of the understanding, but of the centre of the nervous system, upon the unimpaired condition of which the exercise of the understanding depends. The brain is at fault not the mind. ... But let this oppression be relieved, this irritation be removed, and the mind rises in its native strength, clear and calm, uninjured, immutable, immortal. In all cases where disorder of the mind is detectable, from the faintest peculiarity to the widest deviation from health, it must and can only be traced directly or indirectly to the brain. The change may exist in its own structure, or in distant organs which influence its condition....

P.6. Occasionally cases occur where the lesions are very slight, have been overlooked, or, according to some authors, have not existed. The disease, in the latter case is called functional, or is supposed to depend upon some changes in the proportion or qualities of the elements of which the brain is composed, not appreciable by our senses, or detectable by chemical agents. Neither of these explanations is satisfactory. The prevailing opinion at present is, that no cases do occur, where no pathological condition can be observed ...

Quotes doctors who have found organic lesions in high proportions of cases & continues -- Dr. Haslam, St. Lukes, says insanity is always connected with organic changes. Georget, Falret, Voisin, Cox, Crichton, Crowther, Burrows etc. entertain the same opinion.

Insanity then is inordinate or irregular, or impaired action of the mind, of the instincts, sentiments, intellectual or perceptive powers, depending upon and produced by an organic change in the brain; the extent of the disease corresponding to the extent of the destruction or injury of the nervous structure.

In a footnote quotes Newnham in Christian Observer Vol XXIX p 266 - A great error had arisen and has been perpetuated to the present day, in considering cerebral disorder as Mental; requiring and indeed admitting, Only of moral remedies, instead of these forming One class of curative agents;

P.7. whereas the brain is the mere Organ of the mind: and its disorder of function arises from it ceasing to be a proper medium for the manifestation of the varied action and passion of the presiding spirit. And strange as it may seem, this error has been consecrated by a desire to escape from the fallacies of Materialism. Yet it is manifest that they alone are guilty of the charge of attachment to materialism, who consider the disorder of the cerebral functions as Mental, for then, indeed, the brain must be Mind Itself, and not simply its organ. Will not give Definition of Insanity.

P.9. Three classifications - "the most ancient, at least the most ancient which has any pretensions to be complete, the most recent, and the best. We shall adhere to the latter.

I Arnolds Table of the Species of Insanity -

- | | |
|-------------------|----------------------------|
| I. Ideal - | 1. Phrenetic. |
| | II. Incoherent. |
| | III. Maniacal. |
| | IV. Sensitive. |
| II. Notional | V. Delusive. |
| | VI. Fanciful. |
| | VII. Whimsical. |
| | VIII. Impulsive. |
| | IX. Scheming. |
| | X. Vain or Self-important. |
| | XI. Hypochondriacal. |
| | XII. Pathetic. |
| | 1. Amorous. |
| XIII. Appetitive. | 2. Jealous. |
| | 3. Avaricious. |
| | 4. Arrogant. |
| | 5. Misanthropic. |
| | 6. Irascible. |
| | 7. Abhorrent. |
| | 8. Suspicious. |
| | 9. Bashful. |
| | 10. Timid. |
| | 11. Sorrowful. |
| | 12. Distressful. |
| | 13. Nostalgic. |
| | 14. Superstitious. |
| | 15. Fanatical. |
| | 16. Desponding. |

II. Heinroth's Division of Insanity -

I. Disorders of the Moral Dispositions.

1. Exaltation or excessive intensity.

Undue vehemence of feelings, morbid violence of passions and emotions.

2. Depression.

Simple melancholy, dejection without illusion of the understanding.

II. Disorders of the Understanding or intellectual faculties.

1. Exaltation.

Undue intensity of the imagination producing mental illusions and all varieties of monomania.

2. Depression.

Feebleness of conception; of ideas.
Imbecility of the understanding.

III. Disorders of voluntary powers, or of propensities, or of will.

1. Exaltation.

Violence of will and of propensities; madness without lesion of the understanding.

2. Depression.

Weakness or incapacity of willing.
Moral imbecility.

Note- To these unmixed forms others are added under each division displaying combinations of several simple varieties.

III. The Authors Arrangement.

I. Idiocy. Non-development of faculties.

1. Gradation. Non-development of all the powers.

2. " External senses developed.

3. " A propensity or affection developed

4. " An intellectual power developed.

II. Fatuity. Obliteration of Faculties.

1. Partial.

2. Complete.

P. 12. Author's Arrangement - Contd.

III. Monomania. Derangement of one or more faculties.

Section I.

1. Satyriasis.
2. Homicidal and destructive.
3. Proud.
4. Vain.
5. Timid.
6. Cunning and suspicious.
7. Religious and superstitious.
8. Desponding and suicidal.
9. Imaginative.
10. Avaricious.
11. Benevolent or affectionate.

Section II.

12. Incapability of perceiving relations of Ideas
13. Incapability of perceiving relations of external things.
14. Incapability of perceiving qualities of external objects.

IV. Mania. Derangement of all the faculties.

1. Mania with increased activity.
2. Mania with diminished activity.

P 12 - 50.

Gives a description usually a paragraph of each of these categories - 2. becomes Homicidal or destructive mania. 3. Monomania of Pride. 4. M. of Vanity. 5. M. of Fear. 6. of Cunning and Suspicion 7. of Religion and Superstition. 8. of Despondency and Suicide. 9. of Imagination. 10. of Avarice. 11. of Benevolence and Affection.

P. 32. When I studied at Salpetriere.

LECTURE II.

What are the Statistics of Insanity?

P. 52.

Europe. Britain Scotland Wales America - proportion. Rich & poor. Married. Recovery. Deaths supposed to prolong life. Incurable - furious madman.

2nd. Paralytic & Epileptic. 3rd Imbecile, fatuous
 idiotic. 4th Describes demented & incontinent.
 Dangerous. Suicide. P. 87. Refusal of food - high
 Guislain low Mr. Mackintosh of Dundee Asylum.
 Relapses. Isolation. Labour as remedy.- all
 conditions of occupation at hand -- P. 97.

LECTURE III.

P. 98. What Asylums Were.

P. 100. St. Vincent de Paul - journeyed over Europe for
 Insane - The darkened mind as much the visitation
 of God as darkened vision, and Christianity
 demanded of the humane and virtuous and powerful
 to protect and the skillful to relieve the one as
 well as the other. "The father of the poor, the
 steward of Providence". Care of insane confided
 to monks. Bedlam. Gaols. Forcing - feeding.

P. 109. Lunatics placed in Edinburgh Infirmary, where
 twelve cells were set apart for their exclusive use.
 Previous to 1828 only twelve of 52 counties of
 England possessed public establishments for the
 insane: and until 1803 there was only one asylum in
 Ireland.

P. 113. Asylums as prisons. P. 116. Wm. Norris - chains.

P. 119. Exhibition. etc.

Lecture IV

What Asylums are - 135-175.

General lack of sympathy and moral treatment.

Lecture V.

What Asylums ought to be. 176-231

Palaces of industry and happiness.

P. 187. Mr Dryry's excellent asylum Glasgow.

Blood Letting.

by James Wardrop, M.D.

Practical

Observations / on the /

Causes & Cure / of /

INSANITY.

+-----

By William Saunders Hallaran, M.D.

Physician to the Lunatic Asylum of Cork; & a
corresponding/member of the association of the
King's & Queen's/college of physicians, Dublin.

Nisi sanatus animus sit, quod sine philosophia
fiere non potest, finem/miseriarum nullam fore.
Tusculan Quaest./

- - - - -

Second edition, materially enlarged & amended.

- - - - -

Cork:

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London/.

1818.

 To

Thomas Spring Rice, Esq.

My Dear Sir,
Of the highest respect of
Your faithful & obliged
humble Servant,
The Author.

Cork, October 1st. 1818.

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P 132. Over-protracted restriction, not justifiable in Mania. /

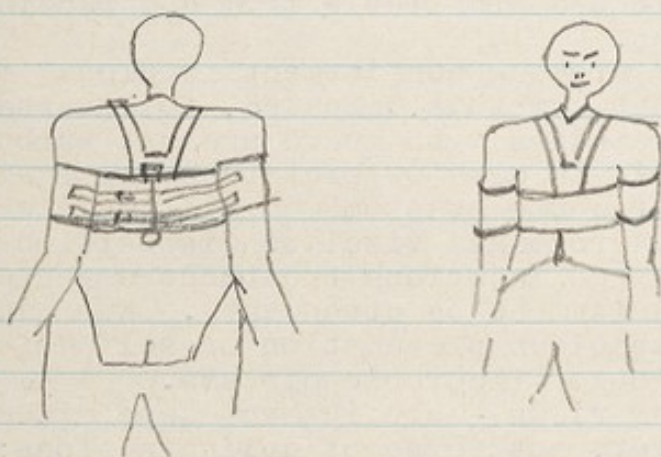
Most persons suffering from acute madness, suffer much in consequence of coldness in the lower extremities. Proof of great inequality of circulation, denotes obstinacy in complaint, earliest attention to relieve pain & prevent congestion. Gangrenous sores & death. Life endangered, confined without interruption on ground floors in depth of winter, also kept unreasonable time on camphor to subdue violence. In order to meet first approach of lividity should be encouraged to daily exercise in doors & within strength. Walking determines circulation towards extremities & relieves head from congestion. * Prevents pressure on descending vessels to which insane in bed are liable from contracting limbs in cold weather.

Custom to prolong confinement in close restriction beyond term that symptoms demanded, to ascertain effects of favourite remedies & to guard against turbulence as danger expected, in case of premature enlargement. Maniac on reduction of acute symptoms do not require excess coercion. When prolonged viscious disposition acquired as if conscious of injurious treatment & resentment. Retributive punishment on attendants. Thus additional restraint on specious presumption of self defence; also mistaken opinion of incurable disease.

Now better views - confinement determined by prevalence of fever, not force of hallucinations; former having nearly subsided, latter fairly allowed a latitude which by most moderate precautions, is sufficiently guarded against, & becomes obnoxious.

P 135 " To obviate the supposed inexpediency of thus freeing maniacal patients from close confinement, and to provide against the possibility of their using unrestrained violence during this indulgence, a broad strap, made of strong leather, has been provided, which embraces the body directly under the axillae, - at the sides of which are affixed other narrower straps, fitted to hold each arm, so as to be buckled behind, and by which means they are effectually secured. The main strap is

closed behind with loop-holes and rings, through which a small iron pin passes, stayed at top, and fitted at bottom for a padlock. To prevent ~~it~~ the body strap from slipping down, a loose circular band of leather extends from the front edge over the head, and lodges broadly on the shoulders, which is also secured behind by a loop-hole and small strap, attached to one of the rings, through which the pin is directed. By this method, the whole is preserved from being shifted; and it most completely prevents the use of either hand, for any injurious purpose. The object of exercise is, however, ~~attained~~, sufficiently attained, for which the open/galleries of the institution are very well adapted; till at length the patients are permitted, under the same restrictions, to pass into the open air."



p 164. The Strap, originally recommended by Mr. Tuke, for the purpose of securing the upper arms, where precautions against violence are necessary.

P 88.

Circulating Swing -

A safe & very effective remedy for determined maniacs communicated to public by Dr. Cox in his practical work on insanity; who, tho he modestly ascribes the invention to late Dr. Darwin, was first to apply it for relief of insane.

From having repeatedly experienced the want of some subduing power, in cases which had resisted every ordinary expedient; and from being often placed under apprehensions for the safety of patients, by whom the usual mode of treatment had been utterly opposed, was not slow in availing self of his observations.

P.89. Erected necessary machinery., & tested in most ample manner. Debt due to Dr. Cox, by public, for general excellence of labours; & especially for his appropriate application of Circ swing as "a moral & medical mean" in cases of insanity.

Advantages of medical treatment by swing are of first consideration & 'its efficacy, to the extent alleged by Dr. Cox, appears to be incontrovertibly ascertained.

Used with success for recently attacked previously purged; & in repeated attacks at short intervals on accession of paroxysm. Also those to whom Dr. Cox has strongly alluded, inflexible maniacs impos to treat or even sustain life. Full evacuations by increasing velocity gradually. Most cases succeeded in exciting sudden action of stomach, bowels and urinary passages, in quick succession; particularly by reversing the motion of the swing every six or 8 minutes, pausing occasionally, & stopping its circulation as suddenly as possible. Often stomach only acts but so subservient to my wishes as willingly to take any medicine prescribed. - gave calomel purge at bed-time; & when necessary, the purgative solution on the morning following, p 82 & 85. Discharges surprised by extraordinary magnitude, density & feter.

Used if other remedies refused, or fail or if no sleep - for many hours in continuance. Unusual time under slow action of swing without vomiting - detaches from aberrations thro fatigue - most perfect repose., a/c by gentle diaphoresis. "Repeated ac to circs. 'the dread it excites very soon predominates, & is generally sufficient to prevent the recurrence of violence, as well as to invite a disposition to sleep'. P. 92. Of great advantage in recurrent cases. 'I have however, a strong objection to its use in all cases where an inordinate determination

of the blood to the vessels of the head may be present especially in young plethoric habits, in whom every sudden emotion, either of mind or body, should be carefully avoided.

- P. 93. Use not applicable to cure, in any form, at commencement, or until violence of paroxysm subsided, or after evacuations sufficient to prevent its materially aggregating the morbid determination to the head, already existing. Horizontal position preferred as long as effect obtained - when erect prevent hanging over of head; 'otherwise a suffusion of countenance will take place, which frequently leaves an ecchymosis, giving the appearance of unnecessary severity'.

Urgencies of evacuation or sleep. For first erect posture - for sleep horizontal in steady uniform manner.

94. Remarkable prostration of strength which succeeds where benefit attained may create alarm & careful superintendence. Immediate influence lowers circulation & general temperature.

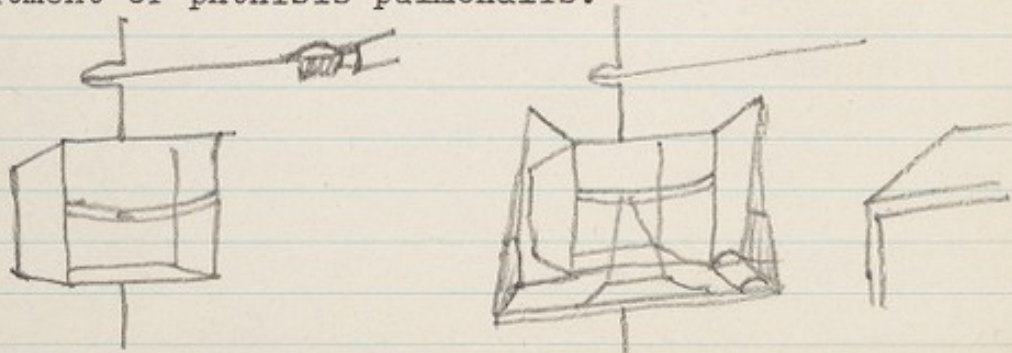
As anti-maniacal remedy has failed even after 2 or 3 well directed efforts - may do harm

95. His swing improvement on Dr. Cox. Worked by windlass & revolves 100 times per min. can be regulated. Used for one person not 4 as originally intended. Some cases trivial effect, idiots use it for amusement also between attacks.

96. Several long standing cases unexpected improvement. Violent & confined became easy of access, kind & gentle manners, willing service in cleansing & attendance on sick - affected by swing with 'a smart fever of 8 or 10 days duration; and from which the favourable occurrence, here alluded to, seemed to have arisen. No chronic case showed complete recovery but no well regulated institution will be unprovided with one.

'In a few cases in private practise ... I have contrived to confine my patients in close hammocks, slung by two parallel ropes from the ceiling, and supported at the angles by cords, with eyes hooked to the upright ropes. A gentle oscillatory motion is thus readily obtained, which is applicable, ~~partiv~~ ... where the continuance of sleep is of importance. If nausea or vomiting be desirable in the first instance, the oscillatory motion should

97. be held in reserve; and by twisting the parallel ropes to their full extent, so as to let them return by retexation, to their former position, the action of the stomach is powerfully excited. This from its vertiginous effects, having produced surprise and some share of tranquility, is followed by refreshing sleep: the attendant, on continuing the rocking motion of the hammock, in a darkened room, has continued to prolong it, for 8 or 10 hours without intermission. This method of subduing furious maniacs has succeeded in an admirable manner. It deprives them of all power to resist, and prevents the possibility of injury to themselves, by beating against a wall or bed-post. They, by this contrivance, are completely enveloped, and kept sufficiently warm; and where the attendants will obey the injunction of silence, the disposition to a return of violence may again be restrained by the repetition of such gentle expedients. To avoid the necessity of the attendant being constantly in the room on these occasions, a string attached to the side of the hammock, and passed through an aperture in the door of the apartment, will give ready means of renewing the oscillatory motion from without, or of continuing it as long as circumstances may demand; it never fails to overawe, without exciting painful and unnecessary irritation, and to produce a cessation of those strong emotions, which are enemies to tranquility and repose. * Objections as too severe - all important medical measures can be perverted and abused. Not more than sea-sickness, when resorted to for the benefit of delicate people in the last stage of pulmonary consumption. Used as recreation & pastime in public resorts. Special advantage in case of haemoptysis taking place of mania where stopped haemorrhage. May be used even in treatment of phthisis pulmonalis.



97a. Last paragraph - P 213.

Convalescents to associate with own class;
incurable set apart; idiots should never, if possible,
be permitted to come within view of each other.
'The indiscriminate mixture of all cannot fail to
be an endless source of riot & of serious disappoint-
ment. I shall conclude by observing, with respect to
the convalescents in particular, that their daily
intercourse, by serving as a check to extravagant
emotion, is highly expedient as a moral mean, and
materially conducive to final recovery.'

The End.

Introduction -

Lack of attention by physicians - departure from prof importance or special study. In medical province.

- P.2. Acute & chronic - former susceptible of cure, latter defying powerful remedies. Associated with organic lesion - not merely in brain but diseased action of thoracic & Abdominal viscera.

Term Mental Derangement mischievous, causes primarily affecting mind, to which corporal infirmity is sure to succeed - does not allow of remedies for other form hence considered incurable.

3. Admits of cure or palliation. Rendered incurable by improper treatment in first stage.
4. Efforts not always fruitless.
Book for practical utility. Mere hypotheses till
5. penetrate Great First Cause by which faculties of human mind developed.

Pathological Division /of/
Insanity.

Practical distinction between species of insanity referred to mental causes denominated mental insanity and similar excitement due to organic disease. 'Certain causes idiopathically affecting the brain, or arising from a specific, or secondary action, in the liver lungs or mesentery, do excite in persons predisposed, ~~many peculiar aberrations of the will, which com-~~ those peculiar aberrations of the will, which commonly denote an unsound mind.'

8. Object to designate those two forms. '..guard against the common method of referring all maniacal symptoms to one general head; and thereby confounding the hallucination of the mind, as primarily the seat of the disorder, with the delirium, which is the associate of corporeal suffering, and to which it can be distinctly traced. This latter modification, at the same time, will be found to partake of delusions, which are inseparable from mental derangement, but, which, on the other hand, are the ordinary symptoms of idiopathic affection.'

Practical distinction between two species with opposite modes of treatment. 'The malady, though differing in its origin, is in effect the same; owing its existence, as accident may direct, in one person to mental, in another organic impressions'

9. The malady of the mind to be treated on moral principles while affection of body, arising from direct injury to one or more of vital organs - approved remedies.

Cases over 25 yrs in Cork Lunatic Asylum - mental causes, dread of punishment, loss of friends, shame, sudden terror, remorse etc. Opposite class, violent excesses of various kinds, and by which, the free action of the brain in particular, and of the lungs, together with the abdominal viscera in general had been principally & individually engaged. Phthisis pulmonalis, haemoptysis & mania furibunda have

10. followed in rapid succession. In diseases of Liver due to long continued intemperance or sedentary mode of life, maniacal symptoms often supervened. Subjected to discipline & organ overlooked. Candid report or careful examination.

11. Mental - prudent disposition of moral agencies; corporeal - specific remedies. Latter succeeded by symptoms of convalescence which belongs to 'synochus' & other febrile affections, where delirium had previously existed; the former 'has ever been remarkable for its inflexible indifference to the most earnest assiduities and privations, and is at all times prone to run into the extremes of catalepsy and idiotism. Some may be suddenly extricated, and without any ascribable cause, experiencing entire relief.

12. Cannot admit of total suspension of mental faculties, though aware of their perversion by disease. If yields to moral remedies how confound it with other due to corporeal disturbance. Terror suddenly induces uncontrollable madness without disturbing organs - prevent organic lesion rather than prescribe for symptoms that frequently bid defiance to all pharmaceutical contrivances.'

- Can account for empirical practice of "breaking in upon the constitution" by giving mercury which relieved disordered state of liver - a ptylism of short duration afforded obvious relief. Not an inflammatory state smtms highly enlarged scirr-
13. hosity, again inactivity or torpor of liver which should be principal point for examination.

- Brain invariably perverted in functions but
14. frequently secondary. Mesenteric glands a connexion either a consequence or an original cause. Ultimately show scrofulous disposition which may be disposing.

15. In few cases of corp. ins. death averted by phthisis pulmonalis with hoemoptoe, maniacal sympts giving way - alternated.
Ins. has connexion with entire glandular system "Mania Corporea" of Cullen.
16. Spurzheim - "I reject a mere mental insanity & consider the cause of every derangement of the manifestations of the mind as belonging to organic parts".
17. I urge real existence of mental derangement from experience of facts not theoretical principles. Quote from Spurzheim on "Proximate cause of Insanity is corporeal."
18. Differ materially in his total exclusion of the mind - 'I will not deny that the mind or soul sickens. So long as the soul remains incorporated with man, so long will it partake of his nature, according to his attributes.' Mind disturbed by impressions for years without affecting organs may without any strong effort resume its original character. Manifestations of the mind are its essence & if they are diseased
20. betray an unsound mind. Causes of ins. whether owing to direct impressions made upon the mind, and ultimately affecting the sensorium, - or indirectly when depending upon organic lesion, affords evidence that mind incapable of resisting those impressions. Mental delusions inciting to suicide without bodily infirmity Dr. Gregory of Edin. story of intending suicide cured by being threatened by footpad.
21. 'The diseased manifestations of the mind, arising from terror, grief, excess of joy, remorse, shame, loss of property, and despair, prove the sensibility of the mind, though they betray its weakness. To deny the influence of those contending passions, would be in some respects to stifle principle, and to sink man below the level upon which Omnipotence had thought fit to place him. If the mind never sickens, - conscience, the great inquisitor, and monitor of man, would prove of no avail. Yet, this conscience, - this mind, - this soul of man, - is but too often sorely afflicted. It encounters
22. disease with a mighty struggle, and is sometimes ~~tr~~ triumphant. If the wound be deep, however, it will "fall sick"; and with this sickness will come death. - "the spirit of a man will sustain his infirmity; but a wounded spirit who can bear?" (Proverbs, ch. XVlll, v. 14.)

23. General & Local Causes /of/
INSANITY.

War,- Foreign & Domestic.

-
- To account for progressive increase of insane. May give offence by assigning certain political opinions inseparable from our recent history. Great increase between 1798 & 1809 due to corporeal & mental excitement from continued state of warfare. Foreign contest & intestine feuds with visions & disappointments - tragical events of late unhappy disturbances in this country. Terror produced incurable melancholia: disappointed ambition cases were loquacious, gay & fanciful; though extremely treacherous and vindictive.
24. history. Great increase between 1798 & 1809 due to corporeal & mental excitement from continued state of warfare. Foreign contest & intestine feuds with visions & disappointments - tragical events of late unhappy disturbances in this
25. country. Terror produced incurable melancholia: disappointed ambition cases were loquacious, gay & fanciful; though extremely treacherous and vindictive.

Abuse of Spirituous Liquors.

-
- Unrestrained use of ardent spirits. Dreadful consequences of this alarming vice; so inimical to domestic peace,- to every moral virtue,- and to political security. Furious madness from long continued ebriety. Soon recover but give way to their former insatiable cravings, to the total extinction of every sense requisite to human happiness, in its most limited form.' Terminates in fatuity, epilepsy or death. Useful artisans & industrious poor suffer from extensive growth of human depravity. Newly distilled spirits ruinous effects on all countries. Vegetable & mineral ingredients added of most pungent & deleterious qualities.- cause frequent doomed maniacs. Should be regulations.
26. Unrestrained use of ardent spirits. Dreadful consequences of this alarming vice; so inimical to domestic peace,- to every moral virtue,- and to political security. Furious madness from long
27. continued ebriety. Soon recover but give way to their former insatiable cravings, to the total extinction of every sense requisite to human happiness, in its most limited form.' Terminates in fatuity, epilepsy
28. or death. Useful artisans & industrious poor suffer from extensive growth of human depravity.
29. Newly distilled spirits ruinous effects on all countries. Vegetable & mineral ingredients added of most pungent & deleterious qualities.- cause frequent doomed maniacs. Should be regulations.

6

30. Religious Dread.

-
- One of principal causes ac/ Cox, Haslam & Spurzheim - in England due to abstract conceptions.- extinction of every hope of peace. 'Those of inferior pretensions, badly digesting the heterodoxies of the day, should in their eagerness to arrive at truth, stumble, through blindness by the way.' Number small - perverted ideas of religion appear unconnected with original excitement. Maniacs thinking obliterated still able to address Deity consistently & attend regular devotional duties.
31. extinction of every hope of peace. 'Those of inferior pretensions, badly digesting the heterodoxies of the day, should in their eagerness to arrive at truth, stumble, through blindness by the way.' Number small - perverted ideas of religion appear unconnected with original excitement. Maniacs thinking obliterated still able to address Deity consistently & attend regular devotional duties.

32. R.C. to established church - 10 to one - no case amongst former. Several dissenters from latter affected - most obstinate & refuse treatment - most active antimaniacal remedies opposed by a cold inactive habit, accompanied by an apparent insensibility, and indifference as to consequences. - Taedium Vitae, & pertinacious anxiety to escape shackles of existence present in some. Mode of instructing.

33. Causes - no longer political feuds, but loss of property, reverses in speculation - incurable melancholia - want from cessation of employment.

Table of the Causes of Insanity, 30.6.1818.

County & City of Cork Lun. Asylum, 1.1.1798 to
Terror from the rebellion. Jealousy. Pride. Grief.
Fever. Epilepsy. Religious Zeal. Loss of Property.
Excess in Drinking. Disappointment. Lues Venerea.
Hoemoptoe or Consumption. Injury on the Head. Heredit-
ary. Palsy. Unknown. Difficult parturition.

36. Is Insanity /an/
HEREDITARY DISEASE.

Many lamentable & undeniable proofs of insanity existing by inheritance. Peculiar confirmation of parts & prior to morbid impressions. Cases indiscriminately & erroneously termed 'Mental Imbecility' manifest at earliest age where the 'Pathemata Mentis' at least could not have a share.

37. Mr Ness Hill in excellent Treatise on Prevention & cure of Ins. most absolutely denies inheritance. - originates from "the combination of various mixed sensations with organic lesion and predisposition" without which combination it would not occur.

38. If predisposition or the susceptibility be acknowledged, so must the hereditary claim.

39. Frequently acquired, yet in most decided instance it can be referred to hereditary predisposition; whether arising from a peculiarity of temperament - to a malconformation of the brain, or, to a morbid irritability of the digestive organs & biliary organs of original date.' Anatomist Hunter - no hereditary disease only predisposition.

40. Idiocy does exist from birth also may be acquired. Idiocy & Insanity closely allied and frequently run one into the other. Exist in same families.

Disposition is the disease - not intermarry. -
affinity with scrofula

45.

Prognosis /or/
Probable Event.

46. Cases imputed to late Rebellion - show force of terror when accompanied by consciousness of guilt, & dread of punishment, - aggravated by loss of character, of property and of friends.- permanent & fatal effects.

General intemperance & substitutes for wine.

47. Daily intoxication - restraint set aside, appetite lost without condiments. Dreary waste of mind & body. Temper dark, irritable & suspicious.

48. Febrile paroxysm, like typhus, symptoms of 'synochus' & symptomatic of vitiated state of abdominal viscera. Reiterated attacks lead to Mania Corporea. Recurrent Fever.

49. When paroxysms have induced peculiar action of liver then faint hope of subduing its inveteracy. Liable to sudden stroke of apoplexy & palsy; effusions of water into cavities of thorax, with oedematous & anasarca swellings of lower extremities - immediate dissolution - maniacal delirium succeeded by perfect consciousness. Greater number females - more exciting causes c parturition & emotions and congestion in sanguineous temperaments at menopause.

50. Men more resistance.

51. Insane do not often reach old age - some 60th yr where paroxysms at long intervals. Females longer.

52. Observed that where most violent favourable issue more likely.

53. In settled state where original cause traced to those impressions which influence mental faculties 'and where the organs of perception bespeak an indifference to every object, whether of emotion or interest, unaccompanied by with febrile diathesis, there scarcely seems a pretext for offering the hope of advantage from any mode of treatment'. But maniacal symptoms under 25 with no infirmities or irregularities who have submitted early to treatment may presume permanent relief.

If paroxysm subsides speedily on first attack anticipate hasty return with redoubled violence. As becomes more benign duration of paroxysm & interval increase in mutual proportion.

54. During convalescence have recurrences with suspicion & despondency aggravated by inhibitions and restraints.

55. At this time Fever gives way by slow degrees. Pulse reduced from 120-86. Urine heavy lateritious sediment, moisture on surface towards morning, smtms profuse & fetid. Countenance more placid, eye which resisted most vivid light now impatient of its influence, orbits less protuberant, pupils react. Tongue bright red at point though coated at centre & swelled at base, becomes moist & clean, appetite increases; delirium continues at night & morning.

All cases where accession abrupt also departure expect renewal within 3-4 weeks. Symptoms subside and have Lucid Intervals which become more protracted & less distinct till real convalescence.

57. Ins frequently accomp by & often terminates in catalepsy. 'The appearance of catalepsy in any degree thus connected, is at all times unpromising, and most commonly fixes the complaint for life.' - only one recovery.- when follows suddenly on original attack, death at hand. Females exclusively liable to catalepsy.

58. When Ins & Ep exist - hope of cure cannot be admitted. 'A species of insanity closely allied to paralysis, is sometimes met with. I have seen mania ushered in by paralysis, and vice versa, Where this connection is established the practitioner will effect but little to his purpose.' Case record Lieut W. recurrent ultimate recovery.

62. Stability after paroxysm indicated by corpulency. - continuing emaciation discouraging. 'A voracious appetite usually accompanies this state of emaciation; and, for the most part attends those patients who degenerate into dementia, or idiotism.'

Method of Cure.

~~***~~

Precursory Remarks

63. Form of insanity which usually arises from causes producing excessive arterial action, and subsequently, Mania Furibunda, not similar treatment to that the result of depressing passions; producing melancholia, with general torpor of system. - former
64. not moral, latter no depletion. Remedies often applicable to different forms on associated appearance of mental & corporeal origin.

64. Ultimate treatment of each form does not differ widely. Furious maniac soothed & benefited by moral means & melancholic often becomes violent & needs evacuants. 'So nearly do the opposite forms of insanity approach each other, that the one is often observed to terminate with symptoms which are peculiar to the other at its commencement; and, vice versa'.
65. Worth & quality of physician decided on at first interview. Closest scrutiny - actions, expression viewed with suspicion.
65. Approach of unbridled authority condemned by profession - 'anything but a tyrant, or a proficient in the art of foppery and grimace.'
67. '...rule to converse with each patient, separately, on my particular days of inspection, on the subject most welcome to his humour.'
68. Argument to be deprecated. Agree with Dr. Coxe (sic) to talk at rather than to, in order to convince & correct.
69. Attentive to strictures directed to others. Less notice taken of obstinate fantasies, less disposed they are to retain them. Coincide with extravagances.
70. Symptoms of maniacal person are those in the young and plethoric, - of the sanguineous & sanguineo melancholic temperaments, which owe prevalence to increased determination of blood to vessels of head, or increased action of their muscular fibres. Observed mania 'entirely independent of increased action of the heart and arteries in any direction.'
- Other temperaments liable to mania but acquired. In all instances of sanguineous or sang melancholic in whatever degree arterial action is exerted, there follows a torpor of venous system, causing dimin of equilibrium in circ so essential to health.
71. Thus get overdilatation of arterioles of Brain & rupture or effusion of serum causing symptoms and those appearances discovered in maniacs on dissection.

Venesection.

From above have refrained from venesection as an anti-maniacal remedy. Patients sent to public hospitals for insane in last stage when inflammatory symptoms given way to more fixed, acute into chronic. - thus too late for venesection.

72. 'Does not follow, that because phrenitis demands instant and abundant loss of blood, that mania must be phrenitis.' Mania hardly ever ends in death, phrenitis of short duration & fatal if not promptly relieved. Phrenitis does not terminate in Mania. Often confounded. Mania in plethoric tendency to
73. Apoplexy, frequently terminated thus, particularly from over distended stomach., does not terminate in phrenitis. In mania in primary symptoms have opened temporal artery - diminishes excessive impetus of heart, and causes quiescence giving immediate relief. Bld-letting not admissible in Mania. Young, pulse 96-100, white tongue, hot skin, suffused protuberant eye then expedient if not essential.
74. Brains of those died from insane orgasm showed evidence of relaxation, soft, white flabby aspect of entire substance, resembling curds, not solid, compact mass the common consequence of inflammation. (i.e. which requires venesection - A.A.B.)
- In long standing cases if inflammation of brain or membranes existed would have died. Case of Mary
75. punch - recurrent mania, gentle between - bleeding
76. would be dangerous. Could not be inflammation or suppuration or effusion & death.
77. Bleeding nugatory in ordinary cases, inadmissible at commencement & mischievous if protracted illness likely to follow.

Local Bleeding

- Have peculiar turgescency of countenance, heat in scalp, tinnitus aurium, & not unfrequently the idea, that loud voices are heard from afar; or as if the rolling of carriages was incessantly at hand. -
78. lower extremities cold, insteps & toes & hands from wrist livid. Apoplexy has occurred so have unwillingly used lancet with short advantage - should be dispensed with. Nothing more than congestion totally independent of inflammatory action - relief by leeches to temples & repeated. Leeches to back of each ear followed by cupping syringe, less harsh than scarificators which are often insufficient.
-

Emetics.

79. Advantages in all febrile conditions, so powerful adjuvants in acute insanity. Lower force of circulation hence mania. - might stop attack if early. Beware if attack mature. Might get rid of indigestible impurities -' though I cannot too forcibly resist the practice of administering emetics to insane patients, in such doses as suddenly to excite the violent action of the stomach, at the time when the vessels of the head may be surcharged with blood and when the danger of over-distention is to be apprehended.' Previously direct a strong purge or combine them.- divided portions, at regular intervals to maintain state of nausea until copious discharge from intestine. No partial determination.
80. Action often tardy & need 3 times dose of emetic

81. contrary to Dr. Haslam. Even 4 times, lady required 16 grs tartarized antimony.- no trouble. Due to torpor & mucous matter in stomach which purgative discharges down exposing surface to emetic, which causes 'immediate discharge of feculent sordes.'

82. Tartarized antimony best, tasteless, more soluble and certain. 4grs c 4 ozs Sulph of Magnesia in pint hot water - 2ozs given every 4-~~hrs~~ hour till acts.- 9 out of 10 require whole amount and even more. May repeat for some days till feces natural bilious appearance & less offensive also breath & system at large enjoys temporary repose.

- Great utility in acute stages with immediate influence on circulating medium c or without bleeding.
83. Where latter cannot from turbulency be attempted or not admissible, free use in 2 gr doses, at moderate intervals 'seldom fails to reduce the most stubborn maniac to a state of relative quiescence, at most after the third portion .' Sleep very frequently follows with 'those happy consequences which succeed to a relaxation from inexpressible misery.'

' ..in recent cases of insanity, by persisting in this mode of treatment, I have frequently, without any other remedy, completely reduced the maniacal hallucinations, within 10 or 14 days from the commencement; so as to be enabled to follow up the plan of cure, in the most satisfactory manner.'

Purgatives.

Purgatives

84. Primary importance during progress of insane paroxysm. At conclusion of fever & during convalescence Preferred to other treatment if organic lesion -
85. submuriate of mercury with antimonial powder & jalap in bolus in proportions to secure direct passage.- slight degree of nausea.

Relief for 24 hrs then circulation quickens & fever more lively. Delirium changes more to gaiety than sadness. Then most obstinate state of constipation, with acute pains darting through head & smtms fixed at Occiput or Os Frontis. Sleep banished & no respite from most wearisome exertions.

- Under such distressing circumstances of reaction slow introduction of emetic solution, c or cout neutral salt, given punctually diminishes pain & affords
86. sleep. When only takes drinks tart antim can be imposed thus largely diluted. Should be stopped but if continued purging needed solution with dim portion of emetic tartar given at longer intervals.

Purgatives persisted ac nature of discharges - dark broken-down matter, with Scybala but slightly marked with yellow bile. Desist if feces consistent, recently secreted bile, of florid aspect,- remission of urgent symptoms,- liver to touch free from pain & tension,- and debility at hand - look to support by suitable nourishment.

87. All remedies frequently refused also food in case poisoned even to death - 'lives have eventually proved the forfeit of their pertinacity.'
88. Artifices may be used with assumed authority - subdue opposition by dexterity rather than by force, tend to overawe and establish tacit acquiescence.

Circulating Swing.

Vide ante.

98. Digitalis.

- Incipient stages of Mania yield to depletion remedies. Chronic more obstinate especially sleep-
99. lessness. Digitalis high merit as anti-maniacal
100. & recommended. Specific in cure of anasarca, phthisis pulmonalis & sedative on circulation applicable to violent stage of mania.- frequent trials.- total failure & given up for 2 yrs. Given in error to

101. to patient having opium for excitement with sleep
 103. & excellent results. Continued up to 100 drops a dose
 after jalap bolus - maintained for weeks with recovery.
105. Recommended by several named doctors.
 Employed in mania & where there is strong
 arterial action. Not in pneumonia, phrenitis, entinitis
 (sic), or any other sthenic disorder - liberal
 in relaxed fibre as anasarca, ascitis, uterine
 haemorrhages, & phthisis pulmonalis scrophulosa.
 Stimulates first sedative secondary & resembles
 106. opium, not persisted when injurious effects seen.
 If debility of either increases get congestion.
 Judicious use in mania encouraged to proceed
 with hope of recovery.
107. Little interest in it - Dr. Cox satisfactory
 opinion but no proofs.
 Anodyne & soporific qualities & confidence of
 sound and refreshing sleep like opium.
108. Patients describe benefit in few minutes.
 Sedative power on circulation attended to or
 cause paralysis or debility. Pallor, & inability to
 retain food, vertigo, dilated pupils, slow inter-
 mitting pulse, cold extremities - stop & give volatile
 alkali & other cordials. Withhold for few days with
 moderate purge & can recommence - 40 drop dose may
 109. cs nausea & vertigo, pause purge & restart with 20 -
 add one drop daily to 50 drops t.i.d. for 8-10 days.
 Increase to 100 with safety.
 Good qualities not shown in small doses.
110. Lady patient recovery after mild ptysm c
 112. mercurial pill & digitalis. Indicated prevailing
 torpor in brain & nerves of insane.
 Tendency to constipate hence purgatives.
 Modus operandi not understood in mania - not
 113. diuretic as in dropsy though large doses yet reduces
 maniacal furor, subdues arterial action, promotes
 refreshing sleep & restores sensorial functions.
 Camphor & narcotic poisons resemble it, but more
 expeditious & can be given in inflammation while '
 digitalis cannot with advantage or safety be ventured
 on, where the inflammatory diathesis presents
 itself.' Excellent in relaxed fibre hence inapplic-
 able in mania without preparatory measures of de-
 petition.
114. Amongst the tribe of narcotic medicines; obvious-
 ly from strongly stimulant and narcotic power. Satur.
 Tincture.- from fresh green leaves taken in dry warm
 weather than from dried leaf.- Green tinct. milder.

115. Case history.

123. Opium.

Soporific & anodyne qualities sought for in Mania & principal character amongst anti-maniacal remedies. Certain precautions owing to arterial excitement - retards the bowels. Of late years in our asylum superceded by swing and digitalis.

125. Full & timely dose may cut short incipient attack. Case - 240 drops tinct in 3 short intervals.- life or death & congestion & debility. Can only be tried once 'especially where the disorder can be referred to the causes that induce an over distention of the vessels of the head, and the febrile diathesis which is its ordinary attendant.'

127. In perfectly quiescent state of insanity, where all febrile heat & turgescence of countenance have been subdued opium of infinite utility; particularly where mind remains defective, through debility, and is prone to dwell on real or imaginary misfortunes or where corporeal functions inert & feeble. Cardiac principle, in small quantities for few days only, promotes convalescence. Leads way for more permanent use of Digitalis - if former produces benefit latter relied upon, sim wine and animal food.

Camphor.

128. Authors have enlarged on value as anti-maniacal remedy.- general utility in other febrile disorders.

Will not deny efficacy as anodyne in first stage of mania & has soporific quality but would not repeat for more than 6-8 days. Used in many cases of acute madness, some assisted in reduction of febrile symptoms, more often failed. More effectual combined with opium, antimonial powder or nitrate of potash. Cases persisted in succeeded by idiotism, 'there is no any medicine of this class which so suddenly loses its influence on maniacs.' 'no hesitation in looking upon the plan of treating maniacal patients on a curative principle, by a continued course of camphor & opium or of either, as an egregious loss of time, and as particularly liable to ultimate disappointment'. Power over arterial system not disputed, reduces force of circulation without benefit, pulse low as 50.

Countenance becomes livid, extremities cold & insensible & equally livid. Arterial blood concentrated in vessels leaving heart, lungs impeded & congestion determining to the head, is often inevitable consequence.- torpor greatly aggravated.

- Insanity is not phrenitis. In latter pure inflammatory action declared in blood drawn - so
131. where powerful evacuations must precede camphor a sedative & employed with advantage. Insanity - need for copious bleeding does not frequently occur & no inflammatory crust.

Uncertain in mania & incautiously resorted to get pallor, nausea & vomiting like digitalis.

Over-protracted restriction, not justifiable
in Mania - (Chest band) v.a.

-
137. Blisters.
-

- Indiscriminate employment - no remedy worse entitled. Early application during fever, or powerful determination to the head, not persisted in by those careful to avoid irritation. Routine causes employment when nugatory & most instances improper. Strictly condemned, especially where absorption of cantharides causes local excitement. Towards decline of paroxysm with want of energy & incapacity to participate in usual objects of volition occasional repetition of
138. blister round lower part of neck often beneficially stimulating & promotes extraordinary discharges from the part. - fever now excited tends to animate. Applied early, discharge scant, heal almost immediately from general irritation increase febrile diathesis.

Pts report return of acute sensations in head.

- May be more efficacious applied to calves or feet
139. but rubbed off & may be eaten. Seldom required before advanced convalescence.

Mercury

From a few cases expected more from it- were associated with retrocedent gout dep on inactivity & over-distention of liver.

140. ~~Ptyalism~~ Ptyalism from calomel purges disappointing. Useful as preparative for digitalis. Calomel best
141. merc. prep. No other form e.g. friction admissible in strong Pyrexia or active maniacal emotion.
- Combined with tart antimony in early stages has promoted evacuation - continued by antim powder alone in increased doses.

142. Warm & Cold Bath.

Indiscriminate use & often misapplied.

- First stage of mania any degree of heat produces injury & inconvenience. Increased fullness & velocity of pulse, additional turgescence of face, acute pain through head esp occiput, & thirst. Not refreshed -
143. lassitude & debility, rigours (sic), arid heat on surface, restlessness & wild delirium - unsafe. Second or improved stage also inadmissible.

Third or convalescent stage cannot be too highly estimated - soothing & invigorating, secretory organs stimulated esp liver, critical flow of yellow bile from intestines, forerunner of complete recovery.

- Dissipates peculiar offensive fetor, may be due
144. to liver causing torpor and impaired digestion.

- 96 degs for 20 minutes - more get confusion & Deliquium Animi - napkins wrung out of cold vinegar
145. & water like turban. Enjoyed & prolonged to 1 hr. Followed by moderate exercise in dry open atmosphere.

Shower Bath.

-
- Application of cold in febrile conditions & for instant relief in maniacal fever. Cold affusion of
146. Dr. Currie - mania does not yield to it.

- Objection - imperfect reaction. Ascertain pulse & temperature - 96-110 & 100 degs maniac benefit from cold shower. Advantage in first stage of mania, even
147. t.i.d. - temporary relief - sleep & mild diaphoresis.

- Cold affusion in diaphoresis or absence of fever heat, pallor or emaciation, not attempted.

148. Mania cold shower bath - 'melancholia' where a suspension of every active principle of life forbids all evacuant measures, save as to the bowels merely, the exhilarating quality of the warm bath, from the commencement is evidently advantageous.'

149. Warm bath in melan. occasionally interrupted by symptoms tending to acute mania, so in latter, cold bath frequently interdicted by a disposition to inveterate melancholia.

' We have in those instances, practical evidence of two varieties of a disease, existing in same(the) person under opposite appearances, though not at one time; which have their origin in causes not materially dissimilar: we can mark their transitions & their interchanges of character.'

150. Treatment /of/
MENTAL INSANITY;
or, Melancholia

Mind taken up with weight of its own infirmities & corporeal functions disturbed secondarily.

151. Resist medicine. Not accompanied by fever or outward signs of disease - excitement poignantly acute & requires relief & precaution.

Idiopathic melancholia not in plethoric or sanguinous temperament or sudden emaciation. Melan temperament, dark complexion, dense fibre, spare

152. appearance, emaciation never to excess. Locomotive faculties nearly suspended in both types. Former disposition to change to acute form of mania, seldom in latter. Former acute from commencement, admitting bleedings from head & depletion from bowels; latter torpid action of bowels urgent & frequent necessity of unloading them.

153. Nearly same remedies as mania., esp at conclusion of paroxysm. Digitalis at outset without difficulty. Warm bath important. Cold effusion would extinguish life. Shower bath in convalescence where reaction restored. Wine & animal food from earliest stages, forbidden in mania. Recreation or amusement not restraint. Difficulty in making any permanent impression, prospects good in mania.

154. Mania depletion ab initio, melan great circumspection owing to emaciation. When vacillates with mania adopt evacuant plan with ref to acute sympts of idiopathic mania. Often mixed case - ascertain presence of acute or maniacal sympts.

155. Beyond reach of medical research to promote cure.

Mania when terminates in melan, accom by jaundice & hepatic derangement.- mercury called for, submuriate preferable but friction if not effected.

- Transition of either form to its opposite is invariably to a milder state of the disease at once
156. subservient to medical treatment.

Mel accompanied by hepatic derangement disposed to oedema of lower extremities. Mercury or get anasarca or ascitis. Prevented by Digitalis.

157. Treatment /of the/
CONVALESCENT INSANE.

158. Future depends, between chronic and acute & all pass through it. Most important after first attack.

New character of mixed nature pertaining to both Mania & melancholia & trtment common.

159. Critical point when mania runs into melan. & v.v. Inadvertency at this point causes incurable in Europe. & here.

160. Judicious regulation whether from mental or corporeal insanity depends hopes of recovery or fixed complaint.

161. Worst is too long confinement giving time to brood over affliction with unabating despondency - causes alternations between man. & mel, & principal source of incurable insanity. Disease originating in organic lesion becomes complicated, corporeal & mental insanity by turns becomes habitual.

162. Mel not so urgent with vivacity which resolves into natural vivacity - dietetic restriction & plan for maniacal fever.

Daily periodical remissions when at end of 10-14 days leave pt in state of languor & resignation, inseparable from true mania - proofs of immediate convalescence.- remove restrictions.- gradually.

163. Seclusion from light, personal restraint, appropriate diet, total separation from friends & relatives. * Cases of mania do occur in which personal restraint of temporary nature is unavoidable & of first importance. Slight restriction of strait waistcoat, the strap, (N.B.) or light chain round ankle may prevent suicide or murder.

164. Irish lunatics often extremely refractory like other countries. Public clamour - lighter trtment preferred. Mr Tuke - one class of patients, uniformity of habits, sound education & self control of Society of Friends - no paupers. Strap for upper arms, originally recommend

by Mr Tuke, where precautions against violence are necessary, has long since been adopted at our institution, and, I trust, with some improvements - P 135.

165. Seclusion from Light.

Mania & all cases of acute fever, where sensorium subject of principal concern, abstraction of all stimuli, externally or internally offending, of first importance. Light.. no power in nature so instant ineffect or more injurious when incautiously admitted. Brain in acute cases of insanity is peculiarly alive to impressions conveyed through medium of light - all objects source of new & alarming emotions. Maniacs may stare at sun with pupils contracted - become chronic.

166. Abstraction of light indispensable in earliest stage, not total dark or dangerous at convalescence. Moderate & equable degree of light so that objects viewed without misconception or visual deformities. Northerly aspect and high up in room for acute mania.

167. Gradual admission of light before change of apartment- convalescents thrown back.- no objects of former associations - rural scenery most acceptable. Case military gentleman - wife & children carried off in Mr Sadleir's balloon in 1816.

169. Exercise.

During convalescence with precaution & address. Free & constant circulation of pure air

170. before exercised, in dormitory first. Muscular debility degenerates into rigidity of fibre tending to curvature of spine with inability to extend lower extremities. Kept warm & made to extend limbs in bed. Heated bricks at bottom of bed induce

171. extension. Walking best in early convalescence

Advantage of bodily exercise & employment of mind - horticulture - institution garden - for those 'who, for want of some suitable occupation, were obliged to loiter away the day in listless apathy

173. Convalescent & chronic - garden activities -

174 silence, 4 times day labourers.- some slow starters.

175. Convalescents ill temper in morning so no garden implements as offensive weapons till after breakfast. - determination of blood to head after recumbent position. Insane will not adopt half reclining posture, so erect one as soon as fever absent. Without varied recreation in convalescence
176. men have faded into mere dementia. Early discharge of agricultural patients - return with thanks.
177. Ascertain most effectual mode of employment. Case - drawing with rude colouring on walls of
178. apartment - recovery - miniature painting.

180. Diet of Insane.

Pauper patients from Cork - diet farinaceous to which accustomed - oatmeal porridge & new milk for breakfast, vegetable soup with oatmeal boiled down for dinner, beef added three days per week, potatoes included. Two meals per day. - some oaten bread for breakfast & for supper. Aged & infirm & convalescence animal food.

181. Suited to all but alcoholics who improve from its
182. salutary effect on Alimentary canal. Humanity of governors allowed seasonal festivities with animal food - scene of uproar sure to follow.
183. Animal food tends strongly to aggravation of insanity. - farinaceous diet for acute. During convalescence & debility from age or protracted paroxysm - gradual indulgence in animal food.
184. Wine & all fermented liquors injurious. Higher classes - diluted but best without.
- Observe temperance - admonition ineffectual -
185. "A pleasure in madness which none but madmen know" - do not fear recurrence - will not reveal sensations. Temperance between over-distention & starvation - anti-phlogistic plan of diet.
186. Insatiable cravings for food in maniacs during remission not that of real amendment - farinaceous because of bulk. Latter opposite & attended to to prevent idiotism from inanition. Conval maniacs corpulent from return to animal food, hope of immediate recovery & v.v.
- Distaste to animal food prior to new paroxysm.
187. 'Animal food conduces to the aggravation of maniacal symptoms; it stimulates in a higher degree

the inner coat of the stomach, and thereby tends to provoke the action of the digestive power into premature exertions, which was suspended through disease; to this succeeds a collapse of the entire with all the horrors of indigestion, followed by increased determination of blood to the vessels of the head, and ending in congestion, apoplexy, and sudden death.' Important to ascertain that liver and appendages be subservient to the process of

188. digestion, in the secretion and copious supply of yellow bile, previous to admission of solid animal matter as an article of diet for the convalescent insane.' Torpor of this viscus frequently obstinate & tedious in its departure even after other maniacal symptoms have disappeared.

189. * Dr. Edward Percival in Report on Mania observes that any restriction on the diet for the insane were thought by him objectionable. Necessary even in chronic insanity with periodical excitements, - moderation & frugality.

-
190. Treatment /of/
CHRONIC INSANITY.
-

Passed thro acute & convalescent stages more permanent, & 'known by frequent exasperations of the original accession', less violent & sub-acute.

191. Early cases concealed from observation. Assumes chronic form under best treatment but professional attention can bring relief to mania.

192. Treatment differs from acute only in degree. Paroxysms though not governed by lunar exactness, are for the most part periodical in their approach, frequent but of shorter duration; ... and pertinaciously unyielding.'

Hopes of final recovery on increased length of paroxysm keeping pace with the interval, in progressive order. Prospect of final amendment not precluded.

-
193. Solutio Mineralis.
-

Recovery may be promoted by cautious introduction of Fowler's Solutio Mineralis as last resource.

195.

MANIACAL EPILEPSY,
Treatment of.Rectified Spirit of Turpentine.

Numerous cases overload our wards. Above recommended by Dr. Edward Percival in Report on Mania. Used it without delay. Teaspoonful in glass water t.i.d. for 3 days then doubled. End of week fits less frequent & shorter, slept better more comfortable Advantage to end of first fortnight, but to end of second effect had ceased, although $\frac{1}{2}$ oz. t.i.d. pain in bowels & distaste for food.

In alcoholic case 2 tea-spoonfuls t.i.d. satisfied eager anxiety for ardent spirits.

197. How far is seclusion and separation from family and friends of importance in the general treatment of the Insane?
-

All of one opinion as to the strict propriety & necessity of removal and non-interference course of the insane, with their intimate friends & relatives - until it touches themselves. Must show that

198. assiduities from this source (attentions from relatives A.A.B.) are never received by insane as proofs of friendship - irritate rather than soothe. Dearest objects of affection exposed to most invincible
199. hatred, violence to offspring.- temporary suspension should be strenuously adhered to. Restraint & privation essential to safety not carried out at home - cause resentment. Persons most intimately connected and anxious to co-operate are last to be selected.
200. Maniac will not submit to restraint from those from whom had deference & over whom authority. Interference of domestics causes irritation, or yield to patient and do not carry out instructions. Few recover under domestic treatment.
201. Recommend immediate removal. 'Half measures;... with appearance of indecision, worse than total inactivity: consistency throughout is indispensable.'

202. Greatest difficulty at home when convalescent stage - 'morally impossible, to treat a convalescent maniac with the hope of advantage, so long as he continues surrounded with his family & friends, 'I may even be allowed to declare it a species of cruelty to attempt it.'
203. Prisoner in own house, provoke every degree of resentment.
Those who think insanity incurable, but others should be allowed to act on their conviction.
204. Opinion of all writers that entire separation in the first instance be decided upon.
205. This does not apply to all insane - partial would be unwarrantable outrage. Not so with maniac-
who after some desperate design is judged to be
206. fit subject for restraint, when convalescence ensues.
Families show indecision & secrecy.
207. If disgrace to families why not endeavour to check its progress at outset before outrage.
Tenderness, perseverance with decision in treatment ensure own reward.
208. Where necessity for separation exists, it cannot be too rigidly enforced.
Many think institutions either public or private are only for friendless and incurable - cruelty part of regular routine of treatment.
209. May be exceptions but not all under reprobation.*
See reports of committee of House of Commons on Mad Houses in Ireland for 1817.
210. Immediate & ultimate advantages in separation and removal to establishments exclusively appropriated to insane patients in contrast to disappointments of best domestic care.
Maniacs of worst description submit to rules-lacerated by inhuman violence after having suffered tedious confinement at home - with convalescents in
211. few days. Had entered convalescence & become ferocious through despair from no modification of treatment so committed to asylum to take chance.
Should be put into skilled hands like surgical case.
212. Intercourse of insane with each other said to retard recovery - no apprehensions.
Take an interest in each other, converse more
213. than with attendants & remonstrate with disorderly.
Convalescent maniac shows a respect & deference towards fellow sufferer, in awe & will not quarrel.
(continued P.97a.)

REFERENCES
to
Glasgow Asylum

in

An

Inquiry into
Certain Errors
relative to
INSANITY.

by

George Man Burrows, M.D. F.L.S.

1820.

An
INQUIRY /into/
CERTAIN ERRORS
relative to
INSANITY; /and their/
consequences;
PHYSICAL, MORAL AND CIVIL.

By. George Man Burrows, M.D. F.L.S.
Fellow of the Phys-Med. Soc of the Univ. of Erlangen;
Member of the Royal Medical Society of Edinburgh;
of the Atheneum of Medicine of Paris;
of the Mineralogical Society
of Jena, etc.

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1820.

To/ The Right Honourable
JOHN, LORD ELDON,
Baron of Eldon in the County of Durham,
Lord High Chancellor of England, Etc. Etc.
who
by virtue of his eminent station, / is / The General
Guardian of Lunatics; / and who, / from motives of
pure philanthropy, / has undertaken / the very
important and difficult task / of arranging / A. Bill/
with a view to improve
the present system of managing asylums, /and/
the condition of the same; insane;
THIS INQUIRY / is /
with his Lordship's permission, / and /
with the utmost deference and respect,
INSCRIBED,
by his obedient humble servant,
George Man Burrows.

Advertisement.

Thanks to those who have communicated including - Dr. Wake and Mr Samuel Tuke, York; Dr. Hallaran, Cork; Dr. Balmanno, Physician, and Mr. Brury, Superintendent, of the Glasgow Asylum.

P.1. Preliminary Remarks.

2. More enlightened views succeeded. Thus, in most of the chief cities of Europe, lunatic asylums are established; and the aid of medicine is no longer deemed unavailing. In G.B. extraordinary interest in the subject - the fate of a lately deceased, illustrious and revered Sufferer - neither pre-eminence in virtue or in rank exempts.- new and active impulse. Some advance in physical and moral management. All ages fruitful source of speculation & contention.
4. Greek & Roman Physicians noted accompanied by bodily disorder., so practice successful
5. Brain seat of understanding, minutely dissected to discover mind - presumption to explain that attribute which the Creator in his inscrutable wisdom, has conferred on him alone, whom he made after his own image. Integrity of Brain essential for mental faculties, long favourite theorem. No part supposed to exercise intellectual function, that has not been lesed or destroyed, yet understanding clear and undisturbed.
6. No impression more detrimental than 'scholastic dogma, that the mind, being independent of the body, can
7. simulate all its functions and actions; can sicken be administered to, recover, and relapse; and, consequently, that all but moral remedies must be secondary, if not nearly useless; every other being incompatible with an immaterial essence like mind'. He who relies, singly on moral means, will be as surely disappointed, as he who resorts to the art of medicine only, for cure of insanity. Speculative disquisitions on the physiology of the human mind, or rather on intellectual or moral excellence, have been preferred, by most English writers on insanity, to practical illustrations on the best mode of treating it. A theory of diseased ideas often superceded all other pathological views.
8. Psychology or science which treats of mental operations yet in its infancy. Know not what mind is.

9. Heredity induces false conclusions as to cure, also
10. deception, and silence about cures.
11. Late parliamentary investigation succumbs to morbid affection.
12. General impressions - Insanity incurable, increasing, and prevalent.
17. INQUIRY

SECTION 1.

Is Insanity curable - and in what pro/portion?

18. Incurable & remedies supererogatory - large proportion recover. Records incomplete. Comparative table of cures - returns from all public asylums in England, (Wales no public and only one private). Ireland many receptacles for lunatics but except Richmond Asylum of Dublin and that of Cork no curative treatment.
19. former from Parliamentary reports, latter account by Dr. Hallaran. All returns from Scotland which are accessible. Best establishments on Continent & few others. 3 British 2 French Private of celebrity.
20. Cases - recent, old, recent & old, complicated ie. insanity combined with fatuity, idiotcy, epilepsy etc.

Table 1.

A comparative view of the cures of cases of insanity in different institutions for lunatics.

Public Asylums		Public Asylums	
Aberdeen ---		French	
Bedford	1812 -	La Salpetriere	1804 -
Bethlem	1684 -	Bicetre	1807
Cork	1798 -	Charenton	1803
Exeter	1801 -	Armentiere. Ms de Det	1811
Glasgow	1814 -	Lille	1811
Hereford	1817	Italian	
Lancaster	1816	Genoa	1816
Leicester	1795	German	
Liverpool	1816	Vienna. Joseph II	1803
Manchester	1766	Berlin. La Charite	1806
Montrose	1805	Sonnenstein..	
Newcastle & Dur	1806	Saxony	1814
Norfolk	1814	Celle.. Hanover	1816
Norwich	1813	Private Asylums	
Nottingham	1812	British	
Retreat	1796	Laverstock	1817
St Luke's	1751	Droitwich	- 1816
		Spring Vale	-1816

French

Dr Esquirol's Paris 1801

" Dubuisson's " -1816

22. Public Lunatic Asylums - 1. Entirely eleemosinary, or supported partly by an income, funded or landed from benevolence, and partly voluntary contributions. 2. Voluntary contributions & pensionary patients paying from gradation of rank. 3. Pauper Asylums, under Mr. Wynne's Act, at expence of County, patients supported by their parishes. Private Asylums - kind usage and safe custody under unprofessional person, others for cure under member of Faculty.
23. Former French call Maisons de Detention, latter Maisons de Sante or Pensionnats. Bethlem & St Luke's more exclusive than other British - Reject if ill above 12 months, epil or convulsive fits, idiots, aged & weak, uncured from other hospitals, venereal & pregnant, dismissed after 1 year. Each hospital - curables & incurables.
24. Bethlem no distinction if discharged cured or not. New form since 1817. Appendix A. Annual Report 1820. St Luke's figures added year to year, App B. - Pts received & discharged from opening 30.7.1751 to
27. 4.8.1819. Most charitable Asylums exclude epil. & idiotcy. County compelled to receive if these are dangerous. Foreign admit all.
29. Dr. Pinel distinction of first introducing into Europe moral system of treatment etc.
30. York Retreat excels every other in moral qualities. but no of cures not equal to London or Paris poss
31. because physical remedies too lightly regarded. fullest conviction of great efficacy of medicine.
32. France in provinces worse than any in England esp Strasburgh v Prof Fodere Traite du Delire 1817 Tom 1 chap 3, Sect 76,75.
33. Esquirol one of phys to La Salpetriere in Dict des Sciences Medicales, Art Folie, P 205 - absolute cures 1/3 vary from $\frac{1}{4}$ - $\frac{1}{2}$, better in France which is wrong.
34. Bethlem recoveries reduced over years. Stow in Survey of London Bk 1. states on authority of Dr. Tyson who was I believe its first physician that 2 out of 3 cured. - 1684-1707 27% more than 1799-1814.
36. Shown that Insanity is curable.

37. SECTION 11

Is Insanity as susceptible of cure as other/ maladies.

39. Many authorities contend Insanity has access, crisis and decline. Diff of cure acc to time since incipient attack, like other diseases.

41 Onset not accepted by relatives.

42 Indifference or disinclination of friends to recovery - remedies often rejected.

43. Dr. Willis stated before Committee of Parliament in 1789 that 9 out of 10 recovered if under his care within 3 months - discredited, by physicians attending His Majesty.

44. Now see 8 in 10 & 6 in 7 recent. In Salpetriere public but one of best conducted in Europe results almost as good as Willis A/c A Short Account of some of the Principal Hospitals in France etc by W.H. Carter M.D. p 21.

46. Proportion high in recent cases.

Report on own good results.- 91% recent cases.

54. SECTION 111.

Is Insanity an increasing malady?

Produced by variety of causes - physical, climate, seasons, situation, quality & quantity of food, habitude, peculiar organization & very many diseases; moreover, by all the passions, and those causes

55. termed affective or moral. No proof of increment. Insanity vice of civilisation. Spain with more primitive manners esp temperance, mania rare; unsophisticated aboriginies of N & S America reported by Rush & Humboldt to be exempt.

56. Register of Luns of Commissioner for licensing mad-houses etc seem to support increase. Not registered, those in hospitals, public asylums, gaols, many in unger. private asylums, houses of industry, poorhouses etc. Readmissions are sep cases. Dr.

58. Powell Secretary to Commissioners made Table from 1775 when register commenced.

59. Table 111.

Abstract of Register of Lunatics fr. 1775 - 1814.

61. Quinquennial periods or lustra - nos incrs more than population. King's first illness 1788-9 sympathy & interest increased by public of exam of attending physicians, on nature prop issue. Great increase in 4th lustrum 1790.

1800 harvest defective. 1801 scarcity of corn & everything dear, distress & suffering.

62. Sim Paris 1817 & Cork 1815. Committee for pauper

62. & criminal Lunatics - Wynne's Act 1808 for better
 63. care & maintenance. Interest and no. sent to asylums
 & licensed houses. Increase not regular.
 64. No increase without powerful & evident excitement,
 physical, moral, theological or political.
 66. Table IV.
 Account of the number of Pauper Lunatics of the
 Parish / of St. Mary-le-bone, London, from 1804
 to 1819.
 67. No increase since 1808 Wynne's Act.
 68. No evidence of increase in London - Reports of
 Diseases of London p 326 by Robert Willan M.D. 1801
 69. Reps Dis of Lond. p 24-5 Thomas Bateman M.D. 1819.
 Observations on the Increase and Decrease of
 different Diseases by William Heberden M.D. 1801.
 71. Table V.
 A comparative View of the Admissions of Lunatics into
 differ/ent British Asylums with those of St. Mary-le-
 bone/ Parish, and the Entries in the Commissioners'
 Register.
 * 1801 & 5 admis to Bethlem reduced by taking down
 portions of building; 1816 removed to new hospital.
 72. Increase in Ireland, last 25 years all the evils
 plus rebellion "have augmented the insane lists" -
 Dr. Hallaran, Pract obs on Insanity p 24. Also
 ardent spirits.
 73. No increase in Paris nor Germany except where war.
 75. Table VI.
 A comparative Statement of the number of Deaths of
 Lunatics in the London Bills of Mortality and of
 Entries in the Commissioners' Register of the London
 District, from 1787 to 1819.
 76. Increase but anomalies in results.
 78. Greatest mortality nearly $\frac{1}{2}$ admissions in Bicetre
 1784-1794 fury of revolution & patients neglected.
 Not registered suicides added to Bills.
 79. More accurate returns.
 80. Not increasing malady.
 SECTION IV
 81. Is Insanity a Prevalent Malady?
 Popular opinion - insanity alarmingly prevalent.
 83. Foriegners all pronounce insanity as the oppro-
 brium of England. Dr. Spurzheim in Obs on Insanity
 p 164 - more insane in G.B. & Ireland than elsewhere
 and most in England - no more opportunity of getting

exact nos than others.

83. Dr. Lorry in De Melancholia tome 1 p 94 says that
Melancholia is a vice born with, and endemical in,
84 the English & that they fall into it without any
obvious cause; & that upon a change of atmosphere,
it will entirely vanish, as if by a miracle' p284.
He stigmatizes the English as prone to insanity, &
designates it morbus Anglicus, he compliments the natives by admitting that it frequently originates in
their attachment to scientific pursuits' p 380.
Seemed endemic to Sydenham but were sequel of severe
intermittent fevers, when patients became cachectic
and fatuous - Opera Medica, Sect 1 Cap V.
85. Intel derangement & suicide by drowning consequent
on the epidemics, the pelagra of Lombardy and the
bilious remittent of Bussorah. May be epidemic in
superstitious ages or when imagination heated by new
& abstract doctrine, induces excess of religious or
political fanaticism.
- 86 That English more prone may have originated in Dr.
G. Cheyne's popular treatise - The English Malady. 'Scarcely a foreign writer who does not quote this
authority for imputing to the natives of this island
an extraordinary predisposition to melancholy; and
particular to a species of hypochondriacism, to
which Dr. Cheyne gave the generic name term "Spleen";
and which foreign nosologists have introduced into
their systems, and classed by this vernacular
appellation'.
87. Hence English most devoted to suicide - divines,
philosophers, poets, & authors - innate in character-
even Montesquieu. Have tried to repel this charge in
Obs on the Comparative Mortality of Paris & London -
Lond. Med. Repository vol 1V p411.
88. Evidence which disproves it - against religious
89. principles. Ratio London to Paris 2 to 3. During
revolution great increase in drowned in Paris. So
91. frequent in France that petition to Chamber of
Deputies to revive ancient law against it.- 4 in one
day in Lyons. Lack of Religion.
More prevalent in parts of Germany.
92. Table VII
The Proportion of Suicides, to the Population of
various Cities in 1817. German.
93. Paris, Berlin Copenhagen - 5-2, 5-3, & 3-1.
94. We least demoralized but too frequent.

95. Agree with Dr. Powell, Sec to Commissioners that Insanity is of rare occurrence. Register does not help with prevalence at different periods.

96. Mr. Dunstan, respectable supt of St. Luke's Parl Reports 1815 p127.

Returns made to House of Commons last spring -
P 287 Appendix C.

A Return of the Number of Lunatics confined in the different Gaols, Hospitals, and Lunatic Asylums; specifying the Number in each, and distinguishing the Males from the Females. Ordered by the House of Commons to be printed, May 4th/ 1819. e.g.

Devon - Devon County House of Correction.

" " High Gaol.

Tiverton Hospital.

Devon Lunatic Asylum

England &

Kent - Canterbury City Bridewell.

Wales.

P. 290 Appendix D.

A Return of the Number of Houses in each County or Division of the County, Licensed for the Reception of Lunatics; the names of the Persons to whom the Licences are granted; as well as the Number of patients confined in each House; - distinguishing Males & Females. Ordered by the House of Commons to be printed, May/ 4 1819. e.g.

Gloucester - 1 at Stapleton called Fishponds -

G.G. Bompas M.D. M 30 F18 48.

Hants - 1 at Grove Place, Nursling -

Edw. Middleton M.D. 14 15 29.

Leicester - 1, John Hill M.D. 5 4 9

Lincoln - 1 at Greatford & Skillingthorpe

John Willis M.D. 11 & 17

1 at Horncastle -

John Fawcett M.D. 8 6 14

Middlesex- 6 at Hoxton

Sir Jonathan Miles - 199 149 348

1 at Hoxton - Thos Wharburton 47 31 78.

1 King's Rd, Chelsea - Geo.

Man Burrows, M.D. 4 6 10.

1 Hackney - George Rees M.D. 10 9 19

1 Clapton - Edw. Tho. Munro, M.D. 19 22 41

Norfolk - 1 at Lakenham, Norwich -

Warner Wright &

Edw. Rigby, M.D. 9 8 17

Somerset - 1 at Brislington House

Edward Long Fox, M.D. 42 31 73

Wilts -

1 Laverstock	William Finch, M.D. & 1.	54	46	100.
1 Kingsdown	C.C. Langworthy, M.D.	10	25	35.

(Summary of those kept by doctors A.A.B.).

89 Licensed Houses in England & Wales - 1 in Wales
Males 1348, Females 1202.

97. Returns glaringly defective & inaccurate. Work & Poor-houses not included Later law made it compulsory on parish officers to remove all dangerous pauper lunatics & idiots into county or district asylums & if none, licensed houses. St Lukes, Guys & Retreat overlooked. Pauper lunatics & idiots reported to Parliament 1807 in houses of industry, work-houses, infirmaries, gaols & private custody -1915.
98. Including omissions no. would be c 6,000. i.e.
100. 1 in 2,000 - not prevalent. Rare affection.
101. Ireland not under same Poor Laws so no poor-houses to confine lunatics, hence wander & supposed to be very numerous. More privations hence more.
102. Mr Rice in Report on Lunatic Poor in Ireland 1817 says on increase from heredity, scrofulous habit & ardent spirits with abuse of mercury. Great influx into Dublin from country due to successful treatment
103. sim Cork. Also Paris, Waterford & Limerick - humane attentions of Sir John Newport like Wynne, H.G. Bennett & others in Eng. and Lord Binning for Scotch Lunatics.
- Return made by Scotch parochial clergy shows in 1818, 4650 ie 5,000 or 5 for each of 992 parishes or $2\frac{1}{2}$ to 1000 much greater than England unless latter calculated too low - different from what expected.
105. Knowledge limited & uncertain but enough to show not prevalent nor exceeding in England.

P 294. Appendix E.

Abstract of Returns from Clergy of Scotland, relative to Lunatics in that part of United Kingdom in 1818.

Total. In Public Asylums, Private Asylums, with Friends. At large. Descriptions - M.F. Adults. Non-adults, Furious or Insane, Fatuous. Maintained-by Parish, partly by Parish, One means or relations

50 parishes did not send returns.

Edinburgh-shire- In City of Edinburgh no return from New Grey Friars Parish in which are Ed. Bedlam &

295. Charity Work-house, latter all Idiots.
Lanarkshire - Returns of parishes of city of Glasgow
do not comprise 95 Lunatics & Idiots in Glasgow
Asylum & Towns Hospital.
Vide Dr. Halliday's letter to Lord Binning.

106. Sect V.
 Has Insanity decreased?

- Comparing returns would have rapid decrement.
109 No document extant that does not favour inference
that ratio diminishes every year.
111. Reduction of 500 lunatics in Lonson district
since 1815 & county districts no surplus.
112. Said to roam at large. 12 doctors specialise
in insanity in London, 3 or 4 only 5 yrs ago.-
readiest road to professional fame.
113. Inquiries & discussion in Parliament wonderfully
good effects. Reformation in every asylum.
115. Numbers owing to more curative measures & general
improvement have diminished in last 5 yrs.c.f. Bethlem.

117. Section VI.
 Consequences of erroneous views of insa/nity,
 in reference to lunatic asylums.

- From impression insanity is increasing comes belief
that vain to attempt cure hence delay or relinquish
trial.
118. Will lead to excessive buildings & assessments.
121. assessments for counties & districts. Norfolk. Wakefield
Stafford too large. 123. Nottingham thought to be
self supporting - donations, subscriptions,
parochial collections & payments by patients.
124. Exeter. Hereford - Wales no public, 1 private Asylum.
125. Capital errors - No of paupers not ascertained,
Only dangerous to be moved by parish officers. Forgot
130. about recoveries. R lapses will not be so frequent.
131. Excess accommodation for better classification.
for lodging incurables, receive cases of Ep.
insipieny Idiocy (sic).

Section VII

132. On the influence which the localities/ of Lunatic
Institutions have on their results.

133. Objects unregarded by sane, influence feelings & actions of insane - Affective causes -
 1. External Causes - Site & general appearance - diversions of ideas.
134. Should resemble domestic dwelling - for comfort &
135. recovery not detention or punishment. Not populous
136. neighbourhood. Do not act in concert for escape.
137. 2. Internal Causes -
138. Old regulations in Bethlem & St Lukes still in force. Saragossan motto - Urbis et Orbis & be open to all whose intellect deranged or demented, continue as long as chance of recovery & cared for when incurable.
139. Might soon be filled with incurables e.g. Bethlem, St. Luke's & Glasgow but not county Or district asylums
140. Printed instructions for admissions to Bethlem - St. Lukes very similar -
 1. All lunatics who are not disqualified by the following regulations, may be admitted provided their complete recovery can be effected within 12 months from the time of their admission, etc. If ill for 1 yr not admitted.
141. Paris all classes of lunatics collected & liberal
142. provision made for continuance - no limitation on duration, complication with other disorders, period of cure age etc. - as many cured in second year.

Dr. Esquirol's report on La Salpetriere on recoveries - different duration, all ages, every complication, idiotic, Epil, paralytic, imbecile or
143. imposters. Could have many more recoveries at Bethlem - after discharge at end of yr sent to private asylums on cheapest terms with no trial of recovery - burthen to family or parish & disgrace to country.
144. Financial objections overcome by increasing charges for two yrs after admission.
146. Exceptions to admissions -
 1. Lunatics possessed of property, for their decent support in a private asylum, and also those whose near relations are capable of affording such support.
147. Constantly evaded because of cheapness for self-interest of relatives because patients received almost gratuitously.
 2. Those who have been insane for more than 12 mnths
 3. Those who have been discharged uncured from any other hospital for lunatics.
 4. Female lunatics with child.

Funds of a charity could not find stronger claim for relief.

149. 5. Lunatics in a state of Idiocy, palsy, or with epileptic or convulsive fits.

Would require separation.

6. Lunatics having the Venereal disease or the itch.

Are mercury & sulphur inimical to cure of insanity. Could have separate cell.

150. 7. Those weakened by age or disease.

Greatest object of compassion.

Regulation at St. Lukes - precludes "those who appear in too weak a state of bodily health to take medicine, proper for his or her lunacy". Still

151. in operation ac to Parl report. Inconsistent with charitable institution. No state so weak to prevent medicines, 'charlatanry of helleborism, or periodical depletion'. Can have dietetic regimen & comforts of well conducted hospital.

152. Revenues for pauper asylums allow of greater variety of cases.

153. Defective reports. 'Some are more full and descriptive, and, of course more instructive. The annual report of the Glasgow Asylum is upon a plan like the whole system of that admirable institution - highly commendable. Mr. Drury, its able and zealous superintendent, has constructed tables which are so arranged as to present in the annual reports a perspicuous view of the result attending every class of cases of both sexes; contradistinguishing also the old from the recent cases. I have subjoined the last report (1820) curtailing the remarks, as one worthy of

296. imitation. Appendix F.

Sixth Annual Report of the Directors /of the/
Glasgow Asylum for Lunatics. Dated 6th Jan. 1820.

Table of nos. admitted & discharged.

297. Asylum has long been burdened with a host of incurables. Detailed Tables of Admissions & Discharges 4 - Male Old cases & Recent Cases.

Female Old Cases & Recent Cases.

Classification on

Admission -

Furious.

Melancholy.

Furious & Melancholy

Imbecile.

Fatuous.

Idiots.

300. Deaths analysed - some in dying state when admitted. Treatment - Varied."Internal remedies have in few instances been of great service; but in general medicine of little avail. The warm bath, sometimes conjoined with affusion of cold water on the patients shaven head, has been much used, and often with advantage. Some patients have derived benefit from the cold bath. Exercise, especially in the open air, has been of great utility; and much good has been in several cases, by pretty severe bodily labour. Rotary motion, by means of a whirling chair, has of late been tried in a great number of cases, and, in some of them with wonderful good effects. By the contrivance used for this purpose, the degree and the duration of the motion are completely under command. The operation is always performed in the presence of the physician; and in no instance has it
301. been followed by any of those formidable symptoms, which have sometimes occurred in other institutions, where a more simple, but much less manageable apparatus has been employed". *'Notwithstanding the unequivocal evidence in favour of this remedy from Dr. Mason Cox, Dr. Hallaran, Prof Horn and others, there is still so great a prejudice against it, that it is rarely, if at all used, in English Asylums. The testimony here added, may induce a more general trial of it - B.'

"Attention to certain rules of mental discipline. But the moral management of the patients, by the usual means of restraining their violence, of correcting their evil habits and propensities, and of regulating their conduct & behaviour, has been of more general utility than, than any other practise employed. These means, however, are often found to be of little avail unless those by whom they are used, besides obtaining complete ascendancy over the patient, gain, at the same time, his confidence and good will."

302. Accidents unavoidable to furnishings owing to liberty allowed.

" When outrage is committed, the discipline of the asylum requires, that the offender should be put under some restraint; but this is done with the least possible severity, and with due attention to health & comfort." Keepers under strictest rules, not confine ment without phys or supt.- no passionate language.

Striking, beating or maltreating inadmissible.- instant dismissal. "For the purpose of rendering any refractory patient more docile, the securing of his hands or the confining of him to his apartment, are the means usually resorted to, and are seldom found to be long necessary." All patients been in airing grounds & have conducted themselves peaceably.

303. Sociality promoted by occupations & amusements. So many at spinning that almost all the bed and table linen now used is product of their labour.

304. Financial Statement -

305. Balance favourable but Directors far from possessing the means of building any addition to the asylum. Applications for two or more apartments, connected together, and detached from the common wards - want has prevented patients of high rank.- cottages with small gardens would be most suitable. Workrooms for patients required. Most urgent - wards for lower rates & paupers long overcrowded & must restrict admissions or build.

306. Collections in poor's box fallen short due to new regulation, whereby the number of strangers who used to visit the asylum, was restricted. "The greatest care, indeed, had always been taken to prevent promiscuous visitors from seeing any of the respectable boarders; but the multitudes who visited, merely to gratify idle curiosity, gave to the asylum an appearance of publicity which was offensive to the relatives of the patients, and which therefore, might have been unfavourable to the prosperity of the institution."

154. Some foreign institutions greater attention to physical, moral & medical details than we do. Report on La Charite in Berlin from Prof. Horn. -1817-

314. Appendix G - History questions - Were any violent or sudden affections of the mind observed? if so, of what nature? & under what circumstances?- Did violent anger, sorrow, or anxiety about the necessities of life act upon the patient? or had any injury to his honour, loss of fortune, of beloved relations, or any disappointments in his hopes taken place.

156. Reports on Exeter & Nottingham - Appendix H & I.

157.

Section VIII.

Remarks on the condition of the epilep/tic
fatuous & idiotic.

Generally classed with lunatics. - excluded from institutions or injudiciously provided while obnoxious to cure of others.

158. 1. The Epileptic - Insanity terrible complicated with Ep. Maniacal Ep. most ferocious, malign and murderous aberrations - against those whom cherish.

Mildest form causes lesions of physical & intellectual functions & induces, demency, idiotism or incurable insanity. Intol/erable burthen to family. "Lord have mercy on my son, for he is a lunatic (epileptic) and sore vexed; for oftentimes he falleth into the fire, and oft into the water". No asylum for eps alone, or part for them.

160. Provincial & Private Asylums admit them but with other patients to mutual torment & danger.

161. Almost all public asylums in Europe receive Ep. fatuous & idiotic, separate part & treated medically with results noted & published. - occupation. La Sapetriere 300 Ep. women.

Connate or essential epilepsy perhaps incurable so maniacal ep. but sympathetic or dependant on other affections often susceptible of cure.

162. All aggravated by neglect- very few among poor recover as no place where can be treated. Foreign physicians more energetic and get cures e.g. Bicetre
163. & La Charite. Many could be saved from idiocy or lunacy in this country.

'2. Fatuity - the Dementia of nosologists is that condition of intellectual faculties, ~~which~~ which may, generally, denominated Mental Alienation - term adopted by Pinel, as generic, to express common character of every species of insanity & which has conduced to error. Cannot apply to idiot who has not had intelligence or Maniacs or Melan who 'although insane on certain points, yet, on others, often possess a very correct judgment'.

164. Fatuity or Demency not confused with imbecility or idiotism. The faculties of a person in demency, tho perhaps alienated, are not always abolished; often only in abeyance; and may revert to state of sanity. If misjudged may pass into perfect idiocy. Eps freq. pass into fatuity - on thirtieth.

The Imbecile from birth have faculties to limited degree but not developed. Incapable of rightly discriminating & of ratiocinating. Imbecility of mind may be effect of accident, exhaustion or senility.

165. Demency is most fatal insanity. In French hospitals ..'a full moiety of the fatuous die'.

3. Idiocy - either congenite (sic) from organic or artificial from fortuitous causes; mal-formation or mal-practice or casualty, equally induces or may render idiotism permanent. If natural hopeless, if artificial possible.

Epil, Mania & Melan by excessive depletion, superinduces fatuity - fatuity, imbecility - imbecility, idiotism.

166. Every case of impaired understanding judged to be idiocy & incurable. Fatuous & idiotic alike thrust into work-house or mad-house, & left to chance or a worse fate. Bereft of all consideration.

167. Imperative on Christians to provide a refuge.

'Reports of Glasgow Asylum, the only one in these kingdoms with which I am acquainted, that makes distinct returns of every species of mental derangement, evidence that the fatuous & imbecile are in that institution sometimes cured.'

169. Could be housed in vacant parts of asylums at equitable charge. Benevolent should found an institution for them.

- 171.

Section IX

Is religion a cause or effect of
Insanity?

All earthly happiness mainly depends on religion.

172. Religion has more influence on mankind than all their passions combined. There is no single passion that may not be excited to an excess inductive of mental derangement - so religion & be cause. But lunatic may imbibe a religious hallucination tho be insane from cause contrary to religion.- an effect.

In public asylums moral cause inferred from 'tenour of mental aberrations; than which nothing can be more deceptious' - hastily attributed to religious cause.

174. Parties formed & controversy follows.

175. Stated that can never be a cause but it may be so.

176. Affliction induces many to seek it in adversity-disappointment.

Depressive temperament may be associated with
177. false religious notions. - charm in melancholy. *Poem.*

178. Religion is very essence of humanity - without it
no guides but passions - no law but his will. When
lost chaos ensues, despair succeeds hope & reason
overthrown - insanity supervenes on defect of religion.

179. Quakers profess pure morality but in Retreat
not immune to insanity - between mend & matter there

180. is a connexion & reciprocal reaction - fewest lunatics
in Society of Friends.

Proselytism is great predisposing cause to what
is designated religious madness.

181. Methodism found in lower orders but no proof
that cause.

182. Where freedom of opinion fewer lunatics but
more religious impressions. In France where no sense
of religion Esquirol says fanaticism which formerly
caused so much insanity has ceased to have influence.

183. Understanding may be disordered by entire de-
votion to abstract theology like any abstruse subject
morals, physics & politics. "melancholic may say

184. sinned past forgiveness but may be distempered
imagination. He who follows form of religion accus-
tomed to consider true will not be disturbed. If

185. doubts arise on points of doctrine which he considered
orthodox, misgivings & uncertainty to interminable
perplexity. Intellectual faculties most apt to
aberrate. The ideas then become fugacious, the con-
duct corresponds, and insanity (develops) is developed!"

Dr. Hallaran no cases amongst R.C.'s, several
dissenters from established church. The Ministers of the
the Romish persuasion will not permit their flocks to
be wrought upon - heresy to distrust, so no dubitations
186. which generally end in conversion. Moment of danger,
when ancient opinions of faith are wavering, or in
novitiate of those recently embraced.

Exuberance of zeal any subject ripens into
madness. Excess of religious enthusiasm, unless com-
mand over affective passions, usually degenerates into
fanaticism, thence to superstition and permanent
187. delirium. Enthusiasm always concomitant of genius &
vigorous mind & emulate highest deeds while super-
stition confined to weak, timid & uninformed & prod-
uces blindest fury or gloomy despondency.

188. Before religion can originate insanity needs a condition of doubt.- mind bewildered & know not where to rest.- intellect falls into disorder.
190. Insanity from religious source directed from authority of primary principles to adoption of new tenets not comprehended hence misapplied.
191. When mind in suspense between old & new beliefs, feelings excited in sensibility & irritability so incident may inflame mind to madness.
Examples from perversion of religion or from adoption of novel & controversial doctrines, at a juncture when the understanding required the full support of an accepted & credited faith.
199. Youth natural season of enthusiasm. Genius, improperly directed, more prone to aberration than mediocre understanding. Education is pivot on which future character, intellectual & moral turns: mind well cultivated & judiciously trained or neglected or on vicious model-opposite impressions.
214. In all 6 examples mistaken views or misapplication of religion proximate cause. - as mental excitation subsided, spiritual fervour abated.
215. Examples numerous where maniacal action has originated the religious propension.
216. Physical causes in female economy whence women more prone to insanity than men, but moral causes superinducing it more numerous. Physically man more robust & less sensibility or as physiologist would have it, irritability. Morally his education more solid & pursuits more active & definite. Females more ardent & susceptible minds so want of occupation dangerous.- embrace things new without due examination.
217. Social life abandoned by religious enthusiasts sacrificed to intense abstraction.
218. One cause - attempt to impress on adolescence, the subtle distinctions of theology, & unrelenting devotion to dubious doctrine.
219. Romans forbid anyone entering upon the sacerdotal office before fifty.- to prevent theological discussions.
Religion sometimes cause, sometimes effect of insanity.
220. Religious Insanity said to be obnoxious to the curative act - usually melancholia with religious hallucinations - merely incidental.

221. Prevention of prompt and energetic treatment, tends to make it incurable.

222. Section X
On the efficacy of religious instruction
of lunatics.

223. Cannot be admitted practically as general principle. Religious communication efficacious in particular cases but in others highly inimical. The attempt would often be a mockery of religion, and a gross impiety.

Divine service with a sermon recently tried on the patients in the Glasgow asylum and spoken of favourably - judicious selection & suitable discourse.

224. 1687 chaplain to Bethlem "to visit the lunatics, and to instruct and pray with such of them - as are capable of it". He "be desired to compose and make such formes of prayers, as he shall conceive most fitting for the said lunatickes". Not known when dispensed with but lately resumed.

Howard in account of Bethlem & St. Lukes speaks of advantages of a chapel for the recovery of patients - similar to abroad.

225. Tuke remarks "the mild and powerful influence of the precepts of our holy religion, where these have been strongly imbued in early life, become little less than principles of our nature; and their restraining power is frequently felt, even under delirious excitement of insanity". This is true; but then those precepts must be unalloyed by polemical dissention.

226. Must have intimate knowledge of each patients state of mind - accuracy of superintendent's discriminating powers - no minister can assume this office.

227. Without utmost precaution introduction of spiritual subjects must be dangerous and often injurious.

228. Fanatical preachers convey to innocent & gentle, wicked & callous the same image of Supreme Deity jealous and full of wrath and vengeance. For pious - no hope; for guilty no salvation even through repentance. In asylum doctrine would need to be modified.

Set of prayers & suitable discourses.

228. When admissible should be privately communicated.

230. Zealots think religion can supersede reason & could never be hurtful or aggravate insanity.

But many pious persons carry notions of efficacy of religion as remedy in mental derangement, to most painful and unreasonable lengths.- free access to book

232. Deliberate selection necessary, or many would be irretrievably alienated.

Before tried as experiment must have previous personal examination then simple & benign precepts an efficacious auxiliary to restoration of sane understanding but to its preservation. 'For true religion yields to the afflicted - relief; to the sinner-hope; to the repentant-forgiveness; and to all who possess a sound mind and belief is "the source of light and life and joy and genial warmth and plastic energy."'

233. Section XI.

Suggestions respecting legislative regulation of lunatic asylums etc.

234. Testimony before Committee of House of Commons 1815 & 16 saw nothing but shocking scenes nor waited to investigate the causes of real abuses. Others condemned regulations as interference with medical subject. Cures showed under control of medicine. Ill-fortune has attended interposition of Parliament in medical affairs. Offspring of those wholly unacquainted with malady.

235. Benevolence before government legislation in Britain.

236. Insane & idiotic helpless so law enjoins supervision both of person & property - special wards of country. Laws should provide for them when necessary as sacred charge on public.

Objections to former legislation in * authors' Cursory Remarks on Legislative Regulation of the Insane; and its probable influence on their moral & Physical Condition: with observations on some Defects in the present System. Harding, London, 1819.

237. Another Bill in contemplation supported by Lord Chancellor Eldon. Author's views.

238. Time extenuates all impressions on the senses and sets the judgment free. If not interrupted by severe regulations, the spirit of improvement will

239. increase recoveries.- no rigorous restrictions & penal obligations.

240. All who faithfully take charge of insane, confer obligation on society, deserve approbation, protection and patronage - not all condemned for few unworthy.

242. Severity never yet improved any system of morals & if punishment necessary for correction then fundamental defect. Expose this & find remedy & apply even compulsorily in reason & rigidly enforce.

Legislation needed because unlimited power degenerates into positive tyranny.

243. 5 Cardinal points for basis of Act -
1 Superintendence

* Prefer term Asylum to Mad-house because more generally used & more appropriate & Superintendent for Keeper latter being used for attendant.

244. On qualifications of person in charge everything rests - key-stone of harmony & perfection. Good sense, religious & moral, free from physical defects - should have protection.

- Should have power to reject applications for licence & take away from delinquent & penal bonds superfluous. Proposed Superintendent should enter bond of £500 for his conduct - will annihilate small asylums.
- 245.

2 Visitation.

246. Mischief done to individual patients, even by Commissioners of College. Indiscriminating visiting injurious effect. Strangers least likely to upset. "The visits of relations & friends, even if they submit to controul (sic) as to the time of paying their visits, and observe utmost circumspection, prove often of great disservice. But if gentlemen were to frequently visit them, examine their condition, hear their complaints, and be known, which is inevitable, to possess the power of releasing them from confinement, what will be the consequences? Quiescence must give place to agitation & violence; order to turbulence & insubordination; content to complaint; hope to disappointment, in short every passion which should be allayed or diverted, will be roused & brought into full action, and aggravate every case." * Cursory Remarks by author.

247. Suggest Commissioners & District Inspectors -
Commissioners - 3 or 5 majority Members of Col. of Physicians. Meet quarterly in London. Power to grant, transfer or annul licences; release improper objects from confinement; approve or reject Supers; receive & register returns; reports to Parliament; visit spec. occasions. Out by rotation.

247. Registrar attached to Commissioners for communications.

England & Wales divide into 8 districts, with 2 or 3 local Inspectors, one of whom secretary. Go out every three or four years.

District Inspectors - examine licensed asylums 4 times per year at uncertain periods also houses intended for asylums.

249. Extreme delicacy in imposing inspection on eleemosinary asylums supported from gratuitous funds. directed by people from pure benevolence.

250. Pauper lunatic asylums - Magistrates of County are proper Guardians to whom controul (sic) of asylum should be left - visit by Inspector. When partly private should be same as licensed.

Objections to scheme of 8 Commissioners & 4 secretaries, on score of expence. At present Coms Fellows of College of long standing visit in London district 2 or 3 times per year, 1 guinea per day.

252. Above plan one third expense.

Difficulty in visiting single lunatic.- no recent case of anyone wrongfully incarcerated.

253. Intended to have 10 Honorary Commissioners to visit without remuneration.- but not professional & may not agree with ordinary Commissioners. discord.

254. One or 2 magistrates appointed at Quarter Sessions might accompany Inspectors but latter only interfered with by Board of Commissioners.

255.

3. Attendants.

Success depends on keepers or attendants & nurses
256. - moral defects long deplored as serious evil. Earl experienced in Glasgow asylum and has occasioned in 2nd Report following very just remarks "In truth to find keepers properly qualified, & to keep them so, has always been, and always will be, the most difficult part of the very difficult task allotted to those who manage an asylum. Besides activity & strength, perfect sobriety and unremitting vigilance, a keeper should have a quick apprehension to discern the first approach of a paroxysm, great decision, and the greatest humanity. Now, such qualities do not often meet in one character; and where they do, their possessor can generally find a station equally lucrative, and more agreeable than the irksome attendance on the insane".

257. Long extract from Cursory Remarks on low wages poor conditions & lack of prospects or provision for old age in men & women attendants on the insane. Paid
258. as domestics, in asylum get cast off patients clothes. often great trust.
259. Try to take patient on own account.
262. Dr. Pigel found discharged patients best like public hospitals.
263. Wisest plans & best intentions frustrated by their ignorance or want of principle.
264. Hold out proper encouragement to meritorious individuals & offer a provision suitable to their deserts, when no longer capable of exertion. 2 methods
1. Establish fund for claim to annuity or injury
265. family benefit. 2. Register of service in every asylum, certificate of service. Also general register of service.
266. Small fee for registration. also for licence to form fund for superannuation.

4. Asylums.

267. Healthy site & plan deposited with Commissioners, to show accommodation. No authority to enforce additions needed, limit number or withhold licence.
268. Similarly new applications for houses. No alteration without approval.

5. General Regulations.

- Licensing - No private asylum permitted without
269. a licence. Applications with testimonials. Granted or annulled each meeting of Commis. All expire one day. State name of Super and no of lunatics. Also detached houses.
270. Certificates - Great importance. Ludicrous that need two signatures in London. Instead of 21 days before admission should be 7.
Registry - Relevant information entered in asylum Register and copy sent to Commis & District Inspect.
271. within three days. Uniform registers kept in all asylums with particulars & duplicates sent to Registrar. Reports - 1. Made by District Inspectors to Commissioners of state of different asylums. 2. Made by Commis to Parl or Secretary of State.
272. Reports clear with all particulars of admissions etc. & hung up in each asylum. so public can contrast different returns & emulation excited.

273. Medical Attendance - If 50 not 100 then daily visit by qual. physician, surgeon or apothecary.
Pauper Lunatics - Mr Wynne to immortal honour Act Geo.3. 48. cap.96. - all ~~peer~~ dangerous pauper lunatics & idiots to be removed from poor- or work-
274. houses into public asylums where one erected.
Last summer temporary Act Geo.3. 59. cap.127 all such lunatics to be sent to private licensed asylums if no county & kept by parish. Omissions - not returned to Commissioners, only dangerous, compulsory on parishes in counties but not in cities.
275. Penalties - Every violation of a bounden duty should have appropriate punishment. Fines & forfeiture of licence.
276. Even small fine too severe on moral character & if forfeiture be abused no one will build.
277. Hasty & partial modes of taking evidence which late Bill provided.
278. Under present Act & rejected Bills Superintendent could be prosecuted although complied with every form - no prior knowledge of case & receives on authority of those whom law entitles to act.
Medical gentlemen signing certificate after examination not liable to action as at present unless collusion or connivance.
279. Recapitulation of General Regulations.

281. Postscript -

Late information from Mr Samuel Tuke -

Table VIII.

A Statement of the Cases admitted into the Retreat exhibiting the Ratio of Cures from its opening in 1796, to the end of 1819.

Total of admissions - 253.

Information regarding cases with duration of illness before admission - 3 months, 12 months 1st attack, 12 months not 1st attack, 2 years, more than 2 years.

Biographien
GEISTESKRANKER in ihrer
psychologischen Entwicklung
dargestellt von

IDELER, KARL WILHELM (1795-1860).

Professor of Medicine &
Lecturer in the Psychiatric
Clinic in the University,
Berlin.

Medical Director of the Mental
Department of the Charite.

Berlin. 1841.

bonum & bene.

1138 5. 574-679

656, 65

680. A

669 - Padded Room

693 b Mühl

696-Dr. Helms and

699 - Hope grows alone 49/

718 *Lobelia* *deflexa*

Appreciate
to everyone

Comments by
George M. Brown -

- P. 11 Comments. 116. Evening
20. Price '45. 122 box.
29. During week. 127 stand.
61. Two Wins. 128 "
62. No wins. 132 2 years.
63. Cockpinner etc. have
68. None. 137 6 in.
70. Stand. 149 Gray.
74. Evening. 151 Stand
76. Comments 154 Wins
78. Bayle. 166 Apok.
80. School. 170 W. Sunny
81. Comment. 174 Power.
92. B. in. 182 Antics
97. Unput in 206 Antics
104. D. Antics 211 "
112. Comment. 212 Stand
114. Skipper. 216 Comment

223 *Arcturus* 240 *Arcturus*
 247 *Arcturus* 248 *Arcturus*
 250 *Arcturus* 253 *Arcturus*
 2524 *Star* 256 *Star*
 259 *Star* 268 *Star*
 286 *Star* 291 *Star*
 296 *Star* 299 *Arcturus*
 300 *Star* 302 *Star*
 305 *Star* 317 *Star*
 318 *Star* 323 *Star*
 332 *Star* 340 *Star*
 356 *Star* 378 *Star*
 406 *Star* 414 *Star*
 438 *Star* 453 *Star*
 461 *Star* 470 *Star*
 472 *Star* 483 *Star*
 484 *Star* 488 *Star*
 501 *Star* 523 *Star*
 548 *Star* 549 *Star*
 554 *Star* 558 *Star*
 561 *Star* 563 *Star*
 572 *Star* 574-674

Burrows on Insanity -

Glasgow References -

P. 139. Soon filled with incurables.

153. Admirable report by Mr Drury. &

296. Sixth Annual Report. Jan 18~~8~~20. Append F.

295. Append E. Abstract of Returns from
Clergy of Scotland - Edin. Glas. Par.

167. Reports make returns of every species.

223. Divine Service.

256. Attendants in 2nd Report.

Glasgow Muff -

On reading an article entitled -

Eduard Seguin & 19th century Moral Treatment
of Idiots by Ivor Fraft

in the
Bulletin of the History of Medicine, Sept. 1961

A Footnote referring to the author Burrows states
that the "Glasgow Muff" was described by him as
"an ingenious & excellent contrivance".

on consulting his book -

Commentaries on the Causes, Forms, Symptoms &
Treatment, moral & medical, of Insanity. by

George Man Burrows M.D. (1771-1846)

London, 1828

one finds at the foot of Page 692 -

"The Glasgow Muff is an ingenious and excellent
contrivance. It is complained of by the attend-
ants as being difficult of application; but I
believe this to be prejudice. It is now very
generally adopted in lunatic asylums on the
continent, especially in Italy".

There is no description however of the Muff itself
and one would like to learn more about it and
possibly have one made as the foundation exhibit of
our Museum.

COMMENTARIES
on the
CAUSES, FORMS, SYMPTOMS
and
TREATMENT,
Moral and Medical
of
INSANITY.

By George Man Burrows, M.D.
Member of the Royal College of Physicians of London,
etc. etc.

London:
Thomas and George Underwood.

M.DCCC.XXVIII.

To
Sir Henry Halford, Bart. K.C.H.

President of the Royal College of Physicians,
Physician to the King,
etc. etc. etc.

These Commentaries

are
by his permission,
very respectfully inscribed,
by his friend and faithful servant,

The Author.

PREFACE.

Apology for delay in publication. One cause - a thief stole porte-feuille, containing all my memoranda, extracts, remarks etc, and thus divested me in a moment of the labour of years.

VIII. 10 Montague Street, Russell Square,
July 1828.

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P. 1. INTRODUCTION.

Madness one of the curses imposed by the wrath of the Almighty on his people for their sins; and deliverance from it is not the least of the miracles performed by Christ. Saul mad, cured of melancholia by David's harp. David "feigned himself mad".

Excess of passion a short madness - Cain.

Cure of daughters of Proteus by Melampus by heliæbore no mere fiction.

- 2 First Philosophies studied mind. Egyptian mythology. Dugald Stewart in Philosophical Essays - had early philosophers ascertained laws of our constitution as far as can be discovered from subjects of consciousness & applied them as principles for the synthetical explanation of the more complicated phenomena of the understanding they would have attained all the knowledge of the human mind permitted to us. Hippocrates contemplated this philosophy which when combined with other qualities, gave character of Divine to Medical Art.

Speculative Philosophy prevailed & hypothesis superseded induction. For perfect knowledge of mind must study human nature, not by scholastic rules, but by the realities of life.

3. Philosophers of all ages struck with awe at the subversions of the human mind, the Divine attribute.

Ancients plunged into mysticism of metaphysics.

Dogma that soul or mind was a divine and divisible principle governing and directing the intellectual faculties, but independent of organic matter i.e. the body - absorbed whole attention. Renewed in 17th and 18th Cents & in 19th exercise controlling influence.

Mental derangement not disease connected with corporeal part or with medicine but subject of abstract contemplation.

Cicero - nature of mind too subtle for our weak perceptions. Bacon in Novum Organum - source of disorders in corporeal changes not primarily in the immaterial principle. Neglected for two centuries after decease although points out only mode of investigating causes - to study phenomena in living & anatomical inspection in dead.

P. 4. Neglected for two centuries. Foreign pathologists, dispising metaphysical speculation, boldly sought causes of insanity indissection of insane.

Danger of oppugning the doctrine of immateriality superseded anatomical discoveries so nothing until last 30 years. - Bonnetus, Morgagni, Meckel etc. proved morbid appearances almost always in brains of maniacs & collated by celebrated physiologist Haller, were little regarded.

Medicine a conjectural science, hence controversial discussion on speculative points. Since revival of learning regret that so many have forgotten principles & precepts of great father of physics, & end and object of their profession and have wasted ~~time~~ their time in discussions so abstruse, so purely metaphysical, as the nature & seat of the intellegent soul or mind'.

P. 5. Theories of physiologists unsupported by proof. Can physiology or pathology justify an expectation, that human inquiries will ever elicit a knowledge of the nature & principles of the soul or mind, which governs & animates man?'

Instead of seeking essence analyse operations of mind in health & unfold causes which influence those operations to the injury & derangement of its functions.

Philosophy of mind cultivated by eminent men like Bacon, Locke, Berkely (sic), Reid, Stewart etc. yet subject belongs more to ideology than to physiology.

Contended this knowledge indispensable to treatment of mental derangement. It will tend to correct infirmities & erroneous perceptions of the mind and physician thus qualified will prescribe with greater success where reasoning can have effect. Reasoning rarely admissibile with insane.

P. 6. Philosophy of mind more suited for instruction, to guide impressions & associations of early life and to prevent or refute error. May prepossess mind with truths which prevent reception of error. Its aim is improvement of man, to avoid causes which expose him to error & to surmount their effects. Leads to knowledge of human character & relates more to prevention of insanity.

Precepts of schools unaided by medical science will never restore insane mind. 'Philosppher must yield to tactitian, who derives his observations from practical views of human nature as it exists with all its infirmities & who prescribes his remedies according to the rules of worldly experience'.

Strongly deprecate impression that none but philosophers can cure intellectual derangement. However he, with knowledge of "anatomy of mind" will have advantage.

Pinel in Traite edit 2 reflects on English writers for vagueness of description, attachment to scolastic distinctions, & for

- mere compilations with few scattered facts as rallying points but without the authority multiplied observations offer for regular inferences. Also at Germans except Greding
- P.7. Concludes all speculative writings on analysis of the human understanding have contributed nothing to elucidate its disorders.

Some instead of studying corporeal disease or morbid actions in the insane have been led astray by psychological disquisitions, German mystifications & Bedlam sketches - shadow only while substance eludes observation. Imagine inquiry should have reference only to mental symptoms like clinical examination of bodily disease. May penetrate that internal disorganization of the understanding whence the aberration originates & by tracing it to its source, the mental process by which it was formed may be ascertained.- then the science of reasoning or logic being the proper remedy a cure will be affected. They know little of the matter-would aggravate patients state & cause disappointment & regret to selves.

Dr. Ferriar in Med. Hist & Reflect vol 11 referring to difficulty of studying insanity, 'observes that Nature as if in ridicule of the attempts to unmask her, has reconciled contradictions & realised improbabilities with a mysterious versatility, which inspires the true philosopher with diffidence & reduces the systematic to despair.'

- P.8. However philosophy & medical science have persisted in the attempt to unveil the mystery.

Proximate causes of mental derangement can never be known, till nature & essence of mind be unveiled to mortal view - a knowledge equally hidden with that of life itself, and which it is, perhaps, best for human happiness should for ever be concealed.

Operations of mind wonderfully influenced by our corporeal movements & influence is reciprocal so that when former disturbed latter sympathise.

Moral causes which produce those physical effects ably discussed by many authors. 'But various phenomena which insanity presents have not been sufficiently studied, either in concurrence or sequence, or in relation to or combinations with, other cerebral affections.'

'Impressed with this opinion, and that a more careful examination of the causes, both moral & physical, as well as of the various morbid affections in connexion with mental derangement, will lead to a clearer view of the pathology of insanity, I have ventured into a wider field of investigation.'

'...have collated facts, and attempted so to arrange them that the treatment of this malady may be established on principles of induction & not solely on hypothesis'.

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Moderns divide causes into moral & physical.

Every impression on sensorium, thro external senses, and every passion in excess, may become a moral cause. All act as exciting causes however opposite - joy & grief, anger & Pain, love & hatred, courage & fear, temperance & ebriety, repletion & inanition, application & indolence. Vices which occasion change in physical constitution act as remote moral causes.

All impressions that affect feelings are conveyed to the sensorium. Action of the heart is correspondent with this impression & reacts on brain & nervous system. Hence there are two impressions; the one primitive, affecting the sensorium; the other, consecutive, but simultaneously affecting the heart. Thus the nervous & vascular systems are both implicated; and in this manner moral impressions become causes of insanity. The moral cause, therefore, is always the remote cause; the physical, the proximate, or that state of the cerebral functions which immediately precedes the peculiar action denominated maniacal.

10. Influence of passions on mind discussed with great ability by Sir Alex. Crichton in An Inquiry into the Nature & Origin of Mental Derangement, 1798. Effect of intense emotions or passions, often repeated or continued, not only disturbs the functions but will occasion lesions of the brain. It is easy he says, to conceive, that an affection or change of structure of this organ does occur from an external impression from the nerves, but the effect on the mind produced by this impression on the brain is what we cannot explain.

Many structural & functional diseases, ascribed to physical causes, may be clearly traced to emotions of the mind.

Thus Art. Stomach, liver, intestines, kidneys, etc are often acted upon violently by external impressions - modified by force & temperament & commonly ceases with cause.

- Views of ancients confined to proximate causes wholly excluding numerous predisposing moral causes & mechanical e.g. malformation of cranium. Placed seat of passions in praecordia, because feeling produced there by any strong emotion, joy, grief, pleasure, pain etc. - courage in heart, anger in liver, joy in spleen. Bacon & Van Helmont affective passions in stomach, Locat in nervous plexuses, & others in ganglia of great sympathetic nerve. Richerand, maternal love in Bowels. Paternal? Reid affection & passions in nerves. Lacaze, Borden & Buffe fon, epigastric region primitive seat of moral affections, whence radiated to remote parts - gave heart physical & mental intellectual meaning, though before this only moral impression. This centre was with them as with ancients, the seat of the internal man.

Stahl many excellent observations on influence of moral causes on corporeal system.- ascribes crises of diseases & expulsion of morbid matter to the animi rationale which assigns them to simple effect of mechanic laws, without intervention of mind. Does not elucidate effects of moral causes on mind.

- 12 Many physiologists ancient belief that each viscus has an independent sense. Germans supposed a sixth sense in extremities of all nerves except five senses. Would be solution of those sympathetic affections now so mysterious & perplexing.

In nervous temperament feelings & passions most varied, indicative of maniacal constitution.

Bichat in Recherches Physiologiques. - "Physicians have not sufficiently distinguished passions & sensations. Former have connexion with exterior objects, and give birth to latter, which are therefore mere agents, and communicate as conductors, the cause, but participate not in the effect. Every kind of impression has its centre in the brain; for all sensations imply impression and perception. Thus, the senses receive the impression, and the brain perceives it; and as the impression quits this organ, its action is suspended, and sensation ceases. On the contrary, the Brain is never affected from the passions; but when excited, the internal organs of life are the only seat of them". Not always possible to distinguish passions from sensations.

Modesty a ~~passion~~ sensation not a passion - blush ceases with cause. Shame deeper: blood retained in capillaries as if veins constricted - suppress menses, or other secretions, caused insanity & death.- Haller's physiologie. Aph. 565. Esquirol wedding nights - Folie, Dict.

13. Diffidence modification of modesty induced mental derangement. Cowper from apprehension of not being able to execute public duty became melancholic.- Hayley's Life of C. Early life as described by self illustration of morbid sensibility.

Terror & horror similar effects & insanity may follow. Instead of Heart re-acting with increased momentum, returning venous blood detracted from extreme vessels - paleness; motion embarrasses, violent struggle, may cease to beat or be ruptured. If reaction, so violent that functions of brain overwhelmed by force of propelled blood.

Anger & fear opposite, one impels more blood to brain & stimulates nervous power, other depresses & enfeebles action of heart, diminishes quantum of blood to brain & deteriorates nervous power - muscular power, anger augments, fear paralyzes.

Anger affects circulation diversely: sometimes blood rushes to capillaries & reddens, sometimes reverse & blanched. Mania or apoplexy produced by either, sudden increased momentum or afflux of blood by reaction after partial collapse of emptied vessels.

14. Dr. Parry says in Elements of Pathology & Therapeutics all symptoms of incipient fever removed in few seconds by fear. Sudden strong emotion will check course of incipient insanity.

Fear & terror will check as well as cause insanity - by producing latter & consequent reaction that bath of surprise has sometimes cured mania, but reaction has been so powerful as to destroy equilibrium between nervous & vascular systems, & fatuity or apoplexy has followed.

Terror sim to anger or courage - stim extraordinary efforts for self preservation, exceeding natural strength but when occasion ceases may subvert mind. Naval officer. Insanity from sudden fright cured with difficulty.

15. Secretions & excretions affected by fright - Hufeland child poisoned by mother's milk after fright.

Excessive grief, determination of blood to brain & madness.

Joy more likely to cs sudden insanity than grief - former cannot find relief in tears, the natural solution of cerebral congestion & excitation. If intense grief does not find this natural vent have ment. derangement with prop to suicide.

Sudden transitions from joy to grief occasion greatest shocks to feelings.

Esquirol says joy rarely cause and singular that excess will destroy life, never deprives of reason, unlike trouble & chagrin. Thinks Mead mistaken in seeing in England persons suddenly enriched becoming insane, due to quitting former habits or hazardous speculation so inquietude, if insanity then due to fear of losing it. Gratuitous assumption because have met with two instances of ment. derangement from excessive joy.

16. No impression more calculated to subvert ordinary minds than sudden & unexpected influx of great wealth.- never apprehension of loss. Actual losses not so often as unexpected wealth - distress of 1825-6.

Desire increase of seminal secretion; smell or expectation of savoury food, salivary glands; maternal feeling milk & dislike prevents it; fear intestines, kidneys & skin as diarrhoea, incontinence & sweat; grief stomach & lachrymal glands anger liver; terror nerves including palsy; hope respiration.

18. Charming of warts influence of mind on body. Whitening

17. of hair. Change of temperature by passions, lust produces heat aversion or fear cold. Nostalgia from moral causes but produces organic lesion - Avenbrugger (sic) says lungs always found adhering to pleura. Corvisart in Comment sur Avenbrugger - infant jealousy would have caused organic lesion of lungs or heart.

Heart responsive to all sensorial impressions & functions excited - functions excited - if often repeated takes on morbid action & becomes disorganised.

18. All the passions & every emotion that powerfully acts on the sensorium rank among the moral causes & become accessory to the physical causes.

Many causes called moral have origin not in individual passions and feelings but in state of society & the more artificial i.e. civilised the more they multiply & extensively operate. Not only vices of civilisation but moral virtues,

religion, politics & even philosophy & all best feelings of our nature if too enthusiastically incited are causes. Occurrence in various relations of life, constitution & education.

Upper classes deemed exclusively liable - vulgar error. Habitual luxury & vices of refinement but lower orders have

19. excesses. Morbid affection of viscera from intemperance.

Extensive as I conceive the influence of moral causes... I cannot assign it so wide a scope as many foreign writers.

Very strong doubts of the fidelity of the catalogue of moral causes which they enumerate with so much affectation of minute accuracy. Although very inquisitive upon this point in every case. .. frequently can trace no moral cause at all. Majority originate in direct physical causes, which privations & misery which poor suffer as well as their vices, multiply.

Recent English author states only one moral cause in several hundred - did not inquire. French list of occupational causes too vague - *Compte rendu des Hospices des Alienes*, 1826.

20. Relation to public events- political or civil revolutions produce great enthusiasm with vicissitudes in moral condition - all extremes in society are exciting causes.

Pinel common as result of revolution & Dr. Halleran in last rebellion in Ireland - *Pract Obs on Cs & Cure of Ins* 1818. Rush American revolution - enthusiasm at beginning of battle produced great thirst & glow of heat in ears. Soldiers dead in battle of Monmouth from emotions of mind. At cessation of war despondency amongst royalists which he called *Revolutions*, opposite in revolutions called *Anarchia*. Scenes suspended in women hysterical & different complaints & produced many others - *Med. Inq & Obs. Sim.* effects on female sex observed during rebellion in Scotland in 1745. Siege of Paris by Allies 1814

21. caused irregular menses, apoplexy & mania more frequent. All moral or affective causes by changes in corporeal system through the Nervous system.

Rush, unknown among N.A. Indians & infrequent in S.Am. Suspect fallacy - passions of barbarians always strong, sometimes furious, affections violent. Why imagined savages never go mad? Natives of India, more temperate in diet & passions more under control are prone & asylums being provided, hereditary

22. Most savage tribes would destroy insane or leave to perish like aged or sick - hence not seen.

Moral Phils love to theorise on passive virtues of unsophisticated aborigines - but man always slave of passions.

All emotions of mind capable of disturbing corporeal functions & the moral causes become physical in operation. Hence physical causes grow out of moral causes & these frequently lead to insanity not thro direct impression on organ of mind but thro morbid changes in the system which they gradually effect.

Habitual drunkenness is moral lesion, excessive venery & any sensual pleasure. Solitary moral vice widespread cause - fatuity & idiotcy - Tissot. Brutes have passions wh. prod. madness.

Commentary II.

Religion in reference to Insanity.

24. Disputed whether cause or effect. Due inquiry deterred. All earthly happiness mainly depends on religion but nothing so strongly influences mental affections. Have taken advantage of opportunities of observation.
25. Accurate observer, Chancellor de l'Hopital - religion more influence than all passions combined. Any passion when excited to excess may cause so religion. But a lunatic may imbibe a religious as well as another hallucination & be insane from cause reverse of religion. Error in confounding these. In public practise attributed to religion because conduct or conversation too vivid spiritual impressions. Authors impugn opinions opposite to own, so controversy -

Similar to Sect IX. P. 171 - 220 of author's Inquiry into Certain Errors relative to Insanity -
- Is Religion a Cause or Effect of Insanity.

27. "The morbid tendency of Cowper to mental derangement was s always counteracted by the consolatory influence of the principle of true religion. In the first paroxysm of his disease, prayer to God afforded a temporary solace to his distractions; & later in life, the sense of his obligations and duty to his Creator arrested his uplifted hand in the act of suicide".

58. Commentary III.

Physical Causes.

Physiological & Pathological Observations.

Long prevailing error of studying mental to neglect of corporeal phenomena almost always cognizable.

Hallucinations of mind only signs of its disorder, of secondary importance. No utility in studying delusion - ought to examine signs of functional or structural lesion & if attendant delirium is idiopathic, symptomatic or sympathetic.

59. Cullen's instructions for acquiring art of distinguishing diseases - by accurate observation of their phenomena as these occur in concurrence & succession - not avail.

Brain organ of understanding & seat of nervous power but ignorant of how exercises functions of mind.

Great Creator all perfect & none of his works manifest that perfection more than man. - every organ complete & adapted. - if impaired then accident or condition of society.

Brain also admirably fitted for functions, but passions, miseries and wants of man act as perpetual stimuli, and induce morbid actions in that organ.

Bichat in Recherches etc - "The brain is to the mind that which the senses are to the brain".

It transmits to the Understanding the impressions coming from the senses, as the latter send the impression made on them to the surrounding parts. Same general laws as other organs and like all organic actions are incapable of explanation. Liable to diseases of other parts & own, apoplexy, palsy, epilepsy, vertigo, convulsions, ecstasis, catalepsy, chorea, lethargy, cephalalgia, compression, concussion, phrenzy, delirium & mania, also inflam. suppur., congestion, irritation & to spasm & atony; to organic vices & accidents which injure its structure & is affected by metastasis, or translation of diseased actions, & by sympathy with diseased parts, however remotely situated.

60. As brain sustains extraordinary states of dis. & extensive injuries & mutilations, to the destruction of very considerable portions of its substance, & yet neither the intellectual nor smtms the functions of sensation & volition are disordered, the integrity of the brain on which mechanical philosophers insisted is a fallacy. As organ of nervous system its integrity is essential.

61. Thomas Willis 17th cent.- thought faculties of mind an emanation from brain & desdants largely on passions & their influence on the faculties. Placed seat of the passions in middle of great mesenteric plexus whence they diverge as radii from centre. (Nerv. Descript. Cap 27).

Some anatomists for corporeal residence of intelligent principle others for path of insanity, e.g. Bonnetus, Lieutaud, Morgagni, Meckel, Littre, Greding etc. Observed skulls & brains of idiots & lunatics had alteration in form of cranium or lesion disease or organic defect in brain. Ascribed to mal-formation density or thickening of the bony covering, or to disorganisation of the brain & its appendages, compression by tumours, disease of pineal gland, inflammation, vascular distensions, effusion, brain too hard soft or dry, " other morbid condns of encephalon.

62. Ferrier collection of cases of morbid alterations, injury & destruction of brain without lesion of mind or death. Manchester Memoirs.

From induction many able physiologists state that organ of thought (brain) though essential to volition, holds but secondary rank - fallacy of prognosis.- Cabanis, Rapport de l'homme.

Vesalius sliced brain horizontally & obliquely from vertex; Varolius from base. Steno to whom Winslow ascribes his knowledge condemns slicing & unfolds plicae of convolutions.- W's Anat. Expos. vol.11.

63. Gall & Spurzheim follow Steno & dissect from base separating convolutions with handle of scalpel & fingers.- founded peculiar system of physiology. - Brain exclusive organ of mind composed of as many organs as there are propensities & sentiments - all parts of N.S. cerebrum spnl chord are double & one side takes over if other damaged. Hydrocephalus ment facs preserved bec convs only expanded bot destroyed.

Decussation of nerves which many anatomists deny is of highest antiquity. Cassius Jatrosohistadisciple of 1st

- 64 Asclepiades, 3 cents B.C., describes crossing of nerves at origin at base & says causes why when Membranes are injured, paralysis on opposite side.- Le Clerc, Hist de la Med. Partie 11 lib 111. ch 11. Aretaeus adopted his opinions - De Causis et Sympt. Morb. Diut: Lancisi & Santorini agree & recently Serres & others proved that hemisphere opposite paralysed side always diseased or altered in structure.

Cranioscopists - organs of sentiments also duplicated.

Galen consigned to parts of brain separate functions or faculties but not double - fertile imagination.

- 65 Mr. G. Coombe of Edinburgh denominates this system phrenology & by able & systematic manner of treating it, attempts to advance it to the pretension of a science. Will get converts who adopt theory than examenefacts. Exults in apparent inconsistency of physiologists because function unimpaired with almost total or partial destruction of structure. - System of Phrenology p. 541. But divine immaterial functions of brain not to be compared with other parts. Phrenological dictum - "organs of intellectual faculties constitute so small a portion of the brain, as to leave nearly two-thirds of the whole mass to be destroyed on both sides, without necessarily interfering with the intellect."

66. Coombe - Philosophy of metaphysicians useless in diagnosis, treatment & cure of insanity - not impressed with all read seen or heard of this science.

Phrenologist who attempts to bring into action organs to counteract the diseased ones would cure patient sooner than physician who treats madness or fury by bleeding & general depletion & melancholia by stimulants & tonics, former innocuous, latter injurious. Phren affords superior aid because "great alleviation from moral treatment" different from other organs - but implied that moral agency has no effect on other diseases?

67. Requires more extended observations & time to sober enthusiasm of votaries - general objection to reasoning of lunatics arguments very ingenious, and often logical; but the premises not being proven, conclusions are sophisms.

No dissection for ment dis in England till last 40 years.

Mead a cent earlier said would ever disappoint our search -

68. Monroe acquiesced few yrs later in admirable reply to visionary opinions of Battie - Remarks on Dr. B's Treatise on Madness 1758 Metaphysical speculations on immateriality of the mind.

Cullen thought insanity chiefly & sometimes soley mental affection, but coincides with Haller Boerhaave etc & admits operation of mind must depend on particular condition of corporeal nature. - First lines (1541) sic.

First anat investig in this country accidental - Dr Andrew

Marshall 1789 paper before medical society, brain diseased in two cases of hydrophobia & materially affected in mania. - Sketch of Marshall's Life by Sawrey p xxlll. Rudely attacked by celebrated physiologist John Hunter. Gen opinion was that ins left no evidence in brain. Made dissections of insane in Bethlem & in 1815 after his death his Morbid Anatomy of the Brain in Mania & Hydrophobia. Also Dr. Haslam in Observations on Madness 1798 showed morbid condition in encephalon of maniacs inspected

Objected that result not cause e.g. Crowther in Pract. Remarks on Insanity also Black. Earlier anatomists Bonnetus, Morgagni etc no morbid appearance in some brains - confirmed.

70. Strengthened that mental affection, and that any lesion was result. Pinel Esquirol etc. morbid appearances found in others not insane. Also bec recovered many weak enough to think not a corporeal origin.

Ought not to assume not morbid because not seen.- eminent physiologist Haller - in elementary particles or not looked for with patience and attention.

71. Nothing found in acute but slight congestion or effusion but strong evidence in long standing tho smtms nothing after violent insanity for years.

72. Should we conclude none exist - will scalpel detect apoplectic, hydrocephalic, scrofulous or gouty diathesis. Morgagni, Cheyne, Abercrombie, Powell, Stark etc prove death from apoplexy with no lesion.

Scrofula believed imperfect organisation of structure & its inflammation is different sim gouty & rheumatic inflammation. Inflamm relative & varies with part affected but not shown by dissection. Brain may have disease of which no visible trace -

73. why see maniacal diathesis?

Again - no difference in structure in special sensory nerves Further who can say inflammation has existed if circulation is colourless. Other organs appear sound. May brain not also have peculiar morbid action designated maniacal.

Some say since alteration or action unknown attempts to cure must be fruitless.

74. Without denying morbid processes may precede generally they are subsequent. Require great no of dissections e.g. from Greding, Esquirol, Georget, Neumann etc. & collection of Dr. Scipion Pinel embracing Esquirol, Villermay, Beauvais & Schwilgæ total 259. Table of Lesions. Lesions of Brain

- 75 to other organs - 1 to 2. No lesion in 1 in 5. hence probably posterior to derangement.

Not necessary to predicate organic change in insanity or d delirium bed as in every organ continued functional lesion will produce organic.

76. Arises from specific morbid action, independent of actual state of cerebral disease because fluctuates even in tumours or injuries. If not primarily organic it ends by being so hence difficulty of curing if protracted.

Bonnetus, brains died of anger or fury were hard & friable. Morgagni if hard & coriaceous then proud and stubborn, if soft weak & undecided in character. Portal & Dumas from form of colour & density of brain have speculated on intellect.

From brains of connate fools might speculate that for perfect mind brain must be perfect ab origine - fallacious.

77. Haller attempted correspondence from dissections of maniacs.

Sir Everard Home - Phil Trans. 1814 - compared dissections and symptoms - both abortive, scale too small. Prejudice against path investigation in this country better off in France but

78. nothing conclusive from Pinel, Esquirol, Georget etc.

Recently some pathologists affirm have discovered positive & un deviating connexion between certain delusions of the mind

& well-defined morbid conditions of encephalon. - Dr. Bayle

Traite des Maladies de Cerveau et ses Membres 1826 - whose opinions have priority maintains in maj of cases result of positive chronic inflammation of membranes. 2 kinds of inflam - chronic or latent Arachnitis prim in arachnoid & Chronic Meningitis ingitis wh affects pia mater with arachnoid - latter uniformly attended with incomplete paralysis.

Author confident able to connect specific symptoms with morbid conditions of encephalon with uniform correspondence, to show in great proportion commencement imputed to chronic disease of membranes of which describes forms, stages & complications to which stages of cerebral disease & intellectual disorder belong.

79. Chronic Meningitis particular diseases diff fr acute but may proceed from latter. Chronic indicates slowness & duration not mode of origin. Phys symptoms which usher in or accompany this disorder do not differ from other forms of mania except slight embarrassment of speech, hesitation & slowness in the pronunciation of particular words, & sometimes a slight degree of stammering - precursory to mental affection. Mental character of this peculiar form of insanity is a prevalence of ambitious ideas.- proportionate to degree of injection of pia mater. Striking analogy to drunkenness where signs of irritation & transient congestions (sic) of brain. Same speech, walk zigzag, exalted, talk without ceasing, ideas disturbed & incoherent, ideas gay & joyous & constitute true ambitious delirium.

80. Says disease due to irritation or inflammation of grey substance which deranges its function result of chronic inflam of membranes on cerebral face. - no exception in 100 dissections.

Dr. L.F. Calmeil from same school - Paralysis, as it appears in lunatics - De la Paralysie, considere chez les Alienes, 1826. Both Royal Lunatic Asylum of Charenton but strangers to each others work - uncandid & suspicious - discrepancies in their respective histories which shake credit due to either. B. visited Ch. 1817 surprised to see great no of lunatics with lower extremities paralysed - he thought due to cold & damp to which both privat & public were exposed in Paris.

81. French anatomists should remember opinion of Pinel that no necessary connexion between characters of insanity & nature of existing cause & that phenomena in living & dead no uniformity or correspondence.

At least lesions are decisive proof of seat of ins in brain.

Facilities for morbid examinations smtms tend more to encourage speculative theories than to advance truth.

- 82 Many have dissected encephalon with similar symptoms & found nothing - will not assert he is mistaken but inference natural & strong that this ingenious physician has attempted to prove too much, and more than facts warrant. Supported by observations of Falret who claims to be original discoverer of this morbid condition of the membranes with coincident mental symptoms also by Calmeil and Voisin Des Causes Morales et Physiques des Maladies Mentales 1826. "I am bound therefore, though sceptical to concede, that the evidence is respectable. Enough so, certainly, to stimulate pathologists to ascertain, by further examination, the accuracy of this new doctrine."

Would strike fatal blow at phrenological system as organ of ambition, self-esteem or love of approbation is only a point on convexity & depends on health while inflam over whole surf.

- 83 Dr. Abercrombie in able researches - Path & Pract Researches in Diseases of the Brain & Spinal Cord 1826. has adopted term Meningitis with delirium as attendant symptom - very slight vascular injection of pia & arachnoid membranes suf. to prod the most fatal consequences.

Nothing seems to abate M. Bayle's ardour.- recently published dissertation, Revue Medicale, to show chronic inflam of m.m. of stomach & bowels influences & modifies character of mental aberrations - dread of poison & repugnance to food most constant & essential symptom. Found in Melancholia where no trace of gastro enteric disease discovered. Beyond his own cases his inferences are untenable. "From his rapid career, I fear a vivid imagination and fondness for theory are leading his judgment astray; and that, like the patients whose bodies he examines, he adopts illusions for reality."

Rouchoux, Rostan & other Fr. Pathologists describe a softening of the brain (ramollissement de cerveau) c symptoms.

84. This Abercrombie says may arise from two conditions - inflammation & failure of supply of blood from dis of arteries in old people already deranged.

Thought in all insanities brain inflamed or sub-acute inflammation or irritation but these may exist even with fever without delirium. Inference delirium or insanity & brain free from inflammatory action.

Dumas - always chronic state of phrenitis, Theses sur la Manie. Vogel also, Beckenbergs, Dissert de Insania longa.

85. No reason why irritation apart from inflam should not cs.

Irritation assumed to be initiatory step to inflam. bec primarily affects balance of circulation, hence nervous & vascular systems act & react on each other, & var dis originate.

Tho differ from Vogel, Dumas etc. that mania always from inflam of encephalon, yet ment. der. often sequel of inflam of brain. That insanity is effect of cerebral inflam. is error dangerous & common. Inflammatory & maniacal actions are totally distinct.

Many eminent men have considered insanity to be a pure disorder of the nerves e.g. Cullen whose opinions so long pervaded the schools, also Crichton who even quotes celebrated experiment of Dionis on transfusion of blood when furious madness produced in some but rejects influence of circulating.

86. Founded on "'a peculiar fluid secreted or at least formed in the medullary substance of the nerves'..principal cause of frenzy & delirium 'always arise from a specific diseased action of those fine vessels which secrete the nervous fluid in the brain'.

Dr. Good at present when physiologists have discarded the notion of a subtle fluid "volatile & energetic" or animal spirits assigns to brain structure & function of a gland secreting & supplying peculiar fluid, which maintains the nervous power or energy as exhausted, & insists on necessity of a quantum of the fluid secreted in the sensorial ~~nerves~~ vessels for sound intellect Bostock's Phys vol 1 p253. Study of Med, Phys. Proem. vol lll.

Equally ancient hypothesis, that sensation transmitted by vibrations or oscillations of particles of nervous matter itself as if nerves were chords - no better authority.

Able commentator, Dr. Cooke concludes that phys of N.S. "remains involved in impenetrable obscurity". in Treatise on

87. Nerv. Diseases 1820.

Dr. F. Willis in Treatise on Mental Derangement 1823 adopts obsolete opinions of Cullen, Crichton & Good, that insanity depends on "'a specific diseased action etc.'" but is silent on physiologists who have proved by experiment the absence of this nervous fluid. Also bodily derangement in high state of mental derangement in praecordia "'where the heart, lungs, and diaphragm are in a state of utmost disorder'" & appeals to ancient physicians. Lastly disputes opinion of Arnold, Cox & Mayo that proximate cs of ins can be in disorders of vasc system.

Would retrograde into some physicians prescribing stimulants & tonics, others depletion & evacuants

- 88 Physiologists - distinct functions to Ns. ac to situation- first receive impression of exterior objects, those of sense, second, seat of moral & intellectual faculties, placed in brain, third regulate voluntary movements arise from spinal chord. - a little beyond what Eristratus & Herophilus taught. In sme cases appears derangement of moral & intel faculties have source in affections of nerves arising from spinal chord. Quotes 3 cases with pain or disease in spine.

Since brain provided so little all other organs of body were examined by anatomists, & remote causes claimed.

89. Esquirol in anatomical researches thought transverse colon in maniacs as sympathetic cause. Direction oblique or perpendicular with left extremity behind pubis or inverted arch into pelvis. Esp in melancholics who complain of pain in epigast. like tight cord at height of hypochondria.

Morgagni find same but not peculiar to insane.

Georget only one instance.- De Valetud Liter. p22.

Abundant proof brain undergoes morbid conditions as

90. insanity advances. Incipient symptoms denote great vascular excitation & action.

When not cured agree with Georget that weakness or atony of brain produced. Tissot - cerebri tonum impaired. Delusions persist but atonic state often manifests itself by abolition of intelligence. Paralysis partial then general then all signs of fury cease. Brn first affected as intellectual agent thro movement and force of circulation then nervous agent from diminished power & influence of circulation.

Brn becomes enfeebled or atonic in chronic ins shown by vigour & renewed action imparted to it from fever even when deemed incurable. Fever a state of vascular excitation accelerates circulation, propels more blood through cerebral vessels & revives dormant functions of intellectual organ.

Influence of sympathy very extensive & prob the most common source. Van Helmont revived ancient opinions of sympath

91. action of dis organs on each other & esp brain. Viscera centre of sensations which were irradiated - if organs diseased so were sensations. Confided too much on his theory of morbid sympathies to explain diseases, contemned with predecessor, charlatan, Paracelsus, anatomical investigations & contended that "the anatomy of the living" was true way of acquiring knowledge of maladies. Bordeu, Barthez, Portal, Dumas, Cabanis & most French physiologists imbued with Van H's principles.

Even Pinel assigns more influence to abdominal viscera than other organs for insanity. Constituted new era - if cannot accord with his pathology his general views & moral treatment so philosophical & practicable that extended wherever science respected & humanity cherished. Like enthusiasts has taken limited view of physical causes - successfully traced moral causes but influenced almost exclusively by theory of visceral irradiation or sympathetic influence.

92. In sympathetical cases, if remote part attacked by inflammation, and mania by metastasis be consequent, the delirium assumes all the violence of the inflammatory diathesis, if from congestion inflam denominated subacute prevails, if from nervous irritation circulation irregular but no inflammation.

Winslow, Soemmering, Cuvier Majendie etc have tried to explain phenomena of sympathy thro great sympathetic nerve. Bichat conceived melancholia, hypochondriasis etc. which others ascribe to lesions of abdominal viscera arose from alterations of ganglionstho which sensations & irradiations conveyed to Recherch Physiol art VIsect 4respective organs.

Arnaud also attributes mania to derangement of functions of ganglia as well as abdom plexus.

Cautious examination will tell which disorders are idiopathic & wh sympathetic. More easy to refer to occult causes than seek truth in patient induction so sympathy yet it is a fr
93 frequent source when little suspected.

Know not causes nor mode of action of sympathies yet proof of their operation in originating diseases which reciprocally act on mind.

Brain most frequently sympathises with Liver.- intimate & reciprocal - second to brain in health - circulation of blood also complex & liable to be interrupted & functions disturbed.

All passions esp anger violently affecting sensorium, act immediately on liver & every excess that disturbs functions of stomach easily determines bld in undue prop to vena portarum where due to remoteness from heart blood always sluggish & congestion easily induced. Bile secreted scantily, alimentary processes ineffective, morbid action of connecting nerves & functions of brain implicated & disordered. Blows on head create not only disordered function but disorganisation of liver & nothing more common than mental disturbance originating in
94 injuries of liver, or in secretions of disordered bile, or obstruction of biliary ducts by gall stones spasm etc. Diseases of hepatic system will even originate delirium, furious mania, melancholia & suicide.

Ins commoner in lowest classes than supporters of mental origin admit - drunkenness great vice in G.B. & Ireland, ardent spirits. Dr. Halloran c 9% Pract Obs on Ins ed 2 p 35.

Dr. J. Cheyne Obs on Apoplexy p 198, ac to late Mr Todd great prev of hepatic dis in bodies of lunatics in Dublin. - cheapness of spirits and habits of lower Irish. Rendu 1826.

France comparatively sober have c 1 in 12 in Paris-Compte
95. Stomach also affected in alcohol - gastric affections most const attendants of ins esp melan & hypochond. Morbid of chylopoietic viscera is sympathetically frequ cs of ment deran. Gastric irritation is frequent cs thro this mysterious agency - long continued nausea often precursor - violent nausea from sea sickness for several hrs prod mania in three instances kn.

Efficacy of remedies on digestive organs implies disorder powerfully influenced mental derangement.

Intestinal irritation share in sympathetically influencing brn.- delirium due to worms & bad diet of poor.

Anatomists dis of spleen & have imputed much influence to it
96. - met 2 cases but physiology too obscure.

R Reciprocal sympathies between Uterus & Brain, causing ins, frequent & notorious.

2 cases mania from cutting Dentes Sapiéntiae.

Often arises from scrophula - traces discovered. Frequently extends to brain & incurable ins follows - attacked like other glands - very obstinate unless suppurative process. Mania with enlargement or diminution of maxillary or sub-max glands.

Lamentable vice of masturbation frequent & formidable cause of ins.- subverts constitution & intellectual faculties. Pinel says in communities of insane effect of loss of reason.

Much ascribed to temperament in predisp. to ins. -

97. Sanguine Temperament pred to mania; nervous to mania & monomania; dry or melancholic with timidity & inquietude to melancholy; moist or choleric to mania & melancholia & smtms to demency. Apoplectic Temperament with large head to demency.

Moral & mental qualities influenced by constitution & more of sanguine & nervous temperaments are maniacal & of bilious & melancholic melancholy but minuteness some physiologists connect human peculiarities with mental aberration only justified by those who still adhere to ancient humoral theories. Excusable in Pinel before path extended.

Gratifies curiosity but what utility to find meagerness or obesity of ins or stature, colour of complexion, hair & eyes. - distinct form of ins for each nation, but varieties in every

98. constitution & clime.

Do not infer doctrine of temperaments to be disregarded - may frequently anticipate disease - object to generalisation not principle.

Reference to planets superfluous but many "still insist on the occult operation of lunation on the human body".- remnant of astrological medicine which assumed all motives actions & diseases directed by movements of planetary system - hence changes in ideas and actions regulated by phases of moon so lunacy instead of Gothic mad.

Arætaeus attributed Ep. to lunar influence also Galen. Celsus acknowledged influence of sun & moon on body. Century ago Mead wrote on same subject & adds Tyson Physician to Bedlam observed ravings of mad people kept lunar periods ac/by Ep fits. Heberden remarks in Commentarii de Morb. Hist et Cur no one confirmed influence of moon on constitution & those with most opportunities of observ reject it.

99. Not improbable that violence increased at full moon but maniacs light sleepers and like animals disturbed by flitting shadows of clouds - images of terror.

Humoral pathology not extinct - on Continent of Europe black & yellow bile, pituita etc active agents in operations of mind & hellebore antimaniacal

Hereditary Predisposition -

Idiosyncrasies - Ipecacuanha to Schneiderian & muc memb. Shell-fish & drupaceous & other fruits to stomach, odour of flowers to olf. Ns - may descend thro successive generations. Gout, phthisis, apoplexy, scrofula inherited & propagated - all predispositions. Every dis of constitutional character, John Hunter sayd, can become hereditary. - not hereditary dis but disposition.

No doubt brain may be imprinted with hered. predisposition to insanity, propagated ad perpetuum like other constitutional characters.- exempt only on mystic ground of its immaterial origin. Mania, demency, epi., leprosy etc extend thro future generations. Insanity per saltum, every second or third generation - Ludovicus Mercatus, Spanish physician who wrote work on hered dis. May escape one gen. but no rule.

No matter whether dis or predisposition can be propagated by intermarriage or inbreeding. Her. predis a prominent cause.

Manic may beget melancholic & v.v. In large family may find all forms or high nervous irritability, even transcendent talents
102. Great wit etc not poetical fiction, but one rarely ever, other generally an inheritance.

Her Ins as successfully treated as from accidental cause.

103. Her. commonly concealed with baneful effects.

Many eccentricities or singularities grow stronger & ripen into insanity.

104. Esquirol 150 of 264 hered but 6/7ths in authors. Exempt when sympathetic origin e.g. puerperal mania. More com. higher ranks, because intermarry - clanship, numerous in ancient Scottish families; "and insanity is more common in Scotland than in any other country". Boethius, de Veterum Scotorum Moribus - to preserve race from hereditary taint Scots emasculated sons & banished daughters, if pregnant buried alive.

Supposed most frequent among Jews from no intermixture.

105. Very prevalent in Society of Friends who intermarry.

Maniacal diathesis exists & propagated as dia. of scrofula, phthisis, gout, apoplexy, epilepsy etc or mere adventitious Syph.

Propensity to suicide propagates itself. Hypochondriasis smtms found to descend. Even with both parents not all doomed. Dormant & not elicited without cause but sev cases aged 13-14 where no exciting cause but constit predis.

If deranged as soon as mind perfect without moral or phys cause then hereditary. Suggested nascent sexual feelings at puberty cs where predisposition.- fnd at 13 with no virility.

106. Child resembles parent in appearance then in constitution and disposition, so others escape. May propagate it if parents free but ancestors affected, uncles or aunts. Child born before adventitious insanity not affected.

107. Puerperal delirium without heredity but recurs so predisposition greater.

Once occurs maniacal diathesis is stamped & generates as "it cannot have run on from the creation".

Progressively wears out or all world affected ere now.

Her. predis. & extension of population are causes physically operating & increasing insanity.

108. Those with predisposition or relatives take no precautions & evade truth which is an offence.

"Perversity in this perverse malady, which like the intelligent principle, is a mystery not to be penetrated".

On the Vascular & Nervous Systems.

Most nosologists class ins. among Neuroses hence received as dis exclusively of nerves.

Disorders of sanguiferous system as great influence.

Dr. Caleb Parry - specific effects on operations of mind.

- 110 Perfect health when balance between nerv & vasc systs - dis when one preponderates, smtms mental functions are implicated with body & this constitutes insanity. In opposition in every case - preponderance of either from moral or physical causes.

Increased circulation of brain in incipient stage but maniacal action cannot depend wholly on it, or sleep would reduce it but redoubled when wakes. Animal movements by nerv or vasc systems independently but intellectual functions require equilibrium of both.

- 111 Impressions to vessels or their nerves affect both so alterations & disorganisations of structure from long continued nervous complaints, proceed to erythism or sub-inflam to highest excitement or real inflam.

Many believe primitive movement in all diseases from sentient system & even in inflam morbid irritation first exerted on n's of part.

Every art. has n. with close ramifications hence influence - if ns. have first impression irritation to capillaries & morbid sensibility of ns. continued by re-action of vascular irritation. By attacking latter relief in nervous affections also mania & hypochondriasis.

Dr. Wilson Philip in Inquiry into the Laws of the Vital Functions, considers power of bld ves destroyed by affections of N.S. Perhaps Esquirols cases of sudden death in maniacs considered apoplexy. Again too great momentum in flow of blood will destroy nervous power as in sanguineous apoplexy.

112. Animal can live without brain but not without heart - acephalous child - also great injury to brn without injury to intellectual functions. Life as well as mind more dependent on movements of circulation than functions of nerves.

Disorder of ns, however, frequent immediate cs, for violent moral impression made on any of senses is first carried to brn "which immediately acts synchronously with the heart, and reacts on the brn; and the last action may remain after the other has ceased".

Intense thought or abstraction powerful influence on circulation - great calculators days & nights without sleep owing to increased action of vessels which soon runs on to delirium.

All passions & emotions modifications of will & when latter stimulates brn to violent exertion heart responds with augmented or diminished force. Joy, anger desire etc. increase energy of heart, accel circ, & induce apoplexy, palsy, mania etc. while

113. fear, horror etc. diminish action & retard current causing asphyxia, syncope etc. When hrt recovers force such reaction is produced which proves fatal or deranges intellect.

When either organ is over-exerted relaxation or rest must follow. Even when stimulus withdrawn before lesion the energy induced is succeeded by diminished sensibility & weakness, or "of collapse, subversive of the mind. It is in this way, probably that moral or affective causes act on the nervous system".

St. John's Hospital - Polmadie near Rutherglen. Ante 1249.

The first Psycho-Geriatric Hospital south of River Clyde -
Predecessor of the Southern General Hospital.

The Old Polmadie (Wolf's Burn) Hospital was situated in the lands of Polmadie to the west of the stream known as Mollsmyre and later as Jenny's Burn - the former name is supposed to be due to the fact that Mary Queen of Scots nearly perished there when her horse stumbled when fleeing after the Battle of Langside in 1568. It lay opposite Richmond Park on the south side of Rutherglen Road the main highway from the ancient Royal Burgh of Rutherglen with its royal castle to the Monastery of Govan originally founded by St. Constantine about 565 A.D.

The first reference to the Hospital is found in a Charter, dated 28.5.1317 granted to it by Robert the Bruce and signed by him at Rutherglen, confirming that the masters, brethren and sisters of the Hospital at Polmadie (juxta Ruglen) should enjoy all the privileges which they possessed in the time of Alexander III, his predecessor, under whom they had been great prosperity in the land, prior to the Wars of Independence. Alexander came to the throne in 1249 and it is considered that the Hospital was founded before that date.

The Church of Strathblane & its lands were granted to it in 1316 & half of the lands of Little Govan were given to it by John de Lindsay, Bishop of Glasgow, in 1320. Sir Patrick Floker was made Master & Guardian of the Hospital in 1319, while in 1347 Queen Joanna, wife of David II & sister of Edward III of England, presented a Master to the Hospital.

In addition to being a Hospice on a Pilgrims' route it was definitely an Almshouse with its due proportion of elderly inmates and we find on 10.5.1391 that Matthew de Glendining, Bishop of Glasgow, signs a Precept concerning Gillian Waugh - "Wherefore we command and require you to admit and receive the said Gillian as a Sister and Portioner of the said House in all times coming; and that you give unto her the whole Rights and Privileges of a Sister, used and wont; and that you cause her to be justly and reasonably satisfied, and Paid yearly; as they become due, in time coming, during all the days of her life; so that the said Gillian may have no just ground to complain of your neglect," - the first Admission Paper.

In 1424 Duncan, Earl of Lennox (a family closely associated with Glasgow) renounced all the rights which he or his progenitors had assumed over the Hospital and its property. Thereafter the Hospital with the Church of Strathblane is made into a Prebend of the Cathedral and the endowments are applied to improving the Music in the Choir, no doubt under the Vicars Choral, while the Prebendary is instructed to educate 4 boy Choristers.

The Endowments of the Hospital & the lands of Crosshill were transferred by Isabella, Duchess of Lennox & Countess of Albany, to the Collegiate Church of Dumbarton, which she founded in 1453, after which it is considered the Hospital ceased to function.

SCIENCE
AND THE
RENAISSANCE.

W.P.D. Wightman

Vol. I.

An Introduction to the Study of the Emergence
of the Sciences in the Sixteenth Century.

Vol. II.

An Annotated Bibliography of the Sixteenth- Century
Books relating to the Sciences in the Library
of the University of Aberdeen.

Aberdeen University Studies
No. 144. 1962.

Dedicated to Duncan Liddel. Dd 1613.

Vol. I.

Preface - Problem of Renaissance - swift enlightenment from Greek Classics or an arbitrary fiction. University founded 1494 when alleged fog began to clear. Spill over into 17th Cent. because of long delayed emergence of Chemistry.

Chap. I - The Renaissance Problem.

Common acceptance - Rebirth of Classical Languages at end of 15th Cent. ushering in Modern World including Science. Myth created by men living at time, continued by Jakob Burckhardt, 19th Cent historian & first vol. Cambridge Modern History but warning in New edition. There covers 1493-1520 but P.O. Kristeller (The Classics & Renaissance Thought, Camb. Mass, 1955) says 3 Cents beginning 1300. Considered all revealed in beginning & lost thro sin so rebirth & redemptory - true with Aristotle but little trace of experimental Science - little of novelty.

Original Myth in dedication to Leo X of De Arte Cabalistica by Johannes Reuchlin 1517 - Great Cosimo & grandson Lorenzo, patrons of Arts. - philosophy buried for so long. Tradition of darkness accepted even by Erasmus. Gelenius in his edition of Theodorus Priscianus (c 400 A.D.) (False syn Octavius Horatianus) in 'Rerum Medicarum lib IV. - Frobeniana Basel 1532', refers to collapse of Latin earlier but not true. Sin myth in Fernel in dedication to Henry II of 'De Abditis Rerum Causis 1548'. Myth Arts in darkness for 1000 years revived 2nd half 15th Cent.

History into Ancient Medieval & Modern by Christoph Keller 1685. All previous ages regarded as preparation by Enlightenment for Age of Reason. Wm Whewell refers to long barren period, stationary Period of Science. Michelet regarded 16th Cent for Ren wh started from nothingness. Burckhardt 'Die Cultur der Renaissance in Italien 1860'. - enlarged concept, cultural epoch, led to revolt of Medievalists who regarded Ren as mere continuation of Middle Ages. Was there any Period of Ren & is concept of Period a fiction. History a continuum on which Mind imposes own categories? Continuity but not uniformity.

Main conclusion re Ren., recognisable period in which occurred transvaluation of values wh produced gulf between Roger & Francis Bacon, & between Summa of Aquinas & Principia of Newton. Period of revaluations but not rebirth. Charlemagne c 800 first revival of importance of secular literature. Similarly in Baghdad for Nestorian manuscripts. Only rebirth when Toledo reconquered from Saracens. Hope of general rebirth in schools at Chartres. Ren. in beginning purely Italian - south near Grk. In Sicily Aristippus had a Grk trans of The Almagest 30 yrs before Gerard of Cremona trans it into Latin in Toledo. Petrarca return to Latin style, no one to teach him Grk. Manuel Chrysolorus first teacher 1396. Enthusiasm for Grk after Council of Florence 1439 - Gemistos Plethon initiated study of Plato. All 30 yrs before sack of Constantinople 1453. 'Humanistic Renaissance' spread thro & from Italy at different rates often against opposition & Classics.

One aspect of Ren - rebirth & revaluation of Classical Literature - new standard of criticism. History books without legends. Important for Science - Astronomy, Reurbach & Mueller (Regiomontanus) critical text of Ptolemy's Almagest. Hector Boece - Historia Scotieorum with apocryphal origins. Another char. of Ren - cult of excellence in every human enterprise. Fine Arts Ren said to begin with Giotto but 2 centuries before Chronicle of Monte Cassino by Leo of Ostia 1336 states Abbot Desiderius sent to Constantinople for artists to lay mosaics.

Chap II - Individual & Cosmos -

Changing conception in relation to Cosmos.- key philosophical. Not new personality 'Renaissance Man' as in Burckhardt.

One or two of those who saw old problems in new light & prepared ground for those who created science later. B's tribute to Leon Battista Alberti - paragon of everything - gymnastics, knowledge camera obscura, writings, sympathy & will; also humanity shown in 'Vita S. Potiti' 1432. Universal genius - formulated laws of Beauty 'De Re Aedificatoria' - architecture also treatise on painting - theory of linear perspective, preceded by others but lines met & fused & evaluated - man may by taste & judgment improve on Nature, 'Della Pittura'. Pierra della Francesca - treatise on perspective more mathematical but painted beautifully - Finding of the Three Crosses & The Dream of Constantine. - influenced Leonardo?

Albrecht Durer - another universal mind - tradition of Alberti in Germany. Born Nurnberg famous for its gold & silver ware - Italian Humanism by Reuchlin, others in city. 'Nurnberg Chronicle' by Hartmann Schedel 1486 - critical history. Eminent scholars - globe & maps:- probably due to arrival of Regiomontanus, 1471. Also Hieronymus Munzer - b 1437 - medicine at Pavia. Intellectual dev also due to wealthy burghers thro Venice trade. Durer entered this activity - portraits etc; pair of compasses in problem picture Melencolia etc - wanted to know law of it, turned to Euclid & Vitruvius - quivering sensibility of the Young Hare.

Emphasis from subject to object & demonstration that science of nature possible. Partly due to Perspectiva - light & vision thought at heart of comprehension of nature. Leonardo's Notebooks - chromatic polyvalence in shadows - related to Aristotelian idea of space being substantial. - space a system of ordered relations to be constructed, one of greatest discoveries in history of science, being rediscovered in relativity physics. Durer's 'Anderweysung der Messung etc' - pub 1528 year before death, also 'De Symmetria Partium Humanorum Corporum' 1532. Also applied science of fortification & artillery - polygonal fronted town.

Girolamo Cardano (1501-76) - representative figure - wrote 'De Vita Propria' with self analysis. Faith in Astrology despite own horoscope saying death at 40 yrs. Inconsistency of judgment. Bk of my Life, - Jean Stoner, 1931. Every vice & evil save ambition. Astounding interests, 10 folio volumes of surviving works. Gambled, 'Liber de Ludo Aleae' - theory of Probability. 'De Subtilitate' - natural philosophy. Wants 'one master theory'. Son executed for murder of wife. Used but did not claim to invent Tartaglia's Rule.

or formula, gave him credit in 'Ars Magna'. Many sided - Medicine, algebra, mechanics Universal Joint (C's) Self assertive - critical, marvels, warnings, familiar spirit, animals - "I have taught that a contemplation of the natural universe leads to an artistic expression & to creative labour".

Three representative of their time 1450 - 1550 - reassessment of relation to Nature & Cosmos. Not due to revival interest in Grk. Cosimo de' Medici 1462 fnd Platonic Academy at Florence & by 1468 its leader Marsilio Ficini had trans all Plato into Latin. Not interested in external world, cosmos or maths wh ac Plato alone could give intelligent account of world. Giovanni Pico della Mirandola - 'Oration on Dignity of Man' 1486 Man unique in Liberty of thought. Origin in first Academy of Luigi Marsigli d 1394, pupil of Petrarch, in San Spirito, Florence - Divinity in whole natural order & man must participate.

Change of relation expressed by Nicholas Krypffs b Cues 1401 became Cardinal of Brixen (Bressanone), experiments with balance & wrote on calendar reform. Cusan revolution, mentioned motion of earth - Copernicus was methodical, & allowed verification. For Nicholas as for Plato "Maths is clue to discover works of God". Relativity of time & movement - his world view between religious & philos concept of truth - authentic Grk Plato met Augustine's Christian Platonism.

Plato excelled Aristotle in making Maths archetype of knowledge - but universally Aristotelian setting of a geocentric Universe with sublunary sphere of 4 elements & aetherial sphere of eternal motion.

15th Cent. Platonists stimulated critical approach to Aristotle not the version of Averroes. Averroes - universal active intellect wh acts only thro humans - not acceptable to Christians. St. Thomas special creation, not acceptable to Phils. 1497 new Chair Padua for Arist in Grk - could be Aristotelian without Averroism & Scholasticism. Master of new Arist - Pietro Pomponazzi (1462-1525), later at Ferrara prepared 'De Immortalitate Animae' printed 1516 when he went to Bologna - showed solution of problem between two. - in his Universities grt advances in Med at end of 16th Cent - Padua Fabricius ab Aquapendente began teaching Embryology which his pupil Harvey elaborated a generation later.

Last general char, Reformation. After fall of Constant heart of Eastern Church was third Rome, Moscow. Luther rejected belief in change of substance - Real Presence was from omnipresence of God through-out Universe. Copernicus encouraged to publish by Church, dedicated to Pope, while Lutherans got work printed. Giordano Bruno burnt at stake as heretic half a century later - gave the ultimat expression to the cosmic transvaluation of values but not martyr to science as stated. The first to give exposition of cosmos without centre or boundaries, with stars freely dispersed instead of spheres, & each star a sun surrounded with planets - could not prove like Newton.

Miguel Servet - (Servetus) 1511-53 - presented views in theological setting - burned by Calvin. Both Churches crushed free speculation on ultimate things - prevent moral corruption.

Principalities & Powers

Few books from Universities in period of scientific renaissance but depended on rulers. Universities various origins - Paris & Bologna from 12th or 13th Cent., more recent still papal. Helmstadt by Noble Protestant; Douai for Counter-Reformation; Leiden to celebrate Dutch victory - no freedom. Index Prohibitorum 1559 set up by Council of Trent. Political alignments & economic Power. Holy Roman Empire sprawling but important. Maximilian I. Not hereditary but 7 Electors - grandson Charles V depended on Banking firm of Fuggers to buy votes. Successful marriages so Charles pledged Netherlands to the Fuggers. Maximilian - surrounded by artists & learning. - Durer designed 'Prayer Book'. Muscovy mentioned end of 16th C. Poland - Mikolaj Kopernik - Cracow natural philosophy. Scandinavia - Tycho Brahe. Netherlands - Erasmus ambassador of Humanistic Renaissance to all nations; Vesalius of Brussels. Antwerp rose due to diversion of oriental spice trade from Venice to Lisbon etc., central. Wealth of Portugal & Spain slipped thro fingers to Welser Fuggers, & other bankers est in Ant. Sacked by Spain 1576. Leiden 1575. France first to have national sovereignty under Louis XI over Burgundy. - estab printing at Sorbonne. - remarkable man. 3 French Kings wasted substance on Kingdom of Naples - Leonardo died near Amboise with Francis I, armoured knight eclipsed by gunpowder, syphilis. - F. fnded Colleges & Chairs for Latin, Grk, Hebrew & new Maths, reign ended in persecution & extinction of Paris for learning. Edict of Nantes 1598 & religious wars - destitution. Moors from Spain 1492. Portuguese navigators. Spanish oppression except some including Cardinal Ximenes fndr new Univ Alcala. Humanism no roots. Switzerland 13 Cantons. - Basel, Erasmus; Zurich, 'Auld-reich' Zwingli. Former, Ioannes Froben greatest of scholar printers printed friend Erasmus & employed Holbein, Felix Plater & Caspar Bauhin-anatomised better thn Padua, latter fnded Botany. House of Froben, son Hieronymus 1527, Erasmus died there 1536 stands. Zurich, encyclopaedic genius Conrad Gesner & his publisher Christof Froschover. Italy - city States - Venice - sea trade. Florence, nominally republic, Medici Banker Princes last Lorenzo il Magnifico died 1492. - disappeared politically 1574. England released from Europe during 16th Cent. - Reformation without European massacres. Caxton & Wynkyn de Worde did not print learned works, no market. Italian, Polydore Virgil called in to write Tudor history. No new ideas from Univs but Erasmus fnd spiritual home.

Chap. 4. Communication -

Of Ideas. Cardano believed in immediate intuition not thro words. Jung, symbols of Alchemists a dream from subconscious, escape. Printing, earliest date 1450 but local till Sack of Mainz 1462, first Italian 1464 so literary Ren begun before it. - Missals Bibles, patristic, popular Latin Cicero; Grk printing advanced by Aldus Manutius near end of cent. Mms preferred by some. Too late at beginning of Ren then to make profit for half 15th Cent.

Printers' difficulties, no effective copyright, censorship - Indices, war. Agencies in other countries, Aldus, Giunta, Plantin thro Fuggers. Patronage - no author paid till 1510, bks made views kn.- scientific writers servants of princes thro' 16th cent. later deds to Senate of town - printers took initiative & could pay for popular book - royalties form. Earliest price list 1489. Aldus list 1489 first modern. Editions about 1000. Libraries - Vatican fnd Nicholas V d 1447, Louis XI reorganised Louvre became Bibliotheque Royale also Geo Pico della Mirandola, Nicholas Pol & Hieronymus Munzer. N. Pol physician to Emp Maximilian I - invest guaiactrtant for Syph. - 467 works Arabic, medieval & contemporary 4 Canons, 0 Hippoc, 1 Galen several Champier's. Theol. N.P. 1470-1532. H. Munzer (Monetarius) 1437-1503. Med studies Paxxxvia then est Nuremberg of Durer. - formation of Library - Goldschmidt 185 works, 18 Theology, 32 Philosophy, 29 Medicine etc. Cicero, Ovid, Ed. p. Euclids Elements given by Bernard Walther patron of Regiomontanus. Travelled & bought books also oral communication like Erasmus. Print identical copies. Fine arts atelier of Andrea del Verrochio in Florence with Leonardo. Awareness of living things, animals painted & plants - still leaf carving in English Churches - later plants individually conceived. No illustrations in Med before Fasciculus Medicinae 1491 - incunabula herbals not for them. Proto-scientific knowledge handed on orally in craft lore esp chemistry.

Chap. V. The System of the Sciences in the 16th Cent.

Imagination added to rationalism & empiricism - new ways of looking at familiar facts. Sciences in 1500? Aristotle with divine science of changeless spheres & natural phil of growth in Univs thro cent. Arts - trivium, Grammar, Rhetoric, Phil. quadrivium, Arithmetic, Geometry, Astronomy, Music not applied in 14th cent in detail. Vienna Maths & Astronomy not Paris. Scientific thought originated outside Univs. Start with Mathematical Disciplines - Used for practical purposes - kept by princes for astrology. Some advances in pure Maths. Astronomy Maths of Heavens. Maths science of eternal relationships of form & magnitude. Opp was Physics wh embraced Geology. Animate Nature - Aristotle - Soul plants, nutritive or vegetative, animals, sensitive; man, rational. Biology from Medical Schools Botany separate discipline end of Cent, Zoology just emerging. Medicine set as crown on Nat. Phil. - Copernicus etc. included Nat Phil from Faculty of Arts, astronomy & maths., Galen & Avicenna, latter under cloud as cent advanced, opp to Rome. Also embraced theoretical science & Phil.

Shall study each division for light on problems of origins of modern Science - knowledge about year 1500.

Chap. VI. The Mathematical Disciplines -

Before end 15th Cent. 200 Maths bks printed in Italy, most Arithmetic not Geometry. Latter were 15 Bks Euclid (1-13 Euclid 300 B.C. 14 Hypsikles 150 B.C., 15 composite); Archimedes; Conics of

of Apollonius; Spherics of Theodosios of Tripoli, Geometrica Speculativa of Thomas Bradwardine (archbishop; 1290-1348). Only Elements of Euclid & commentary of Campanus of Novara printed before 1500. Trigonometry non-existent but Menelaos of Alexandria c 100 A.D. (I-2) had separated spherical Triangles from Astronomy. First bk on solution of Triangles 1533 - Regiomontanus, Trigon. Arithmetica of Boethius basis of Academic Arith till late 16th C. Ars Logistica - Cuthbert Tunstall 1522 - Arabic Hindu numerals avoided Abacus. Leonard Fibonacci of Pisa 1202 - Liber Abaci then Summa de Arithmetica 1494, Pacioli (1450-1509) kn as Paciolo & Luca de Borgo. 'Treviso' 1484 first printed Arith. etc. Robert Recorde's Grounde of Artes 1528, held own till 17th C.

Latin Schools developed & tight Maths before Univ stage - Arithmeticaepracticae methodus facilis by Gemma Frisius 1536 - Gemma, Reinerus (Frisius) 1508-55 - most successful. Cardano's Practica arithmeticae generalis 1539 etc.

Long division 1460 not widely used till 17th C. Fractions to decimal scale by Simon Stevin 1548-1620 first 1535. Newton still used vulgar fractions in Optics cent later. Recorde's Whetstone of Witte which is seconde parte of Arithmetike etc 1557 - Algebra, greater or occult part of A. Origin of word Algebra all mixed up - From Arith of Diophantos 4th C. Trans of Abu Abdallah Mohammed ibn Musa al-Khowarismi (Khiva) d 850 'ilm al-jabr etc' meaning 'restoration & opposition' - mixed up with birth place al-Khowarism i & Latin Geber for Arabic Jabir. Ioannes de Sacrobosco 1230 called his arith 'Algorismus vulgaris'. A. Riese 1489-1559 wrote Die Coss by celebrated Arabic master Algebra 1524. 1537 first English printed arith. Recorde in Whetstone calls rule of equation Algeber's.

Coss is thing to be extracted. Robert of Chester 1145 first power 'root'. Algebra grew out of Geometry & 3rd power called cubus & 4th quadrati quadratum. Question of Notation & signs - earliest mms of Diophantos 13th C. etc. Solution of Equations from 2,000 B.C - transposition & reduction Cardano, Galileo etc. Prelude of modern Algebra in 16th C. Equations of all degrees have general solutions - greatest achievement of cent. Century of Algebra 16th.

Geometry otherwise - no advance on Elements Euclid 1482, Conics Apollonius 1537 & Archimedes 1544 before 1639 when Desargues 1594-1662 laid fndation of projective Geom. Restored the ancients.

Trigonometry was separated, - dev out of Geom. to find measure of Heavenly Bodies - spherical triangles implicit in Hipparchos II-2 B.C. in Spherics of Menelaos I-2 became explicit also Chord equal twice Sine of half angle at centre. Ptolemy based Trig of Almagest on it.etc. Sinus a fold. Arabs dev Trig indep of Astronomy - Nasr ed-Bin 1201-74. in Persia 13th C. 14th C. Oxford Maths. Overtook East when Regiomontanus (Io Mueller) 1436-76 wrote 1464 epoch making De Triangulis Omnimodus, printed 1533. Werner - XVI-1 De Triangularis & Apian P. 1495-1551 - Instrumentum Sinuum 1541; Petrus Apianus. Canon doctrinae Triangulorum 1551 by Rheticus G. 1514-76. R. Georgius Ioachimus. - Pitiscus Bartholomaeus 1561-1613 named new discipline in Trigonometriae 1600 - doctrine of triangles. F. Viète 1540-1603 used purely algebraic methods in his Trig. One of greatest inventions in pure Maths 'The Wonderful Canon of Logarithms' by John Napier 1550-1617. Squaring Circle & ruler & compass. Viète outstanding Math of C. Academic Gregories.

Astronomy & astrology for influence on man. Cosmic rays. Regiomontanus both. Horoscope see at the time. Humanist-critical revival by Peurbach G. (Georgius Peurbachius) 1423-61, & Regio; cosmological revolution by Copernicus; shift from speculation to observation by Tycho Brahe 1546-1601. No 669 Tanstetter Georg edit - Tabulae aegyptium Magistri G. Peurbachii - Vienna school of Astronomers leading in 15th C. No 513 - G. Peurbach - Theoricae Novae Planetarum c 1460. Ioannes de Sacrabosca (John of Holywood) XIII-1 - Tractatus de Sphaera c 1230.- printed 1472. Ptolemy, Claudius 139-161 A.D. Almagest in version of Arabic astronomer al-Fargani (IX-1) d 820 or by Honain ibn Ishaq in 9th C. (809-77). Arabic trans into Latin by Gerard of Cremona 1179. Latin version from Grk in S Italy 1164. Original works of Arabs between 9-13th C. Poseidonius 135-51 B.C. & pupil Geminus (I B.C.) - Astronomers concern hypothesis for positions, Phil hypothesis consistent with observations. Eudoxos (B.C. V-2) (IV-1) rotating spheres to 'save appearances'. Kalippos added more (IV-1 B.C.). Aristotle - 8th sphere. Hipparchos (II-2 B.C.) more observation - Epicycle Deferent - physical theory lost. Ptolemy - equant.- not physical. Reaction by Ibn al-Haithan (al-Hazan) 965-1039 - planets varying distance.- used by Peurbach. Influential works of al-Fargani d 861 & al-Battani d 929 b 358, trans into Latin 12th C. Al-Bitruji (XII-2) De Motibus Celorum 1185 trans into Latin by Michael Scot 1175-1230.- spiral motion not epicycle rejected by Grosseteste R. Bacon & Alb. Magnus.- attempt at revaluation. Transval mediated by Cop. & effected by Kepler. Peurbach - Epitomy of Almagest completed by pupil Regiomontanus No. 558 - restored the Almagest. Rheticus says return to Ptolemy allowed Cop to prove his speculations. Sphaera no use to navigator or astrologer. Ptolemy excluded from schools. A. de Brudzewo (XV-2) commentary on P's Theoricae first to be printed 1495. Pupil Ioannes Mueller b Konigsberg hence Regiomontanus 1436-76 - publications at Nurnberg c 1475- contemporary scientific research.- Ephemerides, Tabulae Directionum, Disputationes contra Cremonensia etc book list c Archimedes, Conics of A., Spherics of Th., & Hero. - also calendars from own observations in Observatory, sole in Europe, tables were navigational aids. This promise saw no fulfilment for half a century when first step towards new astronomy taken in 1509 when Cop made mns copies of Commentariolus, lost for C' Copernicus 1524 wrote to friend Cardinal Wapowski a crit of Johann Werner's (VI-1) Motion of the Eighth Sphere, 1530 text of De Revol suf advanced for patron Bishop Gise to urge publication. 1536 request from Cardinal Schonberg but persuaded by Lutheran Prof Georgius Rheticus 1514-76. & 'De Revolutionibus Orbium Coelestium' pub on death-bed 1543. Compromise between old & new. Sun no influence on Planets; daily rotation of earth. (Universe with Sun in central position). Problem about Hipparchos' displacement of equinox - circle in 25,000 yrs. 8th 9th 10th Sphere. Jew Tabit ben Korra (Thabit ibn Qurra - Forbes) 830-901 new theory of Trepidation- equinoxes oscillate. Alphonsine Tables 1252.

Cop greatest revolution in scientific thought since Ptolemy - no effect in 16th C. - not taken seriously tho' Reingold E. 1511-53 Erasmus - Prutenicae tabulae coelestium motuum, based on it. First support from Reinerus Gemma (Gemma Frisius) 1508-55 in letter to Ioannes Stadius (VI-2) incorp in his Ephemerides novae Ed p. 1556, ref to 'Hermetas Trismegistae Iatromathematica & hoc est medicinae cum mathematica conjunctio'. Refs to Gemma Frisius letter. Latter refers to Petrus Apianus whose Cosmographia 1524 was Bible of Renaissance world view. Support by Thomas Digges 1543-95 in Alae seu scalae mathematicae 1573 in the Perfit Description of the Coelestiall Globes in his revision of his fathers L Digges 1510-53 A Prognostication everlasting etc 1576. Claims also for Robert Recorde 1510-58. - Castle of Knowledge 1560. Tycho Brahe b 1546 noble lineage - rejected Cop on physical absurdity. Astrology & Alchemy also interests. Legacy to Kepler of massive observations on Mars. Observation & measurement - revolutionised physics. Instruments - astrolabe & armillary. Former recorded by Ioannes Philoponos c 500 tho Ptolemy wrote Planisphaerium. Entered Europe 12th C from Arabs. Illustrated compendium 1513 by Ioannes Stoeffler (syn Stoflerinus) 1452-1531 on its use. R. Gemma - Astrolabum Catholicum - 1556 - dedn by son Cornelius to Philip King of Spain, England & France, also one of authors of Annulus Astronomicus in wh Eboracum is among Scotiae Civitates & Eboracensis civitas east of Edinburgh might be Glasgow. Time measures - clepsydra from Grks with mercury for water also altitude of sun. Precision in reading scales. William IV Landgrave of Hesse 1560 established first Observatory in Europe cent before Paris & Greenwich & persuaded Frederick II Denmark 1576 to provide place for Tycho. Uraniborg - research school - portrait of Geo. Buchanan seen by Jas VI. Duncan Liddell there 24.6.1584. Demonstration of New Star 1572 & Comet 1577. (Snapey & Howarth - Source Book in Astronomy N.Y. 1929). Astonished at new star in Cassiopeia in celestial world where neither generation or corruptio Comets portents tho Aristotle, fiery exhalations carried up from outermost elements of Ether. Peter Apian in Astronomicum Caesareum showed tails away fro sun not earth. Measured position of new star not a planet. De Nova Stella tract 1572. Used Trig of Regio. Comet measured & must have passed thro Spheres of Planets still believed. Entailed lot of Maths not accepted in Univs. New world system 1588 De Mundi aetherei etc (Tychoonic System - Earth central & immobile, planets round sun. Forbes). Mix up. Rejected spheres. Believed influence of Stars on Mind & well being. - admired Paracel. Over-bearing esp to critics - Bar Reymer (XVI-2) - sun at centres of orbits of Mercurius & Venus as old as Herakleides (388-310 B.C.). & John Craig (XVI-2) & protege D. Liddell for cladding. Maestwin Michaelis (1550-1631) Observatio cometarum etc 1578. Ioannes Kepler 1571-1630 Mysterium Cosmographicum 1595 created New Astron.

Chap VIII

Mathematical Practitioners & Maps, Charts & Surveys -

America 1492 - unknown plants - possible by new Astronomy of Peurbach & Regio. Traditional view that seeking Indies but mix up as usual. Correspondence of Columbus, by son Ferdinand, 1571 &

Paolo Fisico or Paolo Toscanelli giving support. In 1871 Latin original of T's letter to Canon Martins found but none of C. Great discussion midst modern biographers - Toscanelli 1397-1482 Florentine physician & authority on cosmography. Some think corresp forged. C chose from several authors to suit purpose. C. 1436-1506 - Ferdinand 1488-1539 - Life. Morison - Admiral of Ocean Sea 1942, repeated sail & find America not disc by New Science but courage, faith & seamanship, bumped into on way to Japan. Portuguese Navigators made use of Mathematics & coastal navigation more scientific. When crossed equator required Maths' solar tables or Regimento earliest 1509 - co-operation with Maths of Nuremberg. Prince Henry Navigator 1394-1460. Other voyages due to fixing latitude in Southern Hemisphere. Zacuto, Abraham ben Samuel d 1520 - Almanach perpetuum 1496. Longitude required dead-reckoning - Chronometry - Wt driven in lat 13th C. Giovanni de Dondi (IV-2) first description 1348-64. Tower clock still stands Padua 1437; earlier St. Marienkirche Lubeck destroyed last war. Travellers' watches. Huygen's 1629-95 pendulum.

Before rediscovery of Ptolemy's Geography navigators used 'portolan' charts. oldest 1300. Compass used by Normans in S. Italy 11th C. Pierre de Maricourt (Peragrinus) (XIII-2) famous tract on Magnet. Use of charts. Correction allowed for by Marinus of Tyre (II-2) as Ptolemy in his Planisphaerium trans from Arabic by Herman of Carinthia (XII-1) in 12th C. Tratado de Sphera 1537 by Pedro Nunez 1498-1577 Portuguese - rumb - great circles. Cartographer - Gerard de Cremer (Gerhardus Mercator) 1512-94 - Nova Descriptio - adapted for navigators 1569 M's Projection. - cylindrical. Martin Fernandez de Enciso (Summa de Geographia) & Pirckheimer, Bilibaldo's interpretation of Ptolemy's Cosmo or Geographiaae - eastern bend of Scotland rectified.-(1470-1530). John Dee (1527-1608) - Welsh, English Univ made navigation practical - Preface on importance of Maths in Elements of Geometry first trans into Eng. by H. Billingsly 1570. D. had first scientific library, like Cardano Astrology Alchemy & Magic - mob burned library. Scale of Latitude to correspond with each degree of Longitude by Edward Wright 1558-1615 in Certain Errors in Navigation 1599.

Map making & surveying diff, more accurate measurement. Died out after Ptolemy - revived in Byzantine Emp (XIII-2) when Maximus Planudes 1260-1310 constructed maps fr P's Geography. Many people involved with increasing knowledge but errors. Nicolaus Germanus - Ulm editions of P's Geography wh he revised - P first trans into Latin by Iacobus Angelius 1409 - well known to Arabs. Ger. (XV-2). I. Ang. (XIV-2). Martin Behaim 1459-1507 made first Globe. Reinerius Gemma introduced Triangulation 1533 - in Apianus, Petrus, Cosmographia. Problem of measuring arc subtending one degree at earth's centre - Eratosthenes & Ptolemy but one of outstanding achievements of 16th C. was measurement by Jean Fernel 1528 in Cosmotheria. First collection of maps - Ortelius 1564 in Theatrum Orbis Terrarum - Ort. A.-1527-98. Atlas first used by Mercator 1585. Surveyor's instruments - in Rudimenta Mathematica 1531 by S. Wuenster 1489-1552. Theodolite mentioned by Digges Pantometria 1571.

Chap LX The Nature of the Physical World -

Physics of Aristotle - change of form, substance or position - higher than sphere of Moon changeless. Philip Melanchthon - *Initia Doctrinae Physicae* lect to students mid 16th C. - definition of Physics. Wittenberg. Contemplation of nature part of worship of God. 'Physics' seeking change, generation & decay is Chemistry, also basis of Medicine - first modern work on Physiology called *Natural Part of Medicine* - Fernel - 1542 - renamed *Physiologiae* in first collected Works *Medicina* 1554. Aristotelian principle - each element seeks its proper place. Galileo 1592 in *Sermones de Motu Gravium* sought to improve on A. Footnotes to A. G's solution of problem of motion helped found Physics independent of 'physics' - beginning of modern science. Motion displaced from central position. Varro, Michael - *De Motu Tractatus* 1584. G not unaided creator of modern science - teachers; Archimedes involved also.

Problem of Motion - al-Farabi d. 950 *Enumeration of Sciences* trans Gerard of Cremona in XII-2 - Sc of Weights & Math Devices are part of Mathematics - lever & dynamical approach of Arist etc. St Albert in comment of Avicenna & Averroes - motion is *Forma fluens* not *Fluxus formae* etc. Thomas Bradwardine & disciples at Merton. Mix up. Archbishop T.B. 1290-1348 - *De Proportionibus* - made mathematical formula of velocity, force, resistance. etc. - novel concepts - Mertonian Rule - Impetus Theory - motion an entity wh could be transferred. Paris School Nicole Oresme d 1382 proved Mertonian Rules by intensive forms & diagram. Richard of Swineshead (Suitheth) (XIV-1) *Liber Calculationum*, Padua 1477. Activity there, Pavia & Venice not Paris - deplored by Scot George Lokert (XVI-1) Prof Sorbon edit *Quaestiones et Decisiones* etc 1518. Galileo did not just return to Archimedes abstracted essential-relata. Alb influenced by radical nominalism of William of Ockham - Ockham d. 1347.

Projectiles - Cardano - *De Subtilitate* 1550 - theory of machines. Tartagliax, Nicolo 1505-59 *quesiti et Inventioni* diverse 1546, three *Colloquies* into English by Cyprian Lucar on gunnery (XVI-2). Ubaldo, Guidus, E *Marchionibus* (syn *Montis* (syn *Monte*, Guidubaldo del) - *Mechanorum liber* 1577.

Motion involved in Vision - propagation Eye to Object - Demokritos 460-357 B.C.; Object to Eye Pythagoras VI B.C. & Ibn al-Haitham (al-Hazan) 965-1039; combination from eye & luminary Plato. Euclid accepted last - mathematical approach & physical from Neo-Platonists to Optics. Former greatest work on Optics before Kepler al-Hazen (Hasan Ibn Hasan syn Ibn Haitham) *Opticae Thesaurus* 1572 - section of eye with membranes continuous with those of Brain. Archbish J. Peckham 1240-1292 - *Perspectiva communis*. Name for optics - reflection & refraction. Cimabue 1240-1300 & Giotto 1276-1336 begin to show perspective in paint. Witelo b 1230 in al-Hazen. L. Digges used perspective glasses ac son. Lipperhay, H fl 1610 used coaxial lenses, Galileo a tube.

Rainbow - R. Bacon, Witelo, Theodoric of Fräberg d 1311. etc.

Neoplatonist analogy of light as model of all action in nature - math expression by Grosseteste R. 1175-1253 etc. Cardano heat related to motion.

Magnetic virtue & electric effluviuMagnet (lodestone) in letter of Pierre de Maricourt (Peràgrinus) XIII-2 in 1269 to Siger de Foucaucourt XIII - experimental. Dip towards north -William Gilbert 1540-1603 De Magnete... et de magno magnete tellure - separated proximate causation. New ground - term Electrics also De nostro Mundo Sublunari. Worked in ideas of 'physics' insisted on experiment - instrument versorium first step to dynamo.

Solutions & chemical compounds - 'physics' concerned with 'mixts'. Concern of chemists alchemists physicians craftsmen whose interpretations overlapped in addition to 'physicists or natural philosophers'. Libavius A 1560-1616 ante Galen struck off. Paracelsus allied chemistry to medicine but interpreted thro NeoPlatonic astral mysticism & the contemptuous of gold making alchemists used their mercury & sulphur as first principles & added salt. Alchemy of George Ripley d. 1490 Canon of Scarborough also Bridlington dedicated poem to Ed IV The Compound of Alchemy & spiritual - or the ancient hidden art of Archemie containing the right & perfectest meanes to make the Philosophers Stone, Aurum potabile with other excellent experiments. Divided into twelve gates. First written by the learned & rare philosopher of our nation G.R. sometime Chanon of Bridlington in Yorkeshyre & dedicated to King Edward the 4. Whereunto is adioyned his epistle to the king, his vision, his wheele & other his workes never before published: with ~~xxxx~~ certain briefe additions of other notable writers concerning the same. Set forth by Raph Rabbards Gentleman, studious & expert in Archemical Artes' 1591 - Dedn to Queen Elizabeth 'mauger the Divell, the Pope & the King of Spaine'. Ed p 1471.

Chemistry (by followers of Paracelsus) Spagyric Art) & Alchemy. Latter origin to Alexandria, reached west thro Arabs - Geber i.e. Jabir ibn Nayan al-Sufi (VIII-2) prob others - Summa Perfectionis.- mystical tradition, West 13th C. Mystic Phil applied to Chem processes. Base metals into noble - 2 principles - volatile mercury & combustible sulphur - Brethern of Purity, Basra 950. G also in works of editor Gretalorus, G. - Arax Alchemiae & Auriferae 1561 & 1572. Secret of Secrets by ar-Razi (Rhazes) 865-925. Gold making questioned by Avicenna 1020 in al-Sifa, but cont in Liber Claritatis & Liber de Aluminibus et Salibus prob from R. Also works on Quinta essentia not 5th element of Aristotle but living breath capable of creating life.- pneuma. Sophie Mere & Sulphur are souls. Every substance has its specific essehce wh can be separated, e.g. in mms of Franciscan Ioannes de Rupescissa printed 1597 - 5th essence in addition to 4 qualities of body is incorruptible - aqua ardens, anima vini seu spiritus, aquae vitae. Redistillation props of a spirit, preserves meat, also chemical operations, Corrosive water Aqua fortis; essences of substs obtained by aqua ardens, also extraction of gold. Braunschweig, Hieronymus - Liber de arte Distillandi etc 1512 - Distillerbuch full of Stills. Dominican Chapter at Rimini 1288 forbade erection of such instruments of Alchemy. Alchemy mystic philos side & practical side allied to Chemistry.

16th C. wide distribution of works prev in mms than original thought - Albertus Magnus 1193-1280, Liber Aggregationis also Arnold of Vil. 1240-1313 & Raimundus Lullius 1232-1315. Also

more theoretical Brunschwig's Liber & Onomasticon of O. Brunfels d 1534 both with medical bias. Paracelsus also this period.

Mining & metallurgy part of technology from original 'Physics' G.A. Pantheo XV-1, Voarchadumia 1530; L. Ercker XVI-2, Aula Subterranea 1574; V. Biringuccio XVI-1; Pirotechnie 1540 & Georgius Agricola 1494-1555, De Re Metallica, 1556, De Natura Fossilium 1546 & De Ortu et causis Subterraneorum 1546. - Theories of origin of minerals & fossils - based on 3rd bk of Aristotle's Meteorologica - metals from vaporous exhalations from rocks, dry smoky exhalations as non-fusible fossils also metals. - from 4 primary qualities - fruitless controversy of proportion of wet & dry of generative power of heat & cold - mercury & sulphur in genesis of metals, by chemists. To a head in reply of Joseph Duchesne 1554-1609 to attack against chemists of Jacques Aubert d 1586 in De Metallorum Ortu et Causis - Aubertus Iacobus - one of major documents in war between followers of Paracelsus & the 'orthodox' mainly Galenists - exploded by Joseph du Chesne (syn Quercetanus) Ad I. A. Vindonis de Ortu etc - contains a reply to 'slandorous letter in wh A. tried to overturn some remedies of the Paracelsians, as he calls them' 1575. Wrote other bks in List No 216 in wh defends 'orthodoxy' of Hermetic Medicine 1605. Moresinus Thoma (Morrison Thomas, Liber novus de metallorum causis etc 1593 - In addn to Jas. VI inveighs contra Par. who 'Condemned Med to use of metallic Remedies' early alumnus of Aberdeen, for Elizabeth & cor with Francis Bacon. View confuted by Thomas Erastus 1523-1583 - Disputationum de Medicina nova Phil Par. etc - 4 parts 1572 Pt 1 - de remediis superstitiosis & magicis curationibus; 2 - Philosoph. Parac.; 3 - verae medicinae assertio; 4 - Epilepsiae, elephantiasis seu leprae, hydropis, podagra & colicis doloris. Wrote bks in list on Putredine, Astrologia, Auro Potabile & Comets, Varia Opuscula Medica 1590 & Disputationum & Epistolarum Med 1595. - taught at Basel & Heidelberg. Both sides claim Aristotle. No hope of science of Chemistry till rid of universalism of 'Physics' & ideological entanglement with Med, & principles, essences & qualities - appreciate Robert Boyle.

In De Ortu - Agricola, critical humanist, learning & grace, raised Min. & Met from crafts to Sciences. In De Natura Fossilium provides first classification of Minerals basis of chem analysis.

Pyrotechny - fire raising, chem mixtures back to Greek Fire used by Byzantine navy in 6th C. Gunpowder into Europe 13th C. First printed bk on G. in Augsburg 1529 Buchsenmeisterie a reprod of Feuerwerkbuch in mss from 1420. Science dashed by ball being driven by opposition of heat of sulphur & cold of saltpetre. No 758 Buchsenmeisterie 1582 is abbreviated edition - gun mastery, no author.

Towards end of century new stirring, Ren of Chemistry delayed - First bk of Chemistry - Alchymia by Andreas Libavius 1560-1616 includes Phil Stone but gives account of all materials & apparatus used - change from 'Mystery' to science - wrote several Bks in list in add to 394 & 396 - Neoparacelsia etc 1594 contra; Rerum Chymicarum 1595, corrupt Paracelsus, 4 bks beginning D.O.M.A. Alchemia - architect to Rotenburg. Not surpassed till 1675 when Nicholas Lemery 1645-1715 wrote Cours de Chimie. L defended transmutation.

Attack on alchemy also by chemist Nicolas Guibert 1547-1620 in 1603 - Alchemy.. assailed & demolished by reason & experience Guibertus Nicolaus. Chemistry for beginners, produced from the Fount of Nature & by manual experience abt 10 yrs later by Beguinus Johannes (Jean Beguin) XVI-2.

Chap X. The System of Animate Nature -

- Quotations re generation of Barnacle Goose - from fungi on rotten spars of ships - Avium praecipuarum etc William Turner 1515-68 - 1544; doubt truth of this legend De Arte etc by Fredrick II of Hohenstaufen 1194- 1250 - Church Authority to new science based on personal observation, but wrong way about. Hector Boece or Boethius 1470-1550 first Princ of King's College - Historia Scotorum, Paris 1526 - section on Nature of Claikie Geese - saw for himself 1490 near Castle of Pitsligo tree brt in by sea - worms & formed birds. Also fnd in masses of shells so seeds in sea itself. Working of Pneuma of Aristotle wh generates living things out of Elements. Francisco Redi 1626-97 - disposed of A's theory of spont gener of worms from from putrifying material v The Growth of Scientific Ideas, Edin
- XX 1950 by Wightman. Also fleas from water - Balduinus Ronsseus 1525-97 physician of Ghent De humanae Vitae Primordiis, Hystericis affectibus, infantilibusque aliquot morbis, centones 1594 No 585 - also wrote in list- De magno Hippocratis, Scorbuto 1585 & Venatio medica etc 1589. Worms in human body - Hieronymus Gabucinius - De Lumbricis etc 1547 also wrote No 284 De Comitiali morbo Libri III 1561 - Ep called Morbus Comitialis by Romans as occurence broke up Comitia - any general assembly; also Ioannes Schenckius - Observationum Medicarum rararum etc from Grafenberg 1595 - conts Gesner's story of seppents fnd in man's & girl's stomach. also wrote No 622 Observationes medicae de capite humano etc Froben Basel 1584. Andreas Baccianus XVI -2 De Thermis .. lib VIII 1571 - encyclopaedic - gives Pliny's views on generation of fish & frogs in hot water. also No 54 De Gemmis et lapidibus pretiosis etc - 1603. No 749 De Balneis printed by Iunta, Venice 1553 - handsome. J.C. Scaliger 1484-1558 account of Irish leaves changing into fish in water & birds on land. Ronsseus - fish from slime & decaying matter. Severin Pinxneau XVI-2 Pinaeus, Severinus - Opusculum Physiologium etc Gynaecology - denies change of sex. 1597.
- No sudden & widespread awakening of scientific spirit but Eric. Incunabula no new work of biological significance - latest in Anatomy was Mondino XIV early - 1250-1326. Before end of C. Aldus pub Dioskurides P. Ic De Materia Medica & Theophrastos 372-236 B.C. De Historia et Causis Plantarum.- in Latin 1483. Not used by Otto Brunfels d 1534 in Herbarum Vivae Eicones 1530 Better is German Herbal or Garden of Health printed 1485 by Schoffer of Mainz - preparations for Holy Land with painter for Herbs.- only Bot incunable of importance. Based on it Ortus Sanitatis No 589.
- X Editions of De Proprietatibus Rerum of Bartholomaeus Anglicus XIII-1. also Historia Naturalis of Pliny - Bible thro Mid Ages - 77 A.D. Commentaries by Niccolo Leonaceno 1428-1524 &

& Ermoalo Barbaro 1410-71 - Barbarus Hermolaus - In C. Plinji Naturalis Historiae libros castigationes.- Ed p 1492 - claims 6000 corrections merely textual - spirit is Literary, weighing of authorities rather than scientific. No weighing with ref to Observation. Also wrote No 59 - Commentary on Dioscorides - p 1516. Pandolfo Collenuccio d 1504 more interested in facts.

X Agriculture etc - classical works of Columella I A.D.; Palladius, Rutilius T.Ae. IV A.D.; Varro II B.C.; Virgil & Arnald de Villanova - Arnaldus 1240-1313 & Opus Ruralium Commodorum of Pier de' Crescenzi 1233-1321. 15th C. French incunable of special interest copied from earlier Iordano Ruffo XII-2 syn Ruffo, Rusto, Rufus, Russo - Libro... per conoscere la natura - earliest 1492.

Animals less enlightened than Plants - Birds De Arte Venandae cum Avibus 1596 printed fr mms. Natural illustrations in Herbal written for Francesco Carrara the Younger, Lord of Padua, 1391-1403 about 1400 also Materia Medica of Serapion the Younger? - Yahya ibn Sarafyūm IX-2 esp the Vine - may have been Flemish. Brunfels Herbarum 1530 showed confused nomenclature. Krateuas II-1 B.C. wrote work from wh drew Dioskurides P. I A.D. Dioscorides Pedacius - De Materia Medica libri V etc - Ed p Aldus Venice 1499 also 199 & 200. No system till Cesalpino A. 1519-1603. Brunfel's bk important, also works in Med in list. - importance due to woodcuts wh identify plants.- epoch making. Jerome Bock (Hieronymus Tragus) 1498-1544 - published bk in 1539 - guide to medicinal herbs & displayed them as living organisms - New Krautter Buch (De Stirpium, maxime earum, quae in Germania nostra nascuntur) Strassburg, 1552) refuted Dioskurides on Fern seed, himself gathered also learned from other plants - Brunfel made him publish.

Leonhart Fuchs 1501 - 66 - De Historia Stirpium commentarii insignes ... Basel 1542 in List with several other bks on Med. - most perfect of illustrated Herbals, on classical sources. - collaborated with artists.- Botanizer. 3 German fathers of Bot & Valerius Cordus 1515-54 - Lectures on Dioskurides edited by Con. Gesner pub 1549 - again pub 1561 (No 175) with Historia Stirpium or Plantarum, with medical compositions & account of fatal journey - Also bk on Pharmacology No 174 1546.

Botanical works - Switzerland, Gesner 1541; France, Ruel 1536; Italy, Mattioli, 1544; England, Turner, 1551; Low Countries, Dodoens 1554; Portuguese India, Garcia de Orta, Goa, 1563.

4 Protestant Germans for glory of Germany sim Symphorien Champier Hortus Gallicus pro Gallis in Gallia etc also for Italians Germanw & Spaniards, Symphoriano Campegio Equite aurato ac Lotharingorum Archiatro autore etc 1533 also other bks on List - Rosa Gallica 1513, Practica nova in medicina 1517 etc. Similarly William Turner 1515-1568 - The Names of Herbes - nombre of severe & strang herbes in England not in other nations. In Italy no study till 1544 but Chair of Botany (Reder of Dioscorides) 1534 in Bologna - first Luca Ghini 1500-56 introduced Herbarium with dried plants.- oldest extant that of pupil Gherardo Cibo started collecting 1532. First printed reference to that of Englishman John Falconer. Io Fauconerus Anglus, XVI-1 correspondent of Gesner by Amatus Lusitanus (J.R. de Castello Branco) 1511-68. Herbarium of

Felix Plater rediscovered 1930 in Botanical Inst Berne, cont original sketches of Hans Weiditz XVI-1 for Brunfel's Herbal, date noted 1529.

Garden - herb of Monastery of Reichenau in extant mms of the Abbot Walafrid Strabo d. 849. First Botanic Garden Padua 1542 with Egyptian plants by Prospero Alpino 1553-1617 before end of cnt. - portrait, Prof Simplicium Hortiq. Praefectus. Garcia de Orta syn Garcia ab Horto XVI-1 - Coloquios dos simples ... medicinaes da India etc Goa 1563 - wild herbs to garden of Univ of Coimbra; also No 488 Aromatum et simplicium etc 1593 - discuss of Bezoar Stone & ref to Anil wh named Aniline 3 cnts later. - physician in Goa (Portuguese India) for 30 yrs. by Carolo Clusio syn C. de l'Ecluse 1526-1609 - Ed p 1567. Illustrated version in Spanish 1578 by Christobal Acosta syn Christopher a Costa d. 1580 No 3. Columbus 2nd voyage unfamiliar plants & animals. Earliest work on strange plants by Pierre Belon 1517-64 Observations des plusieurs singularitez et choses memorables - in Greece Asia Egypt Judaea Arabia 1553 - No 71 is Latin trans by Charles de l'Ecluse 1589 Ed p 1553 - ddn to Cardinal de Tournon & dated abbey St. Germain des Pres. Belon another bk on Forestry No 70. Few yrs later account of Spanish West Indies by Nicolas Monardes b 1493 - No 456 De Simplicibus medicamentis ex Occidentali India delatis etc .. int C. Clusio 1574 Ed p 1565. several variations then The three bookes written in the Spanish tongue by the famous physician D. Monardes resident in the citie of Seville in Spaine & trans into Englishe by John Frampton, Merchant etc 1577.

Classification - classical of Theophrastos - trees, shrubs, undershrubs & herbs. Genus was unit. Early systematic herbal No 20 of Jacques D'Alechamps 1513-37 - Historia generalis plantarum etc. Ed. p 1587; wrote commentary on Dioscorides, Pliny & work on Surgery. - overlapping natural criteria, habitat, form. Morphological characters emphasised by Matthias Dodoens 1518-85 No 201 Historia Frumentorum, lrguminum, palastrum et aquatiliu herbarum etc 1569 Ed p 1565 (Dodoens, Rembert syn Dodonaeus, Rembertus) also others in List - Florum et Coronariarum etc 1568; Purgantium aliarumque etc. 1574; Stirpium Historiae Pemptades etc 1584; Medicinalium observationum etc 1585, Ed p 1591. - import. of P.M.'s. conts classical ac of beginning of Morbus Gallicus by Antonio Benivieni. De L'Obel 1538-1616 used leaf structure for arrangement. - used by printer Christophe Plantin 1514-88 No 528 Icones stirpium seu plantarum etc 1591 Ed p 1581. Gaspard Bauhin 1560- 1624 - wrks from 1596 to 17th c. morphol classif. & binomial nomenclature, also groups with certain medicinal virtues - Pinax theatri botanici 1623.

Cesalpino A. or Caesalpinus Andreas 1519-1603 No 116 De Plantis 1583 also other 2 bks on List - Quaestionum peripateticarum 1571 etc 1593 & De Metallicis 1602 Ed p 1596 - Aristotelian - classification on Seed. Adam Zaluzansky XVI-2 Methodi herbariae libri tres 1604 Ed p 1592 - cryptogams & phanerogams. Thurneysser, L or T(h)urneisser, Leonard 1531-96 - Opus per singula hominis membra digestum. etc etc - cuts show Umbelliferae, signatures, celestial signs, & essences, 1576 - signs of inward virtues on outward parts.

Animals in 16th c.; Aristotle plants & animals gradation of perfection due to sensitive soul. Plants first bec grtr pragmatic importance - first desire to extend *Materia Medica* of Dios. then interest in plants themselves - not till 1566-84 did J.C. Scaliger 1484-1558 make available latin trans of Theophrastos. Nothing sim for ans except Man Horse & Hawk. During 1530-50 when grt herbals produced only Wm Turner 1515-68 *Avium praecipuarum quarum apud Plinium et Aristotelem menti oest...historia*, 1544. 1550-60 renaiss of Zoology - Naturalists - Piere Belon 1517-64, Guillaume Rondelet 1507-66, Conrad Gesner 1516-65, Ippolito Salviani 1514-72, first 3 also botanists - R on fishes, B on fishes birds & animals. 1551 first vol Gesners monumental *Historia Animalium* on viviparous quadrupeds, 2nd v oviparous quads 1554, 3rd birds 1555 - relied on ancient authors, 4th v fishes & aquatic ans - acknowledgements. Other 7 bks of G on 1st mainly medical. Belon's *Histoire de la Nature des Oyseaux* - skeletons of man & bird. No advance on Aris classification, even retrogression. Recorded placental dogfish. Edward Wotton 1492-1555 *De Differentiis Animalium* - 1552 - Aris recog Invert ignored in 16th c but W included section on Insects & on Squids crustaceans & molluscs. G's note on Insects passed to Thomas Mouffet (o) 1550-1600 - *Insectorum sive minimorum animalium theatrum* 1634. First scientific monograph on Insects Francisco Stelluti 1577-1651, 1625 - mouth & limbs of Bee with newly invented microscope.

Plants earliest sign of Renais - from study to field - Gesner pioneer of Alpinism also Calzolari Francisco or Calceolari Francisco (1554) *pharmacopoea Veronensi* - opusculum to Pietro Andrea Mattioli 1501-77, No 434, de itinere .. in Baldum Montem plantarum etc - valleys. Tt as part of Med but Botanist term appeared at end of c. No clear cut Renais with animals & later away from books, only vertebrates. Anatomy - Galen, Barbary Ape; Salerno, pig. But Wm Turner dissected bird - c witnesses. Grt 16th c anatomist overlooked vide F.J.Cole's *History of Comparative Anatomy* 1944 viz Volcher Coiter 1534-76 - 2 bks in Brit Mus - *Externarum.. principium humani corporis partium tabulae* 1566, *Lectiones Gabrielis Fallopii de partibus similibus humani corporis ex diversis exemplaribus..* 1575. In addition to G's unfinished one, another giant encyclopaedia of Natural History by Ulysse Aldrovandi 1522-1607, aged 93 & only 4 of 13 vols printed when died - No 19 *Ornithologiae* etc 1603 - 3rd vol of wrk wh began to appear 1599 - syst hist of Birds - Barnacle Goose. Vol on Insects - first posth vol 1605 on Molluscs, Crustaceans & Zoophytes. Remaining vols 1667/8. Differ from modern bks of ref as from imaginative & moralising medieval bestiaries. Nothing of scope & authority till *Histoire Naturelle* of Buffon G.L. 1707-88, in 1749.

Chap XI - The Medical Disciplines - System & Method -

Padua pre-eminent in 15th - 16th c. Montanus, Vesalius, Realdus Columbus, Gabriel Fallopius, Hieronymus Fabricius later students Hieronymus Fracastorius & Galileo at time of Harvey. - no such lineage of teachers equalled elsewhere.

Salerno to 12th c. Bologna & Montpellier in 13th & 14th c but not eclipsed, latter Francois Rabelais 1494-1553 ed Aphorisms of Hip 1543 No 342 (7). Padua - new birth not only rebirth of Biology away from bookishness of Humanist Renais. All branches of Med. Attend to growth of Sc knowledge during 16th c. Underestimate of Medieval Sc bec ideas in works of Phil so thought signif for hist of Sc in Med bks pouring from press. In any age domin by Galen Med still a branch of Natural Phil & Med was & for 2 c later the entry to higher study of Sc. Review of works at beg of 16th C. Incunables Higher prop of contemporizx wrks published. Canon 14 times.

1491 first ed Fasciculus Medicinae sev editions, popular - Singer thinks eds not one work. Examd Facsimile Venise 1491 & Aberdeen copy of Venice 1500 - contents of former with compilation by G. de Monteferrato XV-2, with Practica & Consilium Eyr avoidance of Plague by Pietro de Tausignano - later eds short tract on Anatomy by Mondino 1250-1326 & De Aegritudinibus Puerorum by ar-Razi 865-925 - apart from plague tract no part later than 14th c - Sudhoff & Singer showed grtr part in mm about 1400 & popularised as textbk by Ioannes von Kirkheim (Ketham) by 1450 XV-2. Also Articella printed, 6 eds from 1476 to 1500 - no astrology - all Grk or Hellenistic except Ioannitius (Hunain ibn Ishaq) & commentary by Ali-Ridwan 998-1061 on Galen's Tegni, later eds Numerous Arabic wrks & one or two mediev Latin commentaries - nothing later than early 14th c. No 47 - Articella nuperrimw impressa etc .. Petri Pomarii Valentini Hispani 1519 Ed.p Padua 1476 - Contents in full earliest printed Med Encyclopaedia - Ioannitius (sic) fam Arab trans & scolar. Cnts - Hysagoge Ioannitii. Phylaretus, de Pulsibus. Theophrastus, de Urinis. Hippoc 16 wrks. Io Damascenus, Aphorismi. Celsus, Flosculi medicinales. Arnald de Villanova, Parabole. Galen, Tegni li lll & later trans by Laurentius Laurentianus. Avicenna 5 wrks. 'Almansor'; Textus novi ad Almansorem qui est de egritudinibus a capite usque ad pedes. Jac de Partibus, Summula super antidotario Mesue. Descriptio ponderum medicinalium mensurarum et dosium brevuario Aiseir (for Theyseir).

Avicenna's re-exam of Galen basis of Canon 11th c. persisted beyond 1500 - med pract traditional. No 351 Husain Abd Allah syn Ibn Sina, Avicenna 980-1037 Liber Canonis, de medicinis cordialibus et cantica cum castigationibus (corrections) Andreae Alpigi etc. Juntae, Venice 1544 - based on first trans from Arabic into Latin by Gerard of Cremona, Ed p Brit Mus Cat fr press of Brethern of Common Life, near Cologne 1465-78. & others. Hippoc more printed before 1500 after 1530 steady flow of Galen esp 'star' of Eng Renais, Thomas Linacre 1460-1524. Galen -

Maj of wrks trans from Greek into Syriac, others direct into Arabic by outstanding scholar 'Ioannitius' Hunain ibn Ishaq 9th c. - many still extant. G's On Medical Experience rec pub with Eng trans-Grk original not kn in west. H physician & comp first kn systematic textbk on Ophthalmology - ensured G's pre-eminence in western med when Islamic influence felt shortly 1100 when Constantine the African b 1037 began to trans Arabic wrks into Latin at Salerno & Monte Cassino. G. more appeal than Hip to Islamic mediators. G expounded his system in Methodus Medendi libri IX ad Hieronem kn as Ars Magna. Summary for friend Glaucen - de Medendi Methodo, but most popular for cents, phys Pocket Book - Ars Medica, Ars Parva or thro Arabic Infl - Tegni.

Tegni of great importance, 2 commentaries by Ali ibn Ridwan 998-1061 & later by Jacopo da Forlì d 1413 printed 1475; also printed with 2 comms in 1515 No 287(23) - Antiqua Thegni Galeni cum commento Haly Rodan.... cum expositione Jacobi Foroliviensis, Prov.-1636 Lord Lindsay of Balcarres, well known Alchemist. Ascendancy of G in 16th c helped by effort to stamp out corruption of Arabse.g. No 280 Fuchs L. - De medendis etc. 1539 - written for those who go to Arabs & 'futile crowd of medical barbarians'. Could not read Hunain's trans into Arabic. Better Latin versions became available from Grk with Linacre.- orthodox ascendant over Arabised Galenism.

Leonhart Fuchs in Art of Medicine in 10 editions in mid c. Appeared first 1531 as Compendiaria & succineta admodum in medendi artem (abridged & concise introductio to the healing art), 3rd ed new bk No 278 Methodus seu ratio compendaria cognoscendi veram solidamque medicinam ad Hippocrates & Galeni scripta recte intelligenda mire utilis etc 1550 - conts phrase 'Physiologiae hoc est tractationis de corporis Humani natura' earlier than Fernel also refers to 'charissimi amici D. Andreae Vesalii' Tbingen 1543. Important in assessing changing view point in Med. 1594 still larger 3rd Title No 279 Institutiones Medicinae - Institutes of Med. or Physic i.e. Physiology - to help proper apprec of wrks of Hip & Gal although frn of Vesalius 1543 - based on G. but not slavish. Pub Textbk on Practice of Med in series - No 280-2 De Medendis singularum humani corporis partium etc 1539 & De Medendi methodo etc 1539. 281 - De sanandis totius eorporis humani corporis etc 1543 & 282 - De curandi ratione etc 1568 - critic & praise of G. Dedication gives comprehensive scope of Med. Educ - Grammar, Grk Latin, dialectic, geography, astronomy & maths, philosophy - G says every Phys must be a Phil., Physiologia, anatomy, dietetics Hygiene & materia medica. Physiologia important in G's On the Natural Faculties but even to Gilbert, W's (1540-1603) De Magnete 1600 not distinguished from 'physics'. Fuchs defines it dealing c 'nature of human body' leading to title of bk of Fernel J 1497 - 1558 No 249 - de Naturali parte Medicinae 1551 Ed p 1542 renamed Physiologiae Lib VII in first collected edition Medicine 1554. Sim Anatomy - at beg 14th c Guy de Chauliac XIV-2. Dietetics & hygiene corner stones of Hip. and later Celsus with plain living & open air exercise. Fuchs finally deplored ignorance of Materia Medica as a supporter of G. who differed from Hip in his complex mixtures of vegetable origin - F. admitted Arabs made progress by using plants unknown to G..F. also required knowledge of virtues of 'metals, stones, gems, earths & of those things which animals, the sea & waters yield'. Text, F. gives theories of G. who had been raised up by God. Med not a science based on reason but an Art gained by use and practice - one & indivisible. Grk Med 5 department Physiology; Hygiene like Preventive Med c titles De Sanitate Tuenda; Semiotie, study of signs c knowledge of past, inspection of present & prediction of future (Hip stressed Prognosis as well as Diagnosis) cont pulse & urine, heavenly portents & critical days; Aetiology also kn as Pathologia ac Fuchs that which 'seeks out the causes of affections praeter naturam & symptoms of disease' No 205 Dodoens includes cases fr Liber de abditis nonnullis ac mirandis morborum et sanationum causis 1514 by Antonio Benéveni - more rational approach to Pathology; Therapeutics - titles de Medendi Methodo

wh may involve Surgery - Pharmacology based on De Materia Medica by Dioskurides 1st c A.D. cont for 16 cents.

Galenic Physiology - heart of Med taught by Fuchs & accepted 16th c. Body of 4 elements with pairs of qualities, mutual interaction bec composed of qualities in first matter. Ac to prop of qualities have characteristic Temperament - spring wet & warm also infancy. - pueritia to 15 yrs. Perfect T an ideal. Remaining Natural components - 4 humours - blood, phlegm (pituita), Black & yellow Bile, on correct balance depends character - Sanguine, Phlegmatic, Melancholic & Choleric, when one predominates. Also the Spirits - Natural in all living things, vital & animal. - provide reasons for actions & faculties. Among the 7 Natural components Fuchs includes 'Parts' of body - flesh, bone, heart, hand etc classified by Aristotle into similar - tissues including arteries, ligaments, nerves etc & dissimilar as organs which do not divide into parts sim to whole. These Parts differentiate G's Phys from that beg with Harvey. Food converted into living Part fundamentally in gut by Coction, to Portal Vn where changed into Blood & charged with Natural Spts to Liver, & Rt Hrt. - thro Septum or grt prt thro caval vns to body - ebb & flow in both routes. Left Vent rec Vital Spts from Air brt from Lungs by venous Arts (Pulmonary veins). Arts distrib this vitalised bld to body - that wh reached Brain rec from Rete Mirabile (not human Brn) the Animal Spts conferring higher activities of animals - this form of Pneuma distrib to body thro Nerves fr Brn. Schema of all-wise Providence. G as good anatomist as 16th c. - in Against Erasistratus demons Arts cont Bld imbued with Spirits not merely Air.

Layman asks why advanced anatomy in 16th c. & circulation in 17th c. did therapeutics remain same? e.g. Charles II also martyr. Suggest Physiol after Harvey too many abstractions only valid after gen. Phys. of Claude Bernard. G's phys insight into Mens sana in corpore sano - only psychosomatic. had to falsify details, thro knowledge of structure. - anatomy had to become sep from Phys. To become inductive. Padua - commentaries on G's Tegni - threefold doctrine of Med - Compositiva, Resolutiva, Definitiva. The corresp of first two to these forms of statement to those discussed by Aristotle in Posterior Analytic pntd out by Haly Rodan in Com on Tegni. Resolutio assertion of a Cause from the effects, Composito, demonstration of effects if supposed cause is operative - J.S. Mill 'inductive-deductive'.

Med. School of Padua appeared with famous physician Jacopo da Forlì whose bk on Comment of Haly Rodan printed 1475 & 5 eds before 1500 No 237 (23). Also Ugo Benzi (Hugo da Siena, Hugo Senensis) 1370-1439 commentary on Tegni prntd 1496, corrected in 1505 by N. Leonicensi 1428-1524. Preoccupation of Padua with method due to absence of Faculty of Theology apt to attract most brilliant also its Averroistic philosophy - cont to be tght by Paul of Venice d 1429, Gaitano da Thiene, (Cajetan), Augustino Nipho(Niphus) 1473-1550, Alessandro Achillini 1463-1512, Pietro Pomponazzi 1462-1525 & Giacomo (Giacomo) Zabarella 1533-89. Last predon Humanistic Prf of Padua was Giovanni Battista da Monte (J.E. Montanus) 1488-1551 before Vesalius. Published 1536 1st Latin trns of 16 bks of Aetios of Amida & 1546 summary of Tegni none of own teachings or Consilia till after death. Collections of works by several editors e.g. -

Girolamo Donzellini XVI-1, Gaspar Peucer 1525-1602, & Martin Weindrich XVI-2 in Aberd collection - Consilia in sep volm by Ioannes Crato 1519-85 No 460 - Consultationes Medicae. Antea guidem Ioannis Cratonis Vratislavensis etc 1572 - high esteem. Donz's 1557 includes Methodus Therapeutica of J. Crato & De Medendi Methodo 1544 of John Caius 1510-73.- both prefaced by discussions on method. Windreich says deduced principles of Art of Med. from most recondite philosophy & fr majesty of nature, nil without proof unlike Arabs etc. Tributes to M fr A.M. Brasavola 1500-70, G. Fracastora 1483-1553, V. Trincavelli 1496-1568 & Alexandrini; M. stated key to Method of Med was recognition of its End - art of preserving or restoring Natural state. Method of an Art is rational means of attaining its End - concerned with discovery not proof of syllogism. Galen says cannot comprehend Art from books bec concerned with particular problems. Mont- Art to be based on methodical generalisation from facts - not by Methodus Demonstrative wh is for Science whose end is knowledge but end of Art is action, concerned with particulars to which this method not applic starting from accepted truths & arriving at necessary conclusions. Alternatives - rhetorical, divisive, definitive, resolute, compositive discussed by commentators like Alexander Aphrodisias. Rhetorical dismissed - divisive & resolute necessary for Med., former since Universals in Intellect may be applied to Particulars & latter since Intellect faced with Particular may regress to first Principles. Compos & definitive methods belong to exposition of Art rather than creation. M. not clear between Method & Order. Zimara d 1532 + Method concerned with discovery & demonstration Order with literary exposition & teaching. Some confusion in their minds. Revival of ancient controversies by masters of Greek & observers of natural phenomena or no progress at all - Mont equally famous for clinical teaching as for his Method.

Chap XII. The Rise of the Anatomy Schools -

1543 De Humanis Corporis Fabrica - Andreas Vesalius - held as beginning of modern biological science like Copernicus of same year of physical science. Antithesis - V an anti Galenist in in policy, a plagiarist in performance. Dominating figure till recently. Fab one of most inspiring & influential monument of scientific typographical & artistic enterprise, as much to care & insight of V. as printer Oporinus Io. 1507-68. Magnificent illustrations of naturalistic representations of organs. 1538 Anatomiae Tabulae Sex 2 copies, 1 in Hunterian - V prep skeleton drawn by John Stephen Calcar - enlarged version bec Fab. also Epitome - grt advance in teaching condemned by Sylvius J 1478-1555. Galen no diagrams. Opposition protest against anti-Galenism - G. would prob approve. Fab (Working ac Cushing) reverses medieval order of viscera then skeleton not so Galen - no preservative till 17th c. Recently questioned if Calcar the artist of Fab. Fst printed anat diagrams in Fasciculus Medicinae without naturalistic touch of mms (1514) of surgeon Henri de Mondeville XIV-1.- Singer & Rabin Prelude to Modern Science 1946. Artistic mastery & fidelity of mms drawings of Leonardo da Vinci 1452-1519 unknown for 300 yrs.

- about to be published by Wm Hunter but died. Vasari G (Vite de Pittori 1568) 1511-74 says L collaborated with Marc'Antonio della Torre XV-2 to prep trt on anatomy but latter died. Vesalius may never have seen L's figures. Still two illustrated anatomies before Fab - Giovanni-Batista Canano, before 1543 (1515-79) & Charles Etienne almost complete 1539 (1504-64). Even earlier than Tab illustrations to Commentary on Anatomy of Mondino 1250-1326 by Berengario da Carpi 1460-1530 (1523) & Anatomia Capitis Humani by Ioannes Dryander (1536) XVI-1. Illusts of Fabrica pirated to end of c by - Compendiosa totius Anatomie Delineatio 1545 by Thomas Geminus & Felix Plater 1536-1614 No 530 De Corporis Humani Structura etc 1603 Ed p 1583 dissected 50 bodies. also Walther Ryff in Kleyner Chirurgi 1542 & Jean Tagault XVI-2 Tagaultius Ioannes - de Chirurgica Institutione No 667 1549 Edp 1543

Grt claims made for Vesalius - new direction, original method & new era in hist of science. But in 1536 Niccolo Massa d 1569 wrote Anatomiae Liber Introductorius - parts & uses revealed, overlooked by ancients & moderns No 426 1559 - DDn to Pope Paul III - bewails ignorance, prefers truth to sayings of others,) all before Ves got chair at Padua 1537 - critical attitude already established - Church not frowning. Ves not so much innovator as man of moment able to unite diverse forces, critical scholarly, artistic into forward movement. Blood letting at site of disorder - derivative, Greek or far away as pos- revulsive Arab innovation. Former supported by Fuchs etc. when Vesalius supporting them dissected Azygos Vein 1539 bec convinced Galen did not use human bodies, but assumed same function (physiology) demanded same structure e.g. rete mirabile. 'What Galen saw he described with a mastery never perhaps never surpassed' - W. Massa important but neglected, Ves brt grtr resources but did not storm citadel of Pores till later edition. Not unqualified innovator but famous pupils at Padua - successor Colombo gained pub for Pulm Circ announced by Servetus in theological work 3 copies not burned with him. - Realdo Colombo d 1577. ~~Successor~~ Gabriele Fallopio 1523-62, tubes & dissection of Auditory Ossicles. Succeeded by pupil Girolamo Fabrizio who gave detailed descript of Valves in Veins already seen by Canano g.b. 1515-79, Amatus Lusitanus (J.R. de Castello Branco) 1511-68 Am.(Lus) (pseudonym of Joao Rodriguez de Cast Branco - 'Curationum medicinalium' 1554 Ed p '52, & drawn by Salomon Alberti 1540-1600. Harvey heard Fabrizio.

Other Med. Schls - Univ of Basel, Med Fac since fnd 1460 - Paracelsus 1527-30 - 1542 Vesalius visited to super printing of Fabrica by Oporinus of B. (Io) 1507-68 carried out first public dissection in B skeleton still seen. Plater another 15 yrs ltr. Fr 1532 when made Protestant to 1560 only 9 M.D's. Gesner 1538 Plater 1557 reached hundreds 50 yrs later - Aberdonians James Cargill d 1614 1st recorded Scottish Botanist & Patrick Dun d 1649 Princ of Marischal Col - diploma signed by Plater in Libr. Before Vesalius pun Thesis 1537 No 708 Discourse on Rhazae - Andrea Vesalio Bruxellense autore, Sebastian Sin(c)leler XVI-1 in Reform of Med Faculty wished yrly dissection. Theodor Zwinger 1533-88 built up Med schl 2nd to none in Europe - recast laws etc also Plater famous anatomy, remained during Plague 1563-4. Chairs of Theory & Pract of Med & 1560 Caspar Bauhin 1560-1624 bec Prof Anatomy & Botany cf Cullen later. Platers Anatomy in 1533.

Pharmacology but Para early in cent 16th extended use of chemicals & extraction of active principles fr herbs improved chemical technique - War of Ideas - 15 cents flowing Chem handmaid of Med. Chem aspects of Pharmacology - *Materia Medica* of Dios was for 1500 yrs basis of Pharm - printed Latin 1478 Grk 1499 - Dioscorides Peducius, No 199 de Med Mat libri sex etc 1518 p 1499 Before this several Arabic Commentaries printed in Latin - new drugs

Mat Med of Dios, list of herbs & few materials of animal & mineral origin, prep & powers change since Hipp's diet & regimen. Mainly simples fr single plants earths etc Galen boasted compound-ing drugs - polypharmacy scandal till 18th c. Theriac fist appeared in poem by shadowy Nikandros of Kolophon II B.C. 50 ingredients devised by Mithridates antidotes to animal poisons - Mith VI 120-63 B.C. Flesh of Vipers added later by Andromachos I-2. Prepared with civic pomp & social grace. Greco-Roman Pharm lost critical character by transmission thro well-meaning but not learned Nonks debased by popularity e.g. Herbal of Apuleius Platonicus IV & by magic Anglo-saxon Leechcraft, continuity preserved in Salerno. 11 cent book on remedies attrib to Gariopontus XI 'Passionarius Galeni' not printed till 1526. Dios first to be trans fr Grk into Arabic, first definitive by Hunain ibn Ishaq. Examine first

printed Pharmacologies - incunabula on this mainly by Arab writers or commentaries on their works. Epitome of classical pharmacy of Scribonius Largus A.D. 47 not printed till 1528 No 635 de Compositione Medicamentorum etc. In Arabic most important was Mesue-

Latin corruption of Maswiah, 2 writers, earlier (IX-2) phys to successors of Caliph Harun-ar-Rashid one of first to trans med. wrks into Arabic, doubtfully identified with Janus Damascenus of 'Articella' No 47.- Aphorismi. Second a Jacobite Christian (XI-1). Prob written by Latin writer under Arabic name in 12th cent.

Important for cents - Laxative & General Medicines - latter kn as Antidotarium or Grabadin (Latin corruption of Aqrabadhin Arabic corrupt of Gk wrd meaning a small treatise).- new preps, loch, julep, syrup, reb, introduced by Arabs- model of all Pharmacep-

ecias till 19th cent. Rarely printed alone in 15 Latin & 5 Italian incunables or in editions every few yrs in 16th cent. No 740 - Yuhanna Ibn Masawaih (syn Mesue)- Mwsue cum expositione Mondini...

in Antidotarium eiusdem. Additiones... Antidotarium Nicolai cum espositione Platearii (Circa instans - self). Additiones ..

Tractatus Quid pro Quo. Tractatus de Sinonimis. Libellus Buleasis sive Serviteras. Compendium Aromatariorum Saladini. etc. No 477 - Lyon 1519. Ed p Venice 1495. Ed. p Mesue Milan 1473.

No 477 - Nicolaus Praepositus. N. P. - Dispensarium ad aromaterias Platearius, vulgo Circa instans nuncupatus... Lyon 1536. Original Antidotarium Nicolai many mms from XIII-1 - incipit Ego

Nicolaus rogatus a quibusdam in practica etc. while works entitled Nicolai Praepositi Dispensarium ad Aromaterias begin Querebat ille Saladinus etc. latter not before beginning 16th c. Author was

Nicole Prevest in Tours XV-2. Doubt if others even Myrepsos existed

Antidotarium Nicolai was pharmacological txtbk of School of Salerno - small work c 1100 before Arabic of Constantine by scribe Nicolaus Salernitanus - enlarged 50yrs later by Salernitan Physician, Matthaeus Platearius in work kn as Circa instans from incipit, accompanies Antid in No 477. 1075 Constantine native of Carthage in drug trade called at Salerno - cont med. studies & entered Monte Cassino where spent life trans Arabic wrks into Latin. Influenced Saler teaching & spread thro Lorraine & Chartres. Usual printed Antidotarium is larger with material prob added by Nicholas of Alexandria or Nikolaos Myrepsos 'maker of ointments'. After 1500 its name is changed to Dispensatorium ad Aromataria & author given as Nicholaus Praepositus believed to be work of late 15th c French Phys. Nicholas Prevost. Remaining additions to Messue No 740 - 1. Quid pro Quo - alpha list of drugs & replacements. 2. Synonyma - Alpha list of alternative names esp Classical & Arabic. 3. Liber Servitoris on Simples attrib to surgeon Alzahravi (Albucasis). 4. Compendium Aromatariorum by Saladino Ferre d'Ascoli mid 15th c - first comprehensive on Pharmacology of Western authorship. N. Prevost XV-2.

Ricettario Fiorentino 1498 first of local pharmacopoeias. 15th c. Apothecaries required - Mesue, Avicenna, Serapion, Dioscorides, Macer Floridus, Circa instans, Synonyma of Simon Januensis (of Genoa) XIII, & Antidot magnum & parvum Nicolai. Avicenna's Canon more than 12 incunables, Macer Floridus (only wrk not Arabic origin except Dioscurides) many edts early 16th c. Serapion, 2 Eastern Scholars - Yahya ibn Sarafyūn, Senior, wrote in Syria IX-2 & Ibn Sarabi XII-2, Junior - latter's work on Simples influential, trans by Simon of Genoa & Jew Abraham of Tortosa XIII & printed as Aggregator in Medicinis Simplicium in 1473.

During 12th - 15th Cents when academic Med. dominated by Arab Pharmacology there was a lay tradition of Herbal Medicine from corrupt tradition of Dioscurides & Salernitan Circa instans - vernacular e.g. Agnus Castus, a Middle English Herbal edited 1500 (basis of Batsche's Herbal printed 1526) believed written Fransham Manor Norfolk XV-1. - 248 plants & humeral characteristics. Cent later mms by beauty Philipina Welser, wife of Archduke Ferdinand II of Tyrol.

Illusory power of Guaiac over Syphilis, also Peruvian Bezear stoned praised by Monardes but Salix, Aspirin & Ephedra Vulgaris goes back 4000 yrs.

Early 16th C. with Arab pharmacology of back to Classics in all sciences, but here nothing to go back to, as built on Dioscurides. Either vet Arabian as Antonio Brasavola (1500-70) or scrap Arabic i.e. Galenic theory & restart as Paracelsus.

Former pub. Examen Omnium Simplicium .. 1536 & De Medicamentis Catharticis 1555, 6 works - visited Alps to see plants, relied on experience & experiment - loyal to classical tradition.

Paracelsus - ceaseless denunciation of every person or opinion held in high regard. If Renaissance is liberation of mind from authority & tradition we must not look to Humanists but to their

arch-enemy P who called them empty Rhetoricians, bookworms, slaves of the Devil Galen, ignorant of their craft, & more concerned with fine raiment & ceremonial. Appeals to observation & experience learns from everyone who does things.- seems prophet of Empiricism. but cannot be added to Alberti, Cardano & Durer as Ren Man -passion about life & writings - confused & contradictory opinions held about them..Find evidence for enlightened anticipation & obscurantism, superstition. If sought to liberate from Schoolmen & theory of ancients, replaced them with occult powers wh would have strangled science. Replaced authority of Galen & Avicenna with his own. Not true assessments - must read his apologetic wrks - Paragranum & Defensiones with criticism & sympathy. First Chemist or aberrant Alchemist not appropriate to system of Ideas. His contribution mainly Philosophical like Copernicus - pre-eminence of Spirit in man's nature & knowledge thro natural piety. Traditional account of importance in Hist of Chem & Med based on 1. Lectured at Basel in German 2. Object of Chem to make gold but to prepare medicines 3. Introduced metallic compounds into pharmacy 4. successful surgeon & cures with Laudanum - may mislead. Vernacular not repeated in Univ. till Cullen opened course as Lecturer in Chemistry 1747. Attacked Galen & Avicenna through out Labyrinthus Medicorum. Para & Galen agreed that phys should cure sick person not a disease. G relied on rationalised system based on hypothesis of Humours, P based trtment on experience of cases. Need to release Med fr Humours - achieved 2 cents later - was greatest of P's insights. Chemistry not to make gold but medicines - talking about Alchemy. 7 medicine not syn with Arcanum - a Chaos able to be driven by Astrum. Cure not by chemicals but by Astrum of which they are vehicles. Astra always existed but stars provide conditions for development. Herbs & metals signs of complementary Arcana. Astra ~ Arcana associated with partic stars hence specificity & significance.- Specific origin & cure for each disease is important. c.f. ancient microcosm - some modern scholars would attribute to him discovery of radio & cosmic rays. Inconsistent Path & Therapeutics. Phase of 'Disease as disturbance of natural balance' & 'Disease as specific entity' - Former, Galen in terms of non-existent entities (humours) defined formally (hot-dry etc), therapy on hypothetical & formal armoury of herbal 'powers'. Reform blocked, revolution required, provided by Paracelsus but despite his confusion & fantastic terms there was a system of testable relations - virtue gone out of blood, iron is sign of 'virtue which will restore it. Galenic harmony not superseded but specific definitions asserted. At present P's entity less than G's individual harmony of humours not hot& dry but in P's quintae essentiae in concrete & testable form of vitamins etc. P showed the way to Chemical Pathology - Alchemy is art of removing dross & leaving quinta essentia wh is Arcanum. Physician provides right conditions but is not efficient cause wh is Astrum fr Heaven. Midst psycho-pathic symbolic dross seed of Alchemy begins to germinate into plant of Chemistry - seed rots to prod plant, grape ferments to prod wine (Alcohol named by him -(spirit)), gold refined in fire, iron from ore - man's smelting & cooking.

'here follows the Archeus the indwelling Vulcanus the fire-
alchemist!' Tells more about this Alchemist in Stomach in Buch von den
Tartarischen - coagulation diseases due to separation of pure from
impure, urine & faeces by Archeus. A. may have day off then Tartaric
disease - superfluous animistic principle - unfortunate for Chemistry
but P thinking of enlightened Alchemy & 'central theory' is animism
run riot like much Renaissance thought wh would have caused shudder
amongst Scholastics of 13th & 14th C.

3rd claim - introduced internal metallic remedies & more efficient
extraction - used more extensively & alcohol for tinctures - Metals
Hg. Fe. Pb. Arsenic Antimony in 4th bk of Dioskurides - external. In
Antidotarium Nicolai (N. Praepositi) list of 50 mineralia including
precious stones also in this Dispensatorium is chap on De Antimonio
& dangers of excessive Mercury showing long hist & not introd by P.
Sim warnings in 'Consiliator' of Pietro d'Abano - P did not introd
metal remedies. P.d'A 1246-1320. Improved preparation & under-
standing of application - use of Alcohol skilful & tinctures effective.
Sound in every natural product having essential part but limit passed
with essence of gold etc. Not original bec quintessence & Alcohol as
extractive in mms by mid 14th cent prob by Ioannes de Rupescissa f.122
Printed after P's death but essentials available 1500 & expanded 1512
No 102 work on Pharmacology & Distillation, Galenical & Astrological
by surgeon, Hieronymus Br(a)unschwig XVI-1. Sim in work 1526 No 694 by
Philip Ulstad (Ulstaedius) XVI-1 Coelium philosophorum seu de
secretis naturae liber 1528 Ed p 1525 - based on Io de Rup., Raymon Lull
1232-1315, Arnald of Villanova 1240-1313, Albertus Magnus etc. Ftnte
Multhauf claims Io de Rup first to turn Alchemy to prep of Medicines.
Dispassionate on P - no innovation except few remedies - Spiritus
Vitrioli (ether) analgesic, & antimony & Iron.- Pagel. Sigerist says
P's Laudanum not the prep of Opium. Like Vesalius no outstanding item
but contempt of authority & more effective use of knowledge, techniques
& ideas in discovery. Apart from P's Grosse Wundartznei 1536 & tracts
on Guaiac & Mercury in Frantzosische Krankheit 1529-30 & sketch of Lects
at Basle 1527-8 no major wrk printed in lifetime. Despite friendship
of Erasmus, elder Froben & confirmed Galenist Guinther of Andernach
1487-1574 publication prevented. So influence delayed to close of Cent.

Orthodox Pharmacology strengthened by first Pharmacopoeia by a local
government - No 174 of Valerius Cordus 1515-54 & wrks by Sylvius J. 1478-
1555 teacher of Vasalius No 664 - Jaques du Bois - De medicamentorum
simplicium delectu, praeparationibus, mistionis modo, libri tres. 1548
e.p.'42. also Mattioli P. 1501-77 text on Dioskurides no protest c
metals. Bk appeared abt same time "Buonynus... on Secret Remedies" c
contained Chemicals - new ed 1569 edit Caspar Wolph XVI-2 said
Gesner was author. Trns into Eng by Sir George Baker XVI-2 as "The
Newe Jewell of Health 1576. First printed attack c P in 1575 diatribe
of Jacques Aubert d 1586 'contra chemistas' c origin of metals &
remedies. Reply same year by Joseph Duchesne 1554-1609.- Phys to Henry
of Navarre - averred not a Paracelsian but some of latter's remedies
'almost divine' & that Laudanum prescribed by Iatrochemists did cont
'Suc de Pavot' opium. - not straght issue between Paracelsists
& Galenists. 1585 Iohannes Crato 1519-85 wrote from Breslau on 'iniquitie
of chemists' in revis. ed of col wrks of Falloppio G. 1523-62.

Faculty of Med. Paris forbade Antimony 1575 internally. 1603 more serious by Duchesne's De Priscorum Philosophorum verae medicinae Materia (On the Matter of the True Medicine of the Ancient Philosophers) - whether rising science of Chemistry allowed to play any part in ancient discipline of Medicine. Contra D.elder Jean Riolan 1539-1606 wrote anonym pamphlet Apologia pro Hippocratis Et Galeni Medicina No. 522 .. adversus Quercetani ... Accessit censura Schola Parisiensis 1603. In his Methodus Medicina 1598 had already condemned so called chemist with Antimony. - Censor to Faculty Paris. Duchesne denied next year that attacking Hip & Galen - was a Dogmatic but also a Hermetic in which many Eng & Scottish - e.g. Dee J. 1527-1608 who had lectured in Paris. No 216 Ad Veritatem Hermeticae Medicinae ex Hippocratis etc 1605 also quotes M(o)uffet T. 1550-1600. (Nos not quoted in text - No 212 Du Chesne Joseph (syn Quercetanus) Ad Jacobi Auberti Vindonis de Ortu et Causis Metallorum contra chemycos explicationem 1575 & No 215 De Priscorum Philosophorum also No 300 Gesner C. Eponymus .. de remediis secretis.c 1554). Reply in another anon tract No 574 prob J. Riolan Younger 1577-1657 Brevis excursus in battologium Quercetani etc. - only edit. & No 575 by J.R. yng Comparatio veteris medicinae cum nova - Hippocraticae cum Hermetica, Dogmaticae cum Spagyrica 1605 also No 576 yng - Incursionum Quercetani depulsio 1605. No 394 Libavius Andreas 1560-1616 D.O.M.A. Alchemia .. etc 1597 in 1606 enlarged version No 396 in which is a Defensio Alchemiae et Refutatio objectionum ex censura Scholae Parisiensis. Elder Riolan came back with Ad Libavianum No 573, 1606 says Turquet de Mayerne came to aid of Duchesne. Libavius refutation but R. died No 397 Alchymia triumphans de iniusta etc.'07. - played part in estab Iatrochemistry hence Chemistry itself. Lib a phys. then director of Latin school - Review of Alchymia -

Riolan's attack on Duchesne due to fear that Hermetic or Chymiatric for Dogmatic would grad banish Hip & Galen but already revised by Arabs, - praises middle way with truth from both sides & like Duchesne reform. Wrote against Paracelsian Gramanus G. (Iohannis) in No 392 Neoparacelsica etc 1594 for attack on Galenic Med. Compares Hippocratic-Hermetic Med with spurious Galenic... also spurious Hermetics, Paracelsians, who mix magic madness with med. Becomes abusive to Riolan. Says Antimony dangerous in hands of inexperienced so also is "ellebore, Colocynth & Scammony. R objects to smells & dirt of Alchemy but Gesner studied plants in wild & the Phys. let surgeons dissect, Vesalius Colombo Valverde XVI-1 did own dissections. Compromised between 3 Chem principles - Sulphur Mercury & Salt & 4 Aristotelian Elements - said accepted 3 Chem prins but denied Med should be founded on them so could respect Galen whose 'Humours' P had utterly repudiated. Believed in Phil Stone with more basis in Merc-sulph concept of grades of metallicity. Moving towards more emperical basis than Arist - new attitude in phys of classical tradition. War of Ideas - Academic pedant, slave to ancient books, Surg & Pharmacy beneath Phys. Opponents test authority by experience & open door to chemiaal enterprise. Former rate chemists for wasting time extracting Quinta Essentia as no such thing in nature, ac to Riolan belongs to heavens.

Of Miasm & Contagion -

The Pest - 2,000 yrs - Latin Pestis - Plague - Pneumonic air borne & Bubonic not serious. Also Septicaemic Plague very fatal. Some of Febris Pestilentialis was Typhus. Not definite entity - conception not before Sydenham. Plague Tracts & general before 1501 - large output started by Black Death wh entered Europe by Black Sea port of Kaffa in 1347 & as Boccaccio says in intro to Decameron was devastating Florence next year. Comparable disaster in reign of Justinian VI-1. 281 tracts disc by Sudhoff to 1925 - 1st in April 1348 & special by John of Burgundy 1365 also eye-witness acc by Guy de Chauliac Alv-2 in Avignon 1348. Tractatus, Regiment, Ordnung & new Consiglio (Consilium) esp Italian Gentile da Foligno & Francesco da Siena, not a Consultation wh came later - diagnosing & summary of what classical writers said & regamen, later restricted to single case & collections pub during 16th Cent. Tracts on local outbreaks - Collection No 753 some called Consiglieri. 1473 ordnung of Henrich Steinhewl 1420-82 & Tractus Brevis on Hamburg outbreak 1596 by Rodericus de Castro 1547-1627 No 139 sim one for Bremen by Io Ewichius XVI-2 by Dr. Ritchie. Hamburg Tract says Pestis contaminates by contagion & by breath - proximate cs putridity of humours esp in blood wh in severe cases attacks Hrt. Predisposing cs lack of Harmony of humours by lack of moderation in way of life, aggravated by wind, moisture & temperature. Conjunction of Jupiter & Mars in a 'Warm' sign cs corruption of air also earthquakes releasing noxious vapours a prob cs. Contagion introduced in breath & thro pours, so no perspiration, transmitted by breath, contact or Fomites contaminated clothes. Theory of Contagion in Humours opposed to Hippocratic Theory of Miasma general corruption of Air causing the Dis. Predisposition of Humours goes back to Galen, but Contagion generated in the sick originated with Arab Ibn al-Khatib 1313-74 - here bld fights back & poison expelled thro Bu Bube. Change from Miasma helped by local outbreaks esp when planetary conjunction covered whole earth. Contagion Theory csd authorities to isolate & dispose of bodies & fomites. 1576 Mercurialis Hieronymus 1530-1606 De Pestilentia .. Venise & Patavina, Padua No 450 - tried to prove Miasmatic origin. Alessandro Massaria 1510-98 No 430 - 1579 supported Contagion describing outbreaks - devoted to sick & to study disease in 'light of nature'. R. a Castro refers to spread by 'seminaria' prob knew Fracastorius theory of transference of 1546. Accuracy of signs in Tracts. 7 Aug 1495 edict of Emp Maximilian gives first printed ref to 'evil Pox, never previously existing'. Consilia & Tracts about new dis. Ten tracts between 1495-8 edited by Sudhoff 1925 - press using new material. - one tract Libellus de Epidemia, quem vulgo morbum Gallicum vocant, 1479 by Nòccolo Leonicens 1428-1524 - not a new disease but similar to ancient's Elephantiasis & Lichen. - arises by wrath of God ac to theologians or by power of stars ac to astrologers or boisterousness of air ac to Physicians. Rivers in Italy all rose - disturbance of humours so did not agree with external unguents wh drove dis inwards. Book best type of Humanistic Med - strength, accurate & almost scientific in preferring proximate cs & weakness, devoted to classics so true cs not seen - Aberdeen knew in edict of 1497 c venerie.

In 1497 Tract cum consiliis contra Pudendam seu Morbum Gallicum by Gaspar Torella, more scrutiny of origin. Written at request of Cesare Borgia who as Pope Alexander VI made him his physician - says began in France 1493 & spread, significant in one versed in Humoral theory. Introduction by Spanish sailors pos but not proved - Sherrington says Fernel right in accepting American origin. Morbus Gallicus, Neopolitanus or Italicus, 1527 Morbus venereus by Jaques de Bethencourt XVI-1, Lues venerea used by Fernel, 1530 poem by Girolamo Fracastore 1483-1553 Syphilitis sive Morbi Gallici lib. tres. - vengeance of Apollo on youth S. Genorhoea in classical times, John Hunter thought different stages in same disease. Question whether F. discovered Germ Theory in 'On Contagion' Honoured in Italy as outstanding intellect - noble blood & excelled in things - geometry, artist in letters, soldier, country gentleman, later years near Verona. - wrote famous bk, 2nd Chap has oft quoted passage - contact, fomites, contagion as scabies, Phthisis, Areae, Elephantiasis - I call ..Fomes clothes, which the indeed by themselves are free from corruption, are nevertheless fitted to retain the first 'Seminaria' of contagion. Humanist Phys of early Renaissance may have hesitated to adopt such an un-Hippoc theory. Beginning of classificatio but not a science - contact contagion held to be similar to putrifaction brought about by primordia, insensible particles which evaporate, .. called the seminaria (seed-bed) of contagion. Seminaria not Germs or microbes - generate something like themselves as spirits do. Putrification caused by obstructions, plethora, foulness of Humours, owing corruption thence Seminaria are born wh transfer contagion to another wh acquires sim Humour & contagion carried to second. Modern in that did not ignore evidence that did not fit theory - fomes retaining contagion for time. Mixed with astrology of the time - but no contagion created by the heavens, but could be prod per accidens & forecast by astrologers. Get scientific thinking within context of age. De Contagione not a separate treatise but part of composite work dedicated to Card. Alexander Farnese - preceded by De Sympathia et Antipathia. His substitution of a material agent, wh could be controlled, for classical Miasma or general corruption of the Air, wh could not, was step towards scientific explanation. Mercury & Guaiac
 Question if gunshot wounds might be free from infection from explosion. - opinion against. Ambroise Pare - ignorant of Latin.
 Other infections - English sweats, virulent Influenza etc.

The Embodiment of the Spiritual World -

Pauli 1952 asserts driving force behind Kepler was religious creed from archetypal ideas between God & world. This must be considered in Hist of Science. Intuition & direction of attention play role in development of concepts & ideas, transcending mere experience - matching of inner Images pre-existent in human psyche with external objects .. These primary images which Soul can perceive by innate Instinct are called by Kepler archetypal. Emotional origin of creative activity in science like Einsteins faith in intelligibility of cosmos. Kepler's Mysterium

Cosmographium 1595 - based on faith that there is "one spirit in all things" & things embody modes of this creator-spirit. K's unscientific approach - Renaissance thought freeing itself from Aristotelianism & reverting to Platonism & Pythagoreanism not correct. Kepler astrologist unlike Plato & Tycho Brahe an alchemist unlike Pythagoras. G. Bruno - innumerable systems of suns & planets - harmony of the spheres; John Dee solve riddles of universe by astral relationships; Cardano obsessed by belief in marvels portents & adequacy of genitures; also Fernel who turned from astrology in later years. 1520 Pietro Pomponazzi 1462-1525 - On Incantations not printed till 1556. Univ of N. Italy - basic issue of relation of Nature & Spirit. Cassirer recently says marks new stage in reducing all types of experience to order. - 2 steps towards renunciation of astrological world view - prove empty or give new methodology. P's approach defel out of & opposed Averroes but leaned on Aristotle - sought single causal principle as basis of all phenomena whose causes are not manifest - influence of celestial powers thro wh God works, intuitive belief, rationally justified. - admission of inconceivability that power to effect motion & power change can reside within natural bodies. Astrology unavoidable avenue to science. P. a Neo-Aristotelian but in advance of both Aris. & Plato, former's system suffers from cleavage between celestial & sublunary spheres latter purely mathematical. - showed relationships on wh science ultimately built. Paracelsus influenced by his celestial origins but unlike him also by Alchemy - from books on metalurgy to esoteric phantasies. Mystical Alchemy - The Compound of Alchymy No 577 or the ancient hidden art of Archemie containing the right & perfectest means to make the Philosophers Stone, Aurum potabile with other excellent experiments. Divided into 12 gates. First written by the learned & rare philosopher of our nation George Ripley sometime Chanon of Bridlington in Yorkeshyre & dedicated to King Edward 4. etc. 1591. G. Ripley d. 1490 - Canon Regular of Augustinian Priory. Set forth by Ralph Rabbarde Gentleman, studious & expert in Archemicall Artes. XVI-1 - supposed written 1471 - Dedn to Qun Elizabeth 'mauger the Divell, the Pope & the King of Spaine' one of greatest & rarest classics of Alchemy. May be first Al wrk printed in Eng. flwd by number in 17th cent. - collection by Elias Ashmole 1617-92. Opens with Vision of toad. Written in verse - Stone is Mercurie not quicksilver - of metals essentiall - a soule .. of sunne & moone a subtil influence whereby the earth receiveth resplendence. Mercurial essence is principle of purest gold. Menstruum is a solvent - amalgam. First Gate - Calcination - not ordinary operations of chemists - not fire, corrosives or ardent water - things first separated by Putrifaction. Against those who promise earthly riches of coin etc. Only formal relation to Chemistry & eclectic - metals turn to water. Dissolution, putrifaction & regeneration. Usual sex symbols, Sun & Moon, husband & wife. Congelation - water the secret & life of everything. Death & corruption of seed before new life paralleled with Stone & in life of Spirit. etc. Material projection of a Spiritual exercise or not reputation it enjoyed - satisfied other need in reader.

Jung Psychology & Alchemy provides hypothesis - release for archetypal urges of Unconscious for wh sudden spiritualisation of Christianity gives inadequate expression. Cassirer - Plat-Arist elements with conjugate Humours in living creatures provide theoretical justification for alchemical 'substantiation of qualities'. Stoic conception of craftsman fire - creative & seminal reason from world soul. Preciosa Margarita Novella (New Pearl of great Price) No 682 by Petrus Bonus of Ferrara in 1330 XIV-1 - scholasticism at its best, arguments against alchemy then rejected. Break-up of traditional modes of thought, transvaluation of values, the archetypal images, repressed by Medieval rationalism emerged in Ripley & others Paracelsus & Cardano saw personal unembodied forces. Robert Fludd 1574-1637 & Rosicrucians. Kepler Newton able to drop them when against observation.

Paracelsus extrovert, Ripley introvert - latter seeking sublimation by projecting own unconscious needs on to material. For Par. to perfect Human Beings projects aspect of Stone wh can perfect metals. Light of nature must be his guide. The did not know it was return to Hip conception of phys as guide philosopher & friend & patient an embodied spirit. P in advance of Hip in that for most people the Crown is a Loving Creator, also of Galen by not using obscuring polypharmacy - greater understanding of relations between Man & Nature. In Theosophic Med Par. applying thought & feelings of contemporaries. Sebastian Frank XVI-1 found tyranny in Reformed Churches - concerned with spiritual sickness P. with physical but emphasised inseparable. F. old Adam & Light of Christ & true self knowledge, spiritual health is identification with inner light. Brought out by Keyre 1955 - resurgence of Pantheism - P is epitome of all non-literary aspects of Renaissance Man. - restless, mistrust authority, see for oneself, credulity, arrogance, & awareness of ubiquity & individuality of hidden powers; remote from humanism - was it Rebirth or re-emergence of old ways in new environment. Revival of mystic numerology of Kabala by Reuchlin important in less respectable (not Grk) aspects of Ren - not humanistic but clues to sacred realities in numbers & figures associated with certain nos. belonged to literary & pseudo-historical tradition. Also Lullian Art - but warnings against vanity of Alchemy by Raimunde Lull 1232-1315 - recognised value of his Art to Alchemist. - by process of abstraction & parallel relations the primarily for theology, good for astronomy, law & medicine. - means astrology, influence of powers of heavenly bodies. Medicine calculation of drugs from relations between Elements, Humours, Astral Influences & Temperaments of patients. - near Alchemy of Par. Disclaimed material wealth from Stone & astral pre-destination of individuals & enterprises. Paracelsus's cry - 'Man must bring everything to perfection. the work of bringing things to perfection is called Alchemy'. Flood of P's works 20 yrs after death declined during 17th cent. the more positive teaching new support from van Helmont.

Kepler - Astronomia Nova - not only in time stood between Renais. & modern Science. Thought shaped by Archetypal Ideas - Micro- & Macrocosm, Signatures, number mysticism, astral influences world soul but was selective. In Astrology was closer to Par. in rejecting crude judicial theory. In Signatures echoed Par in

forms of plants being inborn & derived by a natural instinct. P poured out jumble of Ideas, K's world view disciplined by his Platonising respect for regulative power of eternal rationalities expressed in quantitative relations. - unique among mystics of his generation. Idea of Axis of Power (Faraday) used by K. as image of motive power of sun on planets & means of determining points of special cosmic significance due to intersection of special rays. - justified Directiones. Same Potency of geometrical regularity in floral organs of plants, regularity of crystal form of Fossils, generated by Vis Formatrix in earth. Cosmic faith of P. reflected in K's 'Nothing exists or happens in the visible heavens the significance of which is not extended further by way of some occult principle to the earth & the faculties of the natural things'. New faith - 'To same natural effects we must as far as possible assign the same causes' - Newton, Principia. Latter has banished occult principles. From both disappeared Aristotelian dogma of complete disparity of Order of the heavens & Physics of sublunary Elements. For K. P. & Lull the Image of the heavens is stamped on Natural Things. Newton, distinction between heavens & natural things gone, all included in one Natural Philosophy by means of Mathematical Principles. Spiritual not rejected even by N. in Gravity - 'without mediation of anything else' - God able to move parts of Universe as we our limbs - N. Mystical strain of Renais. also important in establishment of 'Natural Philosophy'. Betrayal of grt men of Renais. who enlarged Man's vision of Universe & still regarded it with wonder & awe. Modern Man has robbed it of all spiritual significance, degrading it & himself to soulless exploitation. Men of past often had insights & sympathies shunned by Modern Man - Paracelsus thro undisciplined Imagination saw truth, that beloved physician leading the unquiet spirit, may, over a great range of human ills, effect more than the scientist for whom patient is reduced to disordered system of electrolytes. Renaissance in Science neither a rebirth of Greek thght or new birth of modern Science but clearing away of settled land marks & search for new view points. Next cent. one aspect became dominant - man should become 'masters & possessors of Nature' - unanimity of protestant empiricist Frances Bacon & catholic rationalist Descartes. Bacon - no limit to be put to men's study but apply it to charity. Great men of Renais. had not yet identified Nat. Phil. with ~~Expropriation~~ Expropriation of the Universe.

Man's expropriation

Expropriators will be expropriated.

"In the First Table they are classified according to the mode in most common use.

In the Second they are arranged according to a mode of classification founded on the physical causes of the disease, which I have found to be of more practical utility, and of which I and my assistants have for some years been publishing illustrations in the Medical Journals."

Table IV. No. 1 - Form of Disease in those Admitted

Form of Disease	Males	Females	Total
Mania	14	31	45
" Acute	16	14	30
" Puerperal	0	8	8
" Epileptic	7	6	13
" Chronic	4	5	9
" Senile	3	2	5
" Remittent	0	3	3
Melancholia	33	44	77
Dementia	34	44	78
Idiocy	1	0	1
Imbecility	7	4	11
Monomania	12	0	12
" of Suspicion	1	2	3
" Unseen Agency	0	1	1
Moral Insanity	0	2	2
Mania a Potu	8	4	12
Dipsomania	2	3	5
General Paralysis	13	1	14
Not Insane	0	1	1

Table IV. No. 2.

		Mania	11	17	28
Idiopathic Insanity	Sthenic	Melancholia	0	0	0
		Monomania	7	2	9
	Asthenic	Mania	18	9	27
		Melancholia	14	13	27
		Monomania	5	0	5
		Dementia	18	29	47
General Paralysis			13	1	14
Moral Imbecility			0	5	5
Intellectual Idiocy			1	2	3
" Imbecility			7	0	7
Epileptic Insanity			11	6	17
Insanity of Pubescence			2	1	3
" Masturbation			7	4	11
Puerperal Insanity			0	8	8
Insanity of Lactation			0	5	5
Amenorrhoeal Insanity			0	4	4
Climacteric Insanity			8	15	23
Insanity of Atheroma			13	16	29
" Tuberculosis			3	19	22
Traumatic Blows on the Head			1	0	1
Insanity Sun-stroke			1	0	1
Insanity of Alcoholism			9	6	15
Dipsomania			2	3	5
Post-Febriile Insanity			1	1	2
Insanity of Hysteria			0	7	7
" Oxaluria			3	0	3
" Albuminuria			0	1	1
Not Insane			0	1	1
Total			153	175	330

Table VI - Probable Causes of Disease.

	Males	Females	Total
Epilepsy	9	0	9
Over-study	2	0	2
Sun-stroke	3	0	3
General Paralysis	1	0	1
Injuries of the Spine	10	0	1
Advanced Age	7	1	8
Secret Vice	1	0	1
Depression of the Primae Viae and Derangement of System	1	1	2
Anxiety in Business matters	2	0	2
Not Insane	1	0	1
Loss of Work & Dyspepsia	1	0	1
Domestic Affliction	2	1	3
Chronic Lead Poisoning	1	0	1
Injury	1	0	1
Climacteric Period	1	2	3
Fever	2	0	2
Excessive Drinking	8	5	13
Insane Temperament (Dipsomania)	1	0	1
Change of Habits	1	0	1
Disappointment	2	3	5
Business Reverses	2	1	3
Hereditary Predisposition	2	4	6
Dispute with Employer	1	0	1
Intemperance & Disappointment	1	0	1
Erysipelas of the Face and Scalp	1	0	1
Anxiety	2	1	3
Paralysis	1	0	1
Blow on the Head	1	0	1
Delirium Tremens	1	0	1
Fright	1	1	2
Childbirth	0	7	7
Grief	0	2	2
Causes of a Religious nature	0	4	4
Want of Work	0	1	1
Lactation	0	1	1
Softening of the Brain	0	1	1
Vexation	0	1	1
Not known	69	185	154
Total	130	122	252
Hereditary Predisposition was ascertained in	9	19	28
Previous Attacks in	25	21	46

Table X - Assigned Causes of Insanity

	Males	Females	Total
Physical. Congenital	2	3	5
Epilepsy	6	3	9
Intemperance	21	13	34
Childbirth	0	6	6
Over Nursing	0	9	9
Old Age & Nervous Debility	10	21	31
Softening of the Brain	5	1	6
Weakness of General Health	0	1	1
Change of Life	3	23	26
Dissipated Habits	1	1	2
Injuries to Head	3	1	4
Sedentary Habits	1	0	1
Narrow escape from Drowning at a critical period	0	1	1
Depression from Diarrhoea	0	1	1
Bloody Flux	0	1	1
Sunstroke	1	0	1
Paralytic Attack	0	1	1
Nervousness	1	2	3
Over Work	3	2	5
Moral			
Disappointment	0	1	1
Bad Temper	0	1	1
Tailors' Strike	1	0	1
Fright	2	2	4
Being deceived	0	1	1
Pecuniary affairs	1	0	1
Too much thinking	0	1	1
Domestic Affliction	2	10	12
Solitariness	0	1	1
Over Anxiety	2	1	3
Morbid Religious Excitement	2	2	4
Predisposing			
Previous Attacks	37	51	88
Hereditary	17	24	41
Unknown	76	104	180

MORNINGSIDE ROYAL HOSPITAL

<u>Event -</u>	<u>Lay Superintendent -</u>
1813 - <u>East House</u> opened.	John Hughes - 1813 - 1831.
	Mr. Radley - 1831 - 1839.
	<u>Physician Superintendent -</u>
1840 - Queen Victoria Patron.	<u>William M'Kinnon</u> -
1842 - <u>West House</u> opened for poor patients.	1839 - 1846.
1843 - Library & Museum.	
1845 - Morningside Mirror.	
	<u>David Skae</u> - 1846 - 1873.
1853 - Clinical Lectures.- begun by Morison in 1823. Classification - etiological.	
1873-8. Alterations & improvements.	<u>Thomas Smith Clouston</u> - (Sir). 1873 - 1908.
1877 - Mansion & estate of <u>Craig House</u> purchased.	
1879 - <u>Craig House</u> opened for upper-class patients.	
1879 - University Lecturer in Mental Diseases.	
1894 - <u>New Craig House</u> opened.	
	<u>George Matthew Robertson</u> - 1908 - 1932.
1919 - University Professor in Psychiatry.	
1929 - <u>Jordanburn Nerve Hospital</u> opened.	
1930 <i>Paint Memorial</i> Professor of Psychiatry.	<u>David Kennedy Henderson</u> - (Sir) 1932 - 1954.
1935 <i>Six Benches.</i>	

Medieval PSYCHO-GERIATRIC Hospitals -

T R I N I T Y H O S P I T A L

1462 - 1845.

Trinity Hospital and its collegiate Church were founded in 1462 at the instigation of Queen Mary of Gueldres, in memory of her husband, James II who had been tragically killed two years earlier by the bursting of a cannon, at the siege of Roxburgh.

The hospital provided for poor & needy persons and for those who were impotent from advanced age or illness. In 1575 the Provost and Prebendaries made Regulations for the inmates who were known as Bedesmen or Hospitallers, & who were required to attend religious services twice daily in the College Kirk and to pray for the soul of the founder. They had also to learn the Ten Commandments, the Lord's Prayer and the Articles of the Creed. However they were given an allowance for food and clothing.

On 21st June 1578, a Minute of the Town Council refers to the re-organisation in the Hospital of Trinity College, where twelve furnished beds were now ready for "pepill seiklie and unable to labour for their living". On that date 9 persons were admitted but in 1611 the inmates numbered 35 and in 1628 there were 50.

During the Great Plague of 1644-45 all the inmates died and the Hospital was left deserted for a time. The Governors then decided that those to be admitted were to be "old men and women, burgesses' wives, or children of burgesses, not married nor under the age of fifty years". Each person had to bring a bed & bedclothes, and sign a declaration of all his goods, when he would be provided with food, clothing and lodging to the end of his life when he would be decently buried.

About 1728 the Hospital fell into disrepair and it was stated that "the Nor' Loch ran through the north end of the House". In 1730 it is recorded that each of the inmates had a convenient room, an annual supply of clothing & an allowance for snuff, tobacco etc. Their frugal dietary is also recorded, served at two common tables, one for men presided over by the Chaplain, and the one for women, by the Mistress.

Latterly difficulties arose owing to incompatibilities & dislike of rules and regulations but these are minimised by Lord Cockburn who found the pensioners reasonably happy.

The Hospital continued its charitable work for the sick & impotent till the middle of last century, when the buildings were removed to make way for the railway in 1845, but its revenues are still used by the Town Council to give grants to the aged and sick people of the city.

The Hospital of Our Lady was established in 1479 on the opposite side of Leith Wynd from the above, by Thomas Spence, Bishop of Aberdeen, for the maintenance of 12 men affected by "seikness, aige or impotencie". The Town Council became proprietors after the Reformation & in 1582 refer to it as the Hospital of St. Paul's Work.

A Hospital existed in connection with the Dominican Convent of St. Catherine of Siena giving rise to the district of "Sciennes".

The Hospital of the Magdalen Chapel was founded in 1537 in the Cowgate for 7 bedesmen and lasted 115 years.

The Hospital of the Church of St. Mary de Campis, Kirk o' Field was burned by the English in 1544. The University is on its site.

ASCLEPIADES of Bithynia. circa 124 - 40 B.C.

Writings known through Caelius Aurelianus 5th Cent.

"Father of Psychiatry." "Founder of Psychological cure" ~~Feuchsterlebe~~

Father of Medicine. Divine according to Galen. Member of Guild of Asklepiads & founder of Medical School on island of Cos.

Rescued Medicine from the abstract theories of the Philosophers e.g. the mystic effect of Numbers (Pythagoras), & the religious beliefs of Possession & supernatural causation of the Priests (Diana's Wrath) & set it upon a Naturalistic basis.

At a time of great duplicity & deception & of many charlatans he he set high Ideals for the "Art" as exemplified in the "Oath" probably derived from the Temple Schools.

He based his Scientific Method on clinical examination & detailed observation of the whole patient including Temperament & Mental State & from the grouping of symptoms concentrated upon Prognosis rather than Diagnosis & Nosology.

His Treatment was simple & expectant relying upon the healing power of Nature (Physis) and consisted of rest, fluids, light diet & mild drugs e.g. evacuants not the elaborate treatment of individual symptoms as in the mainland School of Cnidos.

Instead of adopting complicated theories he considered all diseases to be due to abnormalities of the Humours especially Bile & Phlegm which he accepted from his predecessors (Empedocles) and elaborated in the book "De Natura Hominis" and enlarged into the Humoral Pathology of his successors based on the philosophers' 4 Elements & 4 Qualities namely Blood (Heart), Phlegm (Brain) Yellow Bile or Choler (Liver) & Black Bile or Atrabile (Spleen). These were later elaborated into the 4 Temperaments of Galen which persisted through the middle ages.

Among the immediate exciting causes of Diseases are placed external influences like the Sun, Cold, Wind, the Seasons etc. In Spring, Blood predominates; in Summer, Yellow Bile; in Autumn, Black Bile or Melanchole; and in Winter, Phlegm or Pituita (cold & moist).

Diseases were also divided into Acute & Chronic and also into Epidemic & Endemic. In their treatment Nature or Physis required guidance so interference should be at the right moment to prevent the juices or hormones going into dangerous localities. Behind all the sensible phenomena of Nature there was a power (Enormon) which according to Garrison 'set things going'.

The Hippocratic Collection or Corpus or Canon -

This contains more than 100 Books which have been divided into Genuine, Spurious, of Predecessors & of Contemporaries and Followers. If all are not written by Hippocrates himself they emanate from the Cosan School, are inspired by him and radiate his Method of Inductive Reasoning from observed facts. The Genuine were 13 in number in Galen's time but are now considered only to amount to six, according to Neuburger.

The Books were evidently collected & edited at the beginning of the 3rd Cent. B.C. by Alexandrian Scholars under Ptolemy.

The Hippocratic Books vary much in quality from masterpieces to mere extracts. They also vary in style and even differ in fundamental beliefs which are at times contradictory even to the relative importance of the Brain & Heart. Astronomy has been introduced & there are traces of the Supernatural in the book "Concerning Dreams" probably due to his Disciples, Sons or Grandsons over several years.

Some of the important relevant Books are - The Law, The Art, Ancient Medicine, The Physician, Decorum, Deportment, The Humours, The Nature of Man, Diet, Air Water & Places, Precepts, Prognosis, Diseases, Epidemics, Diet in Acute Disease, The Sacred Disease and the Aphorisms.

The Sacred Disease begins thus - "It thus appears to me to be in no way more divine or more sacred than other diseases, but has a natural cause from which it originates like other affections". "Purificators & charlatans ... use the Divinity as a pretext and screen for their own inability to afford any assistance". "They use purifications & incantations and make the Divinity out to be most wicked." Examine the Brain & "in this way you will see that it is not a God who injures the body but a Disease".

He locates the disease in the Brain & refers the cause to excessive determination of Phlegm to the Head, Unconsciousness being due to Phlegm entering the Veins suddenly & hindering the access of Air to the Veins of the Brain; Convulsions are explained by the Air dammed back by the Phlegm, forcing itself upwards & downwards through the Blood, according to Neuburger. The Brain is said to be "humid, full of sweat & smelling badly" and Marti-Ibanez states that in attributing Epilepsy to irritation of the Brain by acid or sour substances, Hippocrates established the first indication recorded in history of the localization in the Brain of certain pathological processes of the Mind.

The Brain is recognized as the Organ of Mind, Intelligence reaching it through the Ventrals by the Air, Breath or Pneuma which is the source of Sensation & Movement which spreads from the Brain which is the centre of Thought, Sensation & Will as recorded in the book on "Diseases".

The Brain is definitely regarded as the seat of Mental Disorder in the Sacred Disease where according to Marti-Ibanez it is stated "Men ought to know that from the Brain & from the brain only arise our pleasures joys, laughter & jests as well as our sorrows, pains, griefs and tears... It is the same thing which us mad or delirious, inspires us with dread & fear, whether by night or day, brings sleeplessness, inopportune mistakes, aimless anxieties, absent mindedness and acts that are contrary to habit... Madness comes from moistness. When the Brain is abnormally moist, of necessity it moves, and when it moves neither sight nor hearing are still but we see or hear now one thing now another, and the tongue speaks in accordance with what has been seen & heard on any occasion..." Elsewhere he quotes "Man becomes insane due to moistness of the Brain, where the functions of the Soul are located".

In the bookson "Epidemics" there are accurate recordings of over 40 cases including a case of Puerperal Psychosis, one of Psycho-neurosis with Phobias, cases of Delirium in Tuberculosis & Malaria, a case of Disturbance of Memory in Dysentery and Acute Mental Confusion after a severe Haemorrhage.

In the early books Praenotiones & Prophetica occur the earliest written records of Melancholia, according to Zilboorg, who also gives his classification of Mental Diseases - Epilepsy, Mania (abnormal excitement)

Classification of Mental Diseases - Epilepsy, Mania (Abnormal Excitement), Melancholia (Abnormal Depression) Paranoia (Mental Deterioration) & Hysteria which was considered to be a physical disease due to wandering of the Uterus, which could be brought back by pressure bandages or evil smelling fumigations to the Nose or pleasant ones to the Perineum.

"Diet in Acute Diseases" records that Acute Diseases are those which the ancients called Phrenitis, Pleuritis, Peripneumonia & Lethargy where Fever was mostly continuous. Phrenitis may be any feverish illness in which Intellectual Disturbance (Delirium) is the leading symptom. Strictly Psychical affections were not distinguished from those which were only secondary (e.g. feverish illnesses), a common origin being ascribed to both viz. disturbances of the Cardinal Humours as in Melancholia according to Neuburger.

Treatment was along the usual expectant lines with Hellebore as a mild purge to correct the Humours, Mandrake as a sedative and Bleeding only when the head is engorged, or indirectly by Diet, Gymnastics etc.
N 9/18/0.

Hippocrates had little knowledge of Anatomy and Nerves were confused with tendons, ligaments & vessels.

Although familiar with Nervous Diseases the cause is always considered to be Phlegm, coming from the Head, leading to different symptoms according to the place in which it accumulates. Obstruction of the Vessels by Phlegm, making them impervious to Blood or Pneuma was the cause of Apoplexy & Paraplegia, gout & rheumatism.

In "De Corde" the seat of the Understanding is put in the Left Heart while the Brain is looked upon as a gland, the seat of cold & Phlegm & entrusted with the task of attracting to itself the superfluous water of the body according to Neuburger.

Zilboorg says that he did not hold the Brain supreme & thought at times that there were purely Psychological Forces presiding over all our organic functions including the Brain. "He thought in terms of a Vital Force - something akin to Bergson's Elan Vital - a force bound in some way to the body through the sensory & motor systems (the spinal cord & the brain), but capable of acting on its own initiative through the agency of the body". As a result when we are asleep & shut off from the outside world our mind goes on without interference - thus Dreams are produced.

Apart from He did not, moreover, ascribe to the Brain inherent Psychological qualities but thought the Breath, Air or Pneuma the source of intelligence & feeling, reaching the Brain through the mouth and being distributed to all parts of the body.

Apart from these his Medical Psychology is chiefly physiological. In addition to Pneuma, Phlegm is very important (hence Phlegmatic Temperament); & particularly in Mental Disease Yellow & Black Bile played an predominant role (hence Choleric & Melancholic Temperaments). "A sudden flux of Bile to the Brain brings on unpleasant dreams & a feeling of anxiety; a superabundance of Black Bile causes Melancholia. On the other hand a state of Exaltation is due to the predominance of Warmth & Dampness in the Brain. Hippocrates considered the seasonal climatic conditions are of some importance; Manias, Melancholias, & Epileptic Disorders he thought of as Diseases of Spring."

Stafford Clerk that he described the Melancholy man & the Phlegmatic & Sanguine Temperaments & offered a Physiological explanation for Temperaments, Constitutions, Moods & Emotional Disorders.

Ibanez states that he was the founder of Anatomico-Physiological Thought in Psychiatry & held the view that Psychic Functions had a Cerebral substratum.

Zilboorg Hippocrates also realized the importance of Emotions however when he asserted that a white woman could have a dark child from having only seen an Ethiopian.

Neuburger states that his fundamental Principle of Life is the "inherent" Warmth of the Body which has its seat in the Left Heart where it warms the Blood produced in the Liver & sends it by Veins to whole body. Arteries only contained Pneuma with perhaps smallest quantity of Blood. The Warmth inherent in the Heart is constantly maintained by the Air or Pneuma from the Lungs - "De Anatome"

Aphorisms from Zilboorg - A Physical Disease when it occurs in madness is apt to alleviate the Mental Illness. VII,5.

Dysentery, or Dropsy or Ecstasy, coming in madness, is good. VII, 5.

In Maniacal affections, if Varices or Haemorrhoids appear they remove Mania. VI,21.

From Douglas Guthrie - When Sleep puts an end to Delirium it is a good sign. II,2.

In every disease it is a good sign when the patient's Intellect is sound & he enjoys his food; the opposite is a bad sign. II,33.

The Diseases which generally arise in rainy weather are protracted fevers, fluxes of the bowels, mortifications, Epilepsy, Apoplexy & angina. III,16.

Both Sleep & Sleeplessness when beyond measure, constitute disease. VII, 72.

Our Natures are the Physicians of our diseases.

For where there is the love of man, there is also the love of the Art - Precepts VI. from Douglas Guthrie.

Almost 150 years passed before Herophilus & Erasistratus made Neuro-anatomical investigations.

The Books of Hippocrates - (460 - 370 B.C.)

from Joannes Cornarium ?

De Arte.
De Veteri Medicina.
De Medico.
De Decenti Ornatu (Seemly Attire)
Praeceptiones.
De Natura Hominis.
De Salubri Diaeta.
De Genitura.
De Natura Pueri.
De Carnibus.
De Septimestri Partu.
De Octimestri Partu.
De Superfoetatione.
De Exectione Foetus.
De Dentitione.
De Corporum Refectione.
De Corde.
De Glandulis.
De Ossium Natura.
De Locis in Homine.
De Aere, Aquis, Locis.
De Flatibus.
De Medicamentis Purgantibus.
De Diaeta sive Victus Ratione.
De Insomniis.
De Alimento.
De Humidorum sive Liquidorum Usu.
De Humoribus.
De Morbo Sacra.
De Morbis.
De Affectionibus.
De Internis Affectionibus.
De Virginum Morbis
De Natura Muliebri.
De Morbis Muliebribus.

Aphorisms.

Maister PETER LOWE - 1550 - 1612.

Obtained the Charter for the Royal Faculty from
King James VI on 29th November 1599.

In 1596 he wrote his book - A DISCOURSE of the
WHOLE ART of CHYRURGERY and in later
editions added The PRESAGES OF DIVINE HIPPOCRATES
i.e. the Prognostics, in which is mentioned "alien-
ation of the senses".

On the Title page the author describes himself thus -
Scottishman, Doctor in the Faculty of Chyrurgerie
at Paris, and ordinary Chyrurgion to the
French King and Navarre.

His Humanitarian outlook is reflected in his two
Chapters - "Of the Entertainment of Old Age" &
"Of Such Remedies or Helpes as should be used
by Old People" - early chapters on Geriatrics.

At the same time he must have been very interested
in the whole Psycho-somatic constitution of his
patients as shown in his chapters on Personality
and the Mind namely - Of Elements, Of Temper-
aments (Complexions), Of Humours, Of Virtues, &
of Spirits, & Passions & Perturbations of Mind.
Indeed he gives such an excellent, succinct,
brief description of the Psycho-somatic aspects
of the four Temperaments that he must have
delighted if not actually stimulated the heart
of Kretschmer when thinking of his Types.

James VI & I.

Granted the Charter for the Royal Faculty on
29th November 1599 at the instigation of Maister
Peter Lowe (1550-1612)

Wrote the following works -

Essays of a Prentice in the Divine Art
of Poesie. 1584.
Poetical Exercises at Vacant Hours- 1591

Demonologie - 1597 - in support of the
traditional attitude towards
Demonology in reply to Reginald
Scot's - Discoverie of Witchcraft-
1584 in which he asserts that
Witches cannot perform the acts of
which they are accused.
In his book James differentiates
between Witchcraft & Melancholy.

Basilikon Doron - 1599 - written for his
son Prince Henry who died in 1612 on
to everyone's sorrow.
It is a guide to Character building,
Conduct and Kingship.

Counterblast to Tobacco - 1616.

BONETUS, THEOPHILUS - 1620 - 1689.

Theophile Bonet

Physician to the Duc de Longueville.

A pioneer in Pathological Anatomy and with Willis & Baglivi initiated Psychiatry without Psychology.

Compiled a large System of Medicine consisting of many volumes in which he deals with Mental Diseases.

Thought the Maladie d'amour described by Ferrand was due to the Animal Spirits being lit up by love.

In his "Sepulchratum" also consisting of many large volumes he describes 30 cases of Hypochondria, depression with gastro-intestinal complaints, as the result of the Animal Spirits which had caused physical & subsequently mental i.e. intellectual changes.

Garrison states that the first edition appeared in 1679 and contained all the known Post-mortems of the 16th & 17th Century until its publication. It was given great credit by Morgagni.

He performed some 3000 post-mortems which were not related to the illnesses of the patients and were ill-arranged according to Poynter.

BAGLIVI, GIORGIO

- 1668 - 1706.

Brilliant clinician & popular teacher. Helped to establish
Psychiatry without Psychology with Willis & Bonet.

Professor of Anatomy and later of Medicine at Rome.

Follower of Hippocrates and discarding theories taught that
the patient was the best text book & Nature th best
physician.

In his magnum opus "De Praxi Medica" he states that the two
chief pillars of Physick are Reason & Observation.

Under the name of Tarantism described a nonexistent mental
disease, a state of excitement resembling a toxic condition
& supposed to be due to the bite of a Tarantula.

etc.

GEORG ERNST STAHL - 1660 - 1734.

Forerunner of Subconscious motivation. Leader of the
Animists or Vitalists against the complacent materialism of the Iatro-physics & Iatro-chemistry.

As he insisted that the Psychical aspect of disease should not be neglected Guthrie says that he would have become a distinguished Psychiatrist.

Professor of Medicine at the University of Halle and private Physician to the Duke of Weimar.

In his dissertation "De Motu Tonico- Vitalis" he postulated that there was a Driving Force, a Vital Living Force which permeated all living matter & was the source of all movement. This he conceived was much nearer to our Emotions, Affects & Instincts than to Physics & Chemistry and he called it the "Anima" or Soul. He did not agree with Cartesian Dualism and tried to bring the Body & Soul more closely together, 'to form a synthesis of physical & mental phenomena'.

The conception of a Driving force is a continuation of the Nature or Physis of Hippocrates, the Soul of Plato the Pneuma of Galen, the Immortal Soul of the Scholastics, the Archaeus of Paracelsus, TheBlas of van Helmont.

Ideler discovered Stahl 100 years later and the Anima became the Ego of the German Idealist Psychiatrists, while it emerges in the Elan Vital of Bergson's Creative Evolution and in the Purposive Drives of McDougall's Instincts & Sentiments, the Subconscious forces of Freud & the Personality of the Dynamic Psychologists.

In "De Medicina Medicinæ Necessaria" 1702 Stahl points out the important effect of the affects on the body.

In "Theoria Medica Vera" (1707) & "De Animi Morbis" 1709 he discusses Mental Diseases which he considers occur when the Soul is impeded in its free function. Deliriums were either organic or emotional.

THOMAS SYDENHAM - (1624 - 1689)

Described as the English Hippocrates who after 20 centuries revived the Hippocratic method of focussing attention on the patient rather than theories of disease or general assumptions. He had no patience for book learning & little respect for the sciences.

Born in Dorset of a Puritan family and was the Captain of a Troop of Cromwell's Horse. He studied in Oxford & Montpellier & practised in London.

Singer says his classical work was "Method of Treating Fevers." which he dedicated to Robert Boyle. He also wrote "Medical Observations" and a "Treatise of Gout". He believed in the Hippocratic healing power of nature & used simple remedies including his "Laudanum".

He gave a classical account of the Chorea which bears his name.

He described mental deterioration in young people under the name of Stupidity.

His famous notes on Hysteria are contained in a letter to Dr. Cole in 1680. which Ackerknecht describes as "the first and by no means the worst, of the writings on the Neuroses which succeeded one another without interruption until the late nineteenth century."

He recounts that Sydenham considered Hysteria to be a widespread & puzzling disease which was very difficult to treat. It occurred mainly in women who did not lead a hard life. It also occurred in men of sedentary life but was then called Hypochondriasis. It took so many different forms that errors in diagnosis were easily made. It could simulate Apoplexy, Epilepsy, Headache, Palpitations, Cough, Passio Iliaca (Chronic Appendicitis), Renal Colic, Diarrhoea, Pain & swelling of Muscle, Toothache, Backache, Cold and a Feeling of annihilation in the Chest. Great stress was put on the secretion of large amounts of clear urine.

Hysterical patients were often depressed or boisterous & generally very labile but they always retained their reason.

It could be precipitated by excitement, by prolonged fasting, severe blood-letting or purgation. It was due not to a disturbance of the Hippocratic Humours but to ataxia or spasm of the Animal Spirits of Galen.

Treatment was simple - Phlebotomy & Purging were used less frequently & reliance was put on Iron preparations, Milk Diet and Horse-riding. Attacks were suppressed by the old evil-smelling drugs which Aretaeus had recommended.

-11-

Famous for his 'Circle' and for his 'Paracusis'.

Outstanding Neuroanatomist, Physiologist & Clinician who still believed in Devils. His book "Cerebri Anatome" (1664) is one of the first descriptions of the Brain and was illustrated by Sir Christopher Wren. He dissected the Brain and worked out its Blood supply in detail.- also discovered 11th Cranial Nerve.

He was a Professor of Natural Philosophy at Oxford, a Royalist during the Civil War, & became a fashionable London physician.

In his "Opera Omnia" (1681) he writes a good deal about Cerebral Pathology and upon Melancholia, Mania, Idiocy & Apoplexy from a Neurological Anatomical viewpoint.

Nevertheless he advocated Harsh Treatment for the mentally ill as quoted by Zilboorg from R.Semelaigne thus -

"Discipline, threats, fetters and blows are needed as much as medical treatment.... Truly nothing is more necessary and more effective for the recovery of these people than forcing them to respect and fear intimidation. By this method, the mind held back by restraint, is induced to give up its arrogance and wild ideas and it soon becomes meek and orderly. This is why maniacs often recover much sooner if they are treated with torture and torments in a novel instead of with medicaments"

With reference to his Neurophysiology Willis speaks about the Acidity of Nerve Juices & Animal Spirits in Mania. He speaks of the effervescence of the Juices & of the ride and sudden expansion of the Animal Spirits pushing themselves across the substance of the Brain & the numerous branches of the nervous paths & exciting a sort of torment of the Intellect. Liquids altered by bad ferments act on the Mind & trouble its equilibrium.

Thus he combined the Classical theories of Physiology with Physics & Chemistry and the Nervous Irritability of his day.

According to Zilboorg Willis with Theophile Bonet & Gergio Baglivi laid the foundation of Psychiatry without Psychology. The latter was handed over to the Philosophers, Descartes, Locke, Hume etc. culminating in Kant asserting, in 1836, expert witnesses in Psychiatric cases should be drawn from the faculty of Philosophy.

Willis noted that Mania & Melancholia may merge, one of the first modern suggestions of the same disease while he also observed a case of so-called "Stupidity" which recovered as the result of a fever.

In 1672 he wrote "De Anima Brutorum" the first modern book of Medical Psychology, in which he gives the first real account of General Paralysis according to Henry & noted that some boys who were bright and intelligent became dull and heavy an early reference to Schizophrenia according to Dawson.

ZACCHIAS PAULUS


- 1534 - 1659

Paul Zacchias of Rome.

Founder of Forensic Psychiatry.

He was the first physician to devote himself to Legal Medicine. Physician to Pope Innocent X. Brought about helpful cooperation between doctors & jurists in many problems of civil & criminal procedure. He departed little from the lawyer Jean Bodin (1530-96) who fulminated against Witches in his "Demonomanie" 1580.

Zacchias believed also in Incubi & Succubi and asserted that the Devil rejoiced in a bath of the Melancholy Humour.



LAURENTIUS ANDREAS -
Andre du Laurens

Died 1609

A Physician who showed an interest in Mental Disorders
like Felix Plater & Timothie Bright.

He wrote his book "Discourse on Melancholike Diseases etc."

in 1599 the foundation year of the Royal Faculty.

It was incorporated in his "Opera Omnia" published
in 1628. He was well versed in Galen & Avicenna.

He maintained that Melancholics should inspire
compassion but was constantly confronted by Witchcraft.

His book "De Mirabile Strumas Sanandi" (1609) is an early
historic record of the Kings Evil in which the contag-
eousness of Scrofula is maintained - Garrison.

FERRAND JACQUES

- circa 1600.

James Ferrand

Recorded the first case of Psychological Insight. Pioneer in Psychiatry

Greek writers had been interested in the emotional condition of being in love with its instability, malaise, moodiness and Depression.

Ferrand interested himself in such cases and studied all the previous literature on the subject.

He considered it was wrong to treat Melancholics caused by love like other Melancholics and Madmen without considering the true cause and seat of the disease.

In 1612 he wrote his book " La Maladie d'Amour ou Melancolie erotique." with the later additional title "Discours curieux qui enseigne a connaitre l'essence, les causes, les signes et les remedes de ce mal fantastique."

On the question of Incubi he treated two young women who recognised their experiences were "all a deformity of their Imagination"
- first recorded case of Insight.

JEAN BAPTISTE van HELMONT

- 1577 - 1644

Physician, Chemist, Philosopher & Mystic of Brussels.

Founder of the Iatro-chemical School.

He was of a moralistic bent & still connected disease with sin.

He had a great regard for Paracelsus and like him he thought there was an Archaeus or Vital Force which dominated all the bodily processes. This Driving Force he nominated "Blas" and considered its situation to be at the Pyloric Opening of the Stomach. Thus he revived the Pneuma of the Classical writers which was expanded by Stahl into his conception of the Soul or Anima.

DANIEL SENNERT

-

1572 - 1637

Sennertius Daniel

Prof. of Medicine, Wittemberg.

An excellent Hippocratic Physician whose Opera Omnia appeared in four volumes in Paris in 1666.

He considered that ecstatic Mental Diseases were the handiwork of the Devil while he believed in Witches. Although acquainted with the work of Weyer he considered Lycanthropy to be a real demoniacal transformation of Human Beings into Animals.

etc

FELIX PLATER

(1536 - 1614)

A Renaissance physician of Basel, Switzerland, who had a strong personal interest in the insane and in order to study and understand them actually lived in their dark dungeons with Idiots & Psychotics.

According to Whitwell he described Flexibilitas Cereâ and Cretinism and produced a new and more scientific classification for Mental Diseases but found it necessary to retain a small section for cases which were "the act of God or a Demon the treatment of which is 'prayer, fasting and perfect faith'"

At the beginning of his book "Medical Practice" he devotes several chapters to Mental Disorders, which he divides into the following groups -

- (1) Imbecilitas. Subdivided into Hebetude, Tarditas, Imprudentia & Oblivio - J. Campbell.
- (2) Consternatio including both Stupor of Febrile Delirium & Catatonic States.
- (3) Alienatio divided into Dementia, Alcoholism, Love & jealousy, Melancholia, Hypochondriasis & Possession by a Devil, also raving Mania.
- (4) Defatigatio - mainly Insomnia due to a supernatural agent either God or Devil.

Zilboorg states that he emphasised - Idiots, Morons, Cretins & also mute, depressed so-called Melancholics. In all he had 23 diseases. He believed that these conditions were caused by dryness of the Brain but those whose delusions or hallucinations were highly erotic or religious were Possessed by the Devil. Moreover the days, the months, the seasons and the summer solstice in repeated attacks - all played a definite role in causation.

He noted that the Memory of old people was defective especially for recent events although their Judgment was sound - the Amnesia of Carl Wernicke (1848-1905)

Plater did not offer anything new in the way of treatment. He used purgatives freely and had only Chains for very disturbed patients.

Whitwell asserts that he attributed Epilepsy to nerve irritation but for treatment he used Peony roots powdered and sprinkled on the hair.

He is considered to be a pioneer, to be accurate in his clinical observations and that his work was, "in many ways a definite step in advance of anything hitherto produced."

TIMOTHIE BRIGHT + 1550 - 1615.

Author of "A Treatise of Melancholie" 1586 claimed by scholars to be the source book of Shakespeare's Hamlet.

He was born in Cambridge, claiming to be a Cantabrigian, where he also was educated. He became a resident at Trinity College in 1564 where he was amongst the poorer students supported by the college & by acting as a college servant.

Geoffrey Keynes in the latest publication about him states that he doubtless slept on a truckle bed beneath the couch of his master who was also his tutor - Vincent Skinner who married into the powerful Cecil family and was knighted by James I in 1603. Timothie was evidently an apt pupil and gave his tutor much comfort by his diligence.

He graduated B.A. in 1568 but he was determined to enter the medical profession and as proper facilities were not available he went abroad. He was in Paris in 1572 and on St Bartholomew's day took refuge in the English Embassy under Sir Francis Walsingham and for the seven days massacre which followed. On his return he took his M.B. at Cambridge in 1573 and his Doctorate five years later. In the interval he had married and had a son Timothie. He practised there and wrote his first book in 1580 - "The Sufficencie of English Medicines." to prove that remedies & herbs produced & grown in England were superior to those of any other country. He particularly eulogises Earth-worms & little vermin called Sowis or Wood-lice, also a decoction of Frogges with salt and butter.

This book was reprinted in 1615 with the additional title - A Collection of Medicines growing for the most part within our English climat, approved and experimented against Jaundice, Dropsie, Stone, Falling Sickness and Pestilence.

His next book was the "Hygieina id est de sanitate tuenda" in 1582 and its sequel the following year - "Therapeutica de sanitate restituenda." The Preservation of Health and the Cure of Diseases.

In 1584 he published his third book - "In Physicane Gulielmi Adolphi Scribonii" observations on Scribonius's Physica published in 1577.

By influence he was appointed to St. Bartholomew's Hospital in 1585 against the wishes of the College of Physicians who summoned him for practising in the City without their licence & condemned him in absentia to be cast into the Fleet Prison.

Shortly after the death of his baby son Paul he published his now famous Treatise of Melancholie in 1586. It is both theological & medical & differentiates between natural Melancholy & the heavy hand of God on an afflicted conscience. It is described as an early essay in Psychiatry recognizing the interaction of body & mind. It was a forerunner of Burton's Anatomy of Melancholy published in 1621.

Prof. Dover Wilson considers that Shakespeare based Hamlet upon it and gives many parallel phrases to support his belief. C.C.

(Continued)

Timothie Bright (continued)

Prof. Dover Wilson considers that Shakespeare based Hamlet on A Treatise of Melancholie and in his book What happens in Hamlet 1935 gives many parallel phrases in support e.g.

Bright says - The ayre meet for melancholike folke ought to be thinne, pure & subtile, open and patent to all winds: in respect of their temper, especially to the South and Southwest.

Hamlet says to Guildenstern -

I am but mad north-north-west when the wind is Southerly I know a hawk from a hand saw.

The Treatise was reprinted twice shortly after its publication and is very rare. A photostatic facsimile of the first edition was made in America in 1940.

Timothie Bright also gained fame as the inventor of modern Shorthand writing which he described in his book published in 1583 "Characterie. An Arte of short, swift and secrete writing by Character" only six copies of which survive.

He compiled an abridgement of Foxe's Book of Martyrs in 1589.

His religious interest caused him to apply for the Curacy of Christs Church adjoining the Hospital without success.

His interest in Medicine declined and in 1591 after several warnings he was dismissed from the Hospital for neglect of duty.

He left London for a living in Yorkshire where he still practised medicine.

He joined his brother William in Shrewsbury where he died in 1615 at the age of 65 years.

A / Treatise of / Melancholie

Containing the Causes

thereof and reasons of the strange effects it worketh in our minds and bodies: with the physicke cure, and spirituall consolation for such as have thereto adioned an afflicted conscience.

The difference between it and melancholie with diverse philosophical discourses touching actions and affections of soule, spirit and body: the particulars whereof are to be seen before the booke

By T. Bright, Doctor of Physicke.
Imprinted at London. Thomas Vautrol -
ler dwelling in the Black-
Friers. 1586.

PARACELSUS

1490 - 1541

Philippus Aureolus Threophrastus Bombastus von Hohenheim.

"Half rogue, half genius" according to Whitwell. Charlatan, braggart or Lunatic. The most original thinker of the 16th Century according to Garrison while Osler calls him the Luther of Medicine. Ackerknecht refers to him as the most renowned physician of his time.

One of the earliest independent Renaissance thinkers and broke with domination of the past by burning publicly the works of Galen and Avicenna previous to lecturing in the University of Basel about 1526. Compelled to resume his wanderings through Europe and is alleged to have died as the result of a tavern brawl, in Salzburg.

He was interested in Alchemy as the beginning of Chemistry in Medicine and in his principal work "Paramirum" states that man is composed of three elements - Sulphur, Mercury & Salt c.f. Hippocratic Humours. A book called "The Triumphal Chariot of Antimony" (1604) is probably his.

He also postulated a Life Force which he called "Archaeus" which was the heart of the Elements and was a reparative & renovating principle. It was the all pervading principle directing the individuals life & was the secret to be understood. Compare this with the Pneuma of Hippocrates & Galen, The Soul or Animal Spirit of Fernel, the Anima of Stahl, the Elan Vital of Bergson, the Instincts of MacDougal and the Libido of Freud etc.

He was interested in Astronomy but not in Astrology although he felt that the heavenly bodies could influence a man under certain circumstances.

The Spiritual side of healing also appealed to him and he states that the invisible body sends forth a healing influence which only faith in God could prevent from being evil according to Douglas Guthrie.

Nicole in Psychopathology says that Paracelsus suggested that there might be a factor responsible for affecting one mind by another and hinted it might be a Magnetic Fluid. This is confirmed by Barton Hall and it immediately recalls Mesmerism and all future Suggestive Therapy.

Mental Disorders interested him and he wrote a book in 1520 which was published, after his death, in 1567 called "Diseases lead to a Loss of Reason." He vigorously denounced Demonology as a cause while his Humanism is seen in this statement quoted by Stafford-Clerk "Mental Diseases have nothing to do with evil spirits or devils one should not study how to exorcize the Devil but how to cure the insane ... the insane & sick are our brothers."

He regards Mental Diseases as natural diseases of the Vital Spirits and advises scarifying the fingers and toes in Mania to allow the vapours to escape or to let in fresh air to reduce the excess of heat. He also advised drilling small holes in the patients skull to let out the Mania.

Paracelsus was full of incongruities & illogicalities especially when he refers to severe cases as animals & beasts & advises chains & fetters and elimination as pariahs of the community - Zilboorg.

Paracelsus (continued)

"Von den Krankheiten so die Vernunft Berauben."

"Diseases which lead to a Loss of Reason." 1520.

Ackerknecht points out that Paracelsus created a new Classification of Mental Diseases again breaking with the past with its Classical grouping of Mania, Melancholia & Paresis.

Classification - Epilepsy, Mania, 'True Insanity', St. Vitus Dance, and Suffocatio Intellectus (Hysteria).

Epilepsy - Five types are described arising from the Brain, Liver, Heart, Intestines and the Limbs. Not clearly defined from Hysteria. Could occur in any living organism, animals & even trees. It was a disturbance of the Vital Spirits precipitated by food or 'Vapours' and it was likened to an earthquake. It began in intra-uterine life and was a seething of the Vital Spirits in the organ of its origin - Brain, Liver etc.

Mania - A disturbance of Reason not of the Senses. Excited and unreasonable behaviour, agitation and irritability. There was a tendency to relapse & it could be primary or secondary to other diseases. A Substance was distilled whose Vapours rose to the Brain. If it originated from Excreta the patients would refuse food, talk to themselves, vomit & ignore surroundings. If from Limbs, they would be cheerful, wild & excited. If Temperature high the Vital Humour would burn and its finer particles would be separated off and rise upwards. They might coagulate in the head & might cause worms. Arose from the Vital Spirit alone not Humours or Temperaments.

"True Insanity" - Divided into 5 Sub-groups - Lunatici, Insani, Vesani, Melancholici, and Obsessi.

Lunatici - Vital Spirit is under the influence of the Moon & Stars like iron with a magnet or water drawn up by the sun.

Insani - Born mad because semen diseased or affected by the Moon in Utero.

Vesani - Poisoned by food or drink especially food subjected to magic of Love. Some think of love, others of war or of climbing or running.

Melancholici - Lose their Reason by Nature. (Whitwell)

Obsessi - Possessed by the Devil.

St. Vitus Dance - (Dancing Mania) - Saints do not cause diseases. Suggest name "Chorea lasciva" due to precipitation of salts in Veins of Laughter by the Vital Spirits or to "Imagination".

Suffocatio Intellectus - Mixture of Hysteria & Epilepsy. Natural disease due to intestinal worms, intra-uterine events, over-eating or over-sleeping. Due to fumes from affected organs reaching head or being sucked into Heart. Also by blows on Head. Recognised sexual nature of Hysteria - Zilboorg. Children have Chorea because "unconsciously they have fantasies" - this he says is first reference to Unconscious Motivation.

Paracelsus (continued)."Diseases which lead to a Loss of Reason." (continued)Treatment -

Epilepsy - Although Spiritual uses physical drugs as Arcana which contains Camphor, Skull shavings, powdered Unicorn, Herbs & Roots.

Mania & Allow Vapours to escape by opening toes, fingers and head, and counteract them by cooling & astringent measures.

True Insanity -

Lunatici - Counteract magnetic attracting forces of Moon or Sun by Quintessences or Active Principles e.g. of Gold.

Insani - Prevent conception and by drugs.

Vesani - Specific drugs, Sedatives & remedies to strengthen Vital Spirits.

Chorea Lasciva - When due to excessive rage - let out oaths on wax image and burn it. Due to sexual phantasies - dark cell, fasting, 'a good stick' & ducking in cold water. When arising in Laughing Veins - potable gold, ointments etc.

Suffocatio Intellectus - Antihelminthics, Laxatives, fumigation, ointments and other drugs.

Paracelsus's inconsistencies are however shown in another book -

"The Invisible Diseases" 1531.

Here he speaks about the influence of the imagination of a pregnant woman on the formation of the child, and about those who kill themselves being inspired by the Devil.

St. Vitus Dance & St. Anthony's Fire are due to Faith & he becomes a mystical philosopher.

In "De Generatione Stultorum" is the first mention of a relationship between Goitre & Cretinism, while he makes an appeal for the understanding and humane treatment of Fools, while in

"De Lunaticis" he states that madness can be avoided by Confession & those afflicted should be burned to prevent them from being tools of the Devil.

Another treatise on those Possessed by the Devil & not amenable to medical treatment can only be cured by the power of Christ, through prayer & fasting.

In a book about Witches he tells that they are responsible for thunder storms & that they can produce disease by shooting foreign bodies under the skin, while they can cause congenital malformations.

Nevertheless he charitably thinks they should be saved rather than burned.

Paracelsus undoubtedly had much sympathy for the sick and poor but with his contradictory statements it is no wonder he has been alternately lauded and maligned.

HIERONYMUS CARDANUS

-

1501 - 1576.

Jerome Cardan. or Cardano.

An Italian Renaissance physician who recognised that Witches and 'Possessed' were mentally ill and raised his voice against their general illtreatment.

Born in Milan under an unlucky star according to his horoscope, became a poor country practitioner and ultimately Prof. of Medicine at Padua & Pavia.

He became the most fashionable physician and most popular Philosopher of the 16th. Century. He was called to Scotland to treat Archbishop Hamilton of St. Andrews, brother of the Regent Arran, and Primate of Scotland. Cardan cast his Horoscope, being interested in Astrology, and prescribed diets and graduated exercises for his over-weight asthmatic patient with excellent results according to Comrie.

In spite of his humanism Cardan paradoxically believed in Devils and relates that seven Beivils appeared one day before his own father. He, himself, was convinced that he was attended by a supernatural person. He attached great weight to dreams & omens.

His ill star followed him and he had a broken hearted old age dying in Rome in poor circumstances as a pensioner of the Pope.

He was an industrious author and his works filled 10 volumes.

He wrote a treatise on Algebra - "The Book of the Great Art" 1545. in which he solved cubic equations - Cardans Rule.

His most popular work was - "De Subtilitate" 1551 a household encyclopaedia in which he describes the universal joint - Cardan's Shaft.

"Praeceptorum Filiis Liber" was a book of precepts for his children

"De Consolatione" was translated into English as "Cardanus Comforte." 1573.

Finally he wrote his autobiography - "De Vita Propria Liber" 1575.

He is described as a great Renaissance doctor and is quoted by Robert Burton in almost every page of his Anatomy of Melancholy.

Jean Fernel -

"He was the earliest to draw together into one discipline Physiology, calling it for the first time by that name." - Sir Charles Sherrington in 'Man on his Nature'.

He was Prof. of Medicine in Paris and although he was physician to King Henry II of France he was equally successful with the poor. He is considered also to be the first to use the word Pathology in its modern sense and to be the first to describe Appendicitis.

His first book "Dialogue" issued in 1542 & printed four years later describes his Physiology the details of which are given by Sherrington. He believes in the 4 Humours with their qualities making up the four Temperaments or constitutions, and every disease is an upset of these - Hippocrates & Galen. Images are drawn into Special Sense Organs and transmitted to the Internal Sense in the Brain, to be recognised. In the fore part of the Brain Memory & Imagination judge them pleasant or harmful & there is an instinctive impulse to movement. "This is caused by contraction (systole) of the Brain forcing Animal Spirits from its front chambers into the hindmost chamber (4th. Ventricle) & thence down the canal of the Spinal Cord and out along the nerves into the muscles making tense those appropriate for the act." He believes in innate vital heat, the importance of Form and a Prime Mover. He speaks of the Anima, the Soul and a Divine purpose in Creation. The Mind is incorporeal & the Human Soul composed of the sentient & reasoning as well as the vegetative, is immortal. The praeternatural does have its place in sickness but some remedies are merely superstition neither divine nor truly magical e.g. the following for Falling Sickness -

Myrrh Caspar brought, thyme Melchior,
And Balthazar brought gold;
Whoso shall bring with him these three
In the names of the kings of old
Cures Falling Sickness by his piety.

He cannot free himself altogether from magic and we learn that the Peony for Epilepsy must be gathered in the wane of the moon.

Zilboorg also tells us that he believed in Werewolves, human beings actually turned into animals by the Devil - Lycanthropy.

"Opera Universa Medicina" describes different ways in which the Devil affects man & uses the ancient method of differential diagnosis - whispering a few words laudatory to God and watch the trembling of the patient. The Devil could assume any guise to enter the body or just agitate the Humours.

Andreas Perforatus (bored)

Author of "The Breviarie of Health, for all manner of Sycknessess & Diseases" which was the first original English medical book to be printed in 1547 & which contains references to mental disorders.

He was born near Buckfield and was educated at Oxford and at Montpellier. He was one of the Physicians to King Henry VIII. At various times he was a Carthusian Monk, a Physician, a friend and political agent of Thomas Cromwell, and a prisoner in Fleet Street Prison.

He was an extensive traveller making four long journeys abroad visiting most of the countries of Europe as well as North Africa & the Near East.

He actually spent a year in Scotland at -
"a litle unyuersyte named Glasco, where I study and practyse physyk for the sustentacyon off my lyvyng."

The Breviary is a household Medical Dictionary and includes a chapter which "Dothe shewe of the Kindes of Madnes. In another chapter of "Lunatyke Men & Women" he writes " This impediment may come by nature and kynde, and then it is incurable, or els it may come by a greate fear or a great study."

He says there are four kinds of madness - Mania, Melancholia, Frenesis and Demoniachus. "the latter doth passe all manner of sickenneses."

"Also there is another kind of madnesse, named 'Lunaticus' the which is madnesse that dothe infest a man ones in a Mone (moon), and which doth cause one to be geryshe (changeable), and wavering witted, not constant, but fantzasticall." - Whitwell.

Guthrie makes the following extracts -

"Spleen is the Greek word, in Latin it is Liēna. In Englyshe it is named a man's splene, a spongiouse substance lienge under the ribbes on the left side, and it doth make a man bee merry and to laugh, although melancholy resteth in the splene if there be impedimentes in it. If ant man be splenitike let him use mery company, be joconde and not to study upon any supernatural thynges."
"Let him be bloud of a veyne named Basilica on the left side."

BERNARD de GORDON

circa 1285.

Bernardus Gordonius

Bernardus de Gordonio

A famous Professor at the Medical School of Montpellier and probably a Scotsman.

One of the most famous physicians of the Middle Ages.

In 1305 he began his magnun opus the "Lilium Medicinae" which after being circulated in manuscript was printed in 1486 or 1496. It was long esteemed as a text book.

Freind writes - a "Volume called Lilium Medicinae (for in this affected age everything writ in Physic was either a Lily or a Rose) a book mightily celebrated in those times."

Neuburger states that it is divided into 7 Particulae and that it reflects the Scholasticism, polypharmacy & superstitions of the age and perpetuates Arab views.

Garrison points out that it contains the first reference to a Truss and makes the first mention of Spectacles as 'Oculus berellinus'.

He indicates that Epilepsy under the name of Pedicon is included under the eight Infectious Diseases of that period the others being - Fever (Plague), Phthisis, Scabies, Ignis Sacer, Anthrax, Trachoma and Leprosy. The name is from the Assyrian-Babylonian concept of Seizure by Demons.

According to Whitwell Epilepsy is treated by whispering Latin incantations into the patients ear or by writing incantations with Blood taken from the patients finger.

The first Incantation to be recommended under Cura on the page opposite 75 is the one about Caspar bringing Myrrh Melchior Thyme and Balthazar Gold, but whoever brings all three shall cure Epilepsy with his piety - quoted in full under Fernel.

Joannes Anglicus

A student at Montpellier and became Professor at Merton College Oxford. He was a Prebend of St. Pauls and was the first English Physician to be employed at Court.

He treated the son of Edward II for Small Pox by rapping him in a red cloth and having red furnishings so that he had no scarring.

Between 1305 and 1317 he published a 'Practica Medicinæ a Caput ad Calcem' known as the "Rosa Anglica". Freind calls it a whole Practice of Physick collected chiefly from the Arabians and from the moderns who had written in Latin before him. He says however that Leland calls him a profound Philosopher and a skilful Physician and the brightest man of his age. Neuburger calls the book a compilation with scholastic subtilty and mysticism.

Freind says somewhat scathingly that he provided perfumes and washes for the ladies & that he provided dearer medicines for the rich and gave them double doses. "In Epileptick cases he provides them with a Boars bladder boiled; and besides Mistletoe a Cuckoo".

"He is still more learned in his derivation of the word Epilepsy; it is, it seems, from Epi and laedo - and therefore he observes it was call'd likewise Hiera noson, from Hiera which signifies Sacra, and nocere - from hurting the noble parts."

"He acquaints us with his great skill in Physiognomy; and did design, if God would give him life and leisure to write a treatise of Chiromancy; but to our unspeakable grief, this excellent comment upon Fortune - telling is lost".

"Nothing came amiss to John, which was in the circle of the Profession, and there was nothing which he wou'd not undertake: and the more difficult & dangerous the case was, he seems to proceed upon it with the greater alacrity". -- he could conquer Epileptick fits with a necklace, (probably Paeony).

Whitwell records his method of distinguishing Epilepsy from Lunacy When one falls to the ground, utter these words into the ear

"Depart, demon, go forth because effimoli command thee"
If lunatic, he becomes unconscious for nearly an hour; when he rises, ask him any question - if he does not fall then he is epileptic.

Arnoldus of Villa Nova.

A teacher at the Medical School of Salerno and the most brilliant exponent of 13th. Century Medicine. - Neuburger.

Probably born in Spain of humble origin he probably studied in Paris a Naples and graduated in Theology and Law as well as Medicine. He was ultimately the Physician to Three Popes and two Kings, and was latterly a Diplomat for the Kingdom of Aragon.

He was an outspoken critic and got into trouble with the Church for statements like "Works of Mercy and of Medicine were more acceptable to God than the Sacrifice of the Altar". Was forced to recant by the Inquisition but was able to justify himself to the Pope. After his death he was accused of Sorcery and of being in league with the Devil while his works were publicly burned.

He was a prolific writer in barbarous Latin on Medicine, Alchemy and Astrology. He made use of the work of the past without being overpowered by it. His rational empiricism held the traditional dialectics and superstition in bounds if not entirely free.

His two masterpieces were the "Breviarum Practicae" and the (experience) "Parabolae Medicationis" in which he asserts that the subtlest reasoning cannot compensate for sensible/which is in direct conflict with the existing Scholasticism. At the same time he combatted aimless therapeutic empiricism which neglected all general principles. He sought to prove that an interrelationship between theory and practice was the rational basis of the Art of Healing.

His "De Conservanda Sanitatis" evinces his high moral & deeply religious conception of the medical calling.

His Therapeutics were based on the individualism of Hippocrates with dietetics and expectant treatment with vegetable and mineral drugs.

He attached particular importance to the Psychic factor & says -

"It is of the utmost importance to the physician to be able rightly to make use of the sufferings of mankind, to win men's confidence and know how to stimulate their imagination; there will then be little that he may not accomplish."

from

Arnold however was not altogether free of mysticism and was an industrious Alchemist with his power reputedly from the Devil.

He admitted the origin of Mental Disorders through Witchcraft & Incantation, made use of amulets, regarded gold as a panacea, made prognosis & treatment subordinate to the constellations and believed in dreamportents, according to Neuburger.

Zilboorg tells us that he tried to reconcile Galen's Humouralism with Demonology and claimed that if certain Humours developed in the body, the Devil or Incubi might seize the person as they like warmth. Galen was also brought into Astrology e.g. Epilepsy is caused by Phlegm if it appears during the first quarter of the Moon, in the Blood in the second & third quarters, and in Black Bile in the last. Mars is responsible for Melancholia and the Sign of Cancer is most favourable for blood-letting. Reading the Gospel of St. John and reciting the names of the Seven Sleepers were beneficial for Insomnia.

SCHOOL of SALERNO

11th. - 12th. Cent.

Patron - St. Matthew. Seal - Civitas Hippocratica.

Regimen Sanitatis Salernitanum - 11th. Cent.end.

This Poem is described as the most popular medical work ever written.

Almost 300 editions had been issued up to the middle of last century and it has been translated into many languages including Polish, Hungarian & Irish.

The oldest version is contained in the works of Arnold of Villanova (1235-1312) and contained over 300 verses but very many verses were added during the Middle Ages until they are about ten times the original number.

It is alleged to have been written for Robert, Duke of Burgandy, son of William the Conqueror, who stayed at Salerno for the treatment of a wound in the arm which he had received on a Crusade.

One of the earliest English translations was made for Queen Elizabeth by Sir John Harington in 1607.- The earliest being published in ~~1552~~.1528.

The Poem is a collection of Aphorisms on Health & is indeed a handbook of Domestic Medicine.

The 4 Humours & Temperaments (Elements) are depicted thus -

Four Humours reign within our body wholly,
And these compared to four Elements,
The Sanguin, Choller, Flegme and Melancholy.

John Freind says (p 224) - "...about 1100 the Schola Salernitana was compil'd, which made so great a noise then and in the succeeding ages It was put together by John of Milan."

The earliest Medical School in the Christian West. Origin lost in antiquity but the town itself was a health resort in the time of Imperial Rome, and frequently visited by invalids, so it became a Civitas Hippocratica. According to Neuburger.

During the 10th Cent. the Physicians of Salerno were renowned and gradually formed themselves into a Collegium Hippocraticum which was not an ecclesiastical foundation of the neighbouring Benedictine Monastery of Monte Cassino which had been founded by St Benedict of Nursia in 529 on the site of an ancient Temple of Appolo, as the original Monastery of his Order, one of precepts of which was the care of the Sick.

From the earliest time however the "Medical School worked in close harmony with the Monastery which no doubt possessed an Infirmary for sick Monks and lay Brothers and a Hospice (Hospital) or Xenodochium for poor & infirm Pilgrims.

In addition to the "Regimen Sanitatis Salernitanum" with its emphasis on Hygiene & Dietetics before it was expanded by later writers to cover the whole field of Medicine, the attainments & teachings of the period are portrayed in the Text Book of Medicine of the School - Namely - 'De Aegritudinum Curatione'.

This is a compilation of the writings and teachings of 7 of the most eminent Masters of the School, the basis being the 'Practica Brevis' of Joannes Platearius the Younger, with extracts from Kophon, Petronius, Afflacijs, Bartolomaeus, Ferrarius & Trotula.

De Aegritudinum Curatione :-

Nervous Diseases & Psychoses -

Phrenitis - An aposteme (abscess) of Anterior Ventricles of Brain

Lethargy - Aposteme of Posterior Ventricles.

Melancholia - Affection of seat of Reason.

Mania - Of imaginative power.

Causes include Mental Affections, Overexertion & Covetousness.

Clinical Picture varies with underlying Humoral Disorder -

Yellow Bile symptoms of Exaltation; Black Bile Depression & Delusions of Persecution.

Therapeutics - Constitutional - Diet, Purgation, Blood-letting, &

Psychological - "Verborum dulcedine et etiam artificio falsae suspiciones removendae sunt ... adsint soni musicorum instrumentorum" - By the sweetness of words & certainly by

occupation false suspicions are removed ... the sounds of musical instruments are helpful. Diet for Epilepsy.

Convulsions - Arise "ex inanitione et repletionem" & Plasters with Sedatives are applied to Neck & Spine.

Hysteria - "Suffocatio Matricis" - Treatment pungent medicaments like Musk & Ambergris. For the wealthy a costly medicament called "Diamargariton" prepared from Pearls.

According to Zilboorg, Mercury was used for Impotence & Peony against Demons & Sorcerers & in Epilepsy; Gold & Silver for Melancholia. Constantinus Africanus treated Impotence by putting together the halves of a Nutshell.

Anglicus

Bartholomaeus, according to Zilboorg, advised that the mentally ill be "refreshed & comforted and withdrawn from any source of dread and busy thoughts. They must be gladdened with instruments of music & some must be given occupation." He does not mention the common belief of demoniacal possession but does not oppose it although in advance of his time - "Madness cometh sometimes of passions of the soul, as of business & of great thoughts, of sorrow & of too great study, and of dread; sometime of the biting of a wood-hound (mad dog), or some other venomous beast; sometime of melancholy meats, and sometime of drinking strong wine. And as the causes be diverse, the tokens and signs be diverse. Some cry and leap and hurt and wound themselves and other men, and darken and hide themselves in privy and secret places".

The Physiology of the School was based on Galen according to Neuburger & was founded on teleology (purpose) & organic Forces.- The "Virtus Nutritiva et Augmentativa" is situated in the Liver, Membrana Nutritiva, & is the most important for the maintenance of Life so the Liver (Prima Radix Corporis) is formed first. The "Virtus Vitalis et Vegetativa" is situated in the Heart, Membrana Spirituales including Lungs is next most important so Heart developed second. The "Virtus Motiva et Sensibilis" is in the Brain, Membra Animata with the Nerves, is most exalted so Brain is developed last. The "Virtus Propagativa et Generativa" is in the generative organs Membra Generativa is subordinate and of least significance.

Magisters & Authors of Salerno -

Gariopontus also Guaripotus, Garimpotus, Garimponus, Warmipotus, Warimbotus, Raimpotus, Warbodus etc. (d.1050) a Lombard, compiled the "Passionarius" a textbook of Medicine from Graeco-Byzantine Authors in Latin, in 5 books.

Petroncellus also Petrocellus, Petricellus, Petronsellus, Petronius - "Practica" - fragments - Anglo-Saxon version in Cockayne's Leechdoms.

Alphanus or Alphonsus c. 1050, Archbishop of Salerno, writings "De Unione Corporis et Animae".

Trotula, said to be of family of Ruggiero (Roger of Palermo) & presumably wife of John Platearius I. quoted for several works in manuscript. Printed in her name is "De Mulierum Passionibus ante, in et post Partum" is 13th Cent. but may be from her writings. Sudhoff says not a person but name of book. Other "Mulieres" -

Abella - "De Atra Bile" & "De Natura Seminis Hominis" in verse.

Mercuriade - De Febre Pestilentiali, De Crisibus, De Curatione Vulnerum.

Rebecca Guarna - De Febribus, De Urinis, De Embryone. Constanza Calenda etc.

"Speculum Hominis" ca 1050 - fragmentary didactic poem.

Magisters & Writers -(Contd.)Constantinus Africanus - Constantine the African - (1010-1087) -

Born Carthage, travelled Persia & India & learned Languages.

Fled to Salerno & retired to Monte Cassino as a Monk.

He translated into Latin the works of the Arab Physicians,

Haly Abbas, Johannitus, Isaac Judaeus & his pupil Ibn al-

Djazzar and the Aphorisms of Hippocrates & the Ars Parva

(Microtechné) of Galen & his Commentaries on Hippocrates from

the Arabian. Made available rich resources of Arabian medicine which however did not influence Salerno.

His "Pentateuch" the "Whole Art" is largely a compilation.

Made Surgery of past more accessible & acted as inspiration.

Bartolomaeus Anglicus - Bartholomew the Englishman - Magister

Bartholomaeus - "Practica" - clearly written Text Book on

the Practice of Medicine translated into many languages.

Sub-title "Introductiones et Experimenta in Practicam Hippocratis,

Galieni, Constantini, Graecorum Medicorum." Stressed Pulse &

Urine in Diagnosis & Venesection & Diet in Treatment. Wrote

"De Proprietatibus Rerum" an encyclopaedia of general information

- translated into English in 1397 by John of Trevisa. Edition

by Wynkyn de Worde in 1495 one of finest & earliest books to

be printed in England. Franciscan Monk.

Kophon the Younger - Kopho or Copho Junior - Wrote first Textbook

of Anatomy - "Anatomia Porci". Also the "Ars Medendi" ca 1090,

dealing with therapeutics & preparation of drugs. Jewish.

Anonymous - "Demonstratio Anatomica" relates to the dissection of

a Pig with a polemic against Kophon. Organs divided into Membra

Animata, Spiritualia, & Naturalia including Nutritiva & Generativa.

Joannes Platearius the Younger - "Practica Brevis" - systematic

Handbook on Internal Medicine.

Archimathaeus - Wrote another Practica - A clinical primer, "

De Instructione Medici" or "De Adventu Medici ad Aegrotum", the

etiquette of the Physician's approach to the bedside.-(governed

by rules & stereotyped.)

Nicolaus Praepositus (Praeses i.e. President, of the Faculty or

Head of the School) or Salernitanus - 12th Cent. beginning.

Wrote the "Antidotarium", the first Formulary, a lasting Text-

book for Apothecaries & the basis of all future Pharmacopoeias.

Contains a large collection of complicated Formulae & Prescriptions

in alphabetical order named after their discoverers including

Ezra, with directions for use. Uses new Eastern drugs and is

first to show the Polypharmacy of the Arabians. Gives the

original formula for the Anaesthetic Sponge of Opium, Mandragora

& Henbane (Hyoscyamus), Hemlock (Conium), Mulberry Juice, Ivy &

Lettuce. It was one of the first books to be printed, by Jensen

at Venice in 1471.

Matthaeus Platearius (Junior) son of Johannes Platearius II. 12th Cent.

Wrote a commentary on Antidotarium the "Glossae vel Expositio"

also "Simplici Medicina" known as "Circa Instans" from the

first words.

Magisters & Teachers - Contd.

- Petrus Musandinus - 12th Cent - Wrote "De Modo Praeparandi Cibos et Potum Infirmaorum", a textbook of Sickroom Cookery based on "Diaeta in Acutis" of Hippocratis & studying patient's appetite.
- Magister Salernus - ca. 1130-1160. Wrote "Compendium" a textbook of Medicine with emphasis on Drug Treatment like Arabians.
- Bernardus Provincialis - ca. 1130-60. Wrote Commentaries on "Practica" of Bartholomaeus & "Tabulae" of Mag. Salernus.
- Maurus - ca. 1160. Wrote "Regulae Urinarum", a Uroscopy based upon Theophilus Protospatharius & Isaac Judaeus, Arabic influence. Describes 4 regions of Body & Urine also 19 colours.
- Urso - "Compendium de Urinis" increased Arabian influence.
- Richardus Salernitanus - 1130-1180. Wrote the "Anatomica" on the structure of the Pig like the "Demonstratio Anatomica".
- Romualdus Guarna (Archbishop of Salerno) - "De Pulsibus" - Arabic.
- Johannes de Sancto Paolo - Cardinal. Pupil of Romualdus. ca. 1215. Wrote "De Virtutibus Simplicium Medicinarum", attributed to Constantine.
- Johannes Afflacijs. Wrote "De Febribus et Urinis" and "Curae". Pupil of Constantine.
- Ferrarius.

Surgeons -

- Roger (Ruggiero) of Palermo - Wrote 'the oldest surgical book known in the mediæval literature of the Christian West' the "Practica Chirurgiae" also called from opening "Post Mundi Fabricam", in 1130. Regarded Suppuration essential for healing & used sutures, ligatures as well as styptics for Haemorrhage.
- Roland (Capelluti) of Parma - Pupil of above - re-edited Practica 1250

Famous Graduates -

- Pierre Gilles de Corbeil (Petrus Aegidius Carboliensis) - c 1200. Transferred Salernitan Medicine to Paris where taught in University Canon of Paris & Physician to King Philippe Auguste (1180-1223). Wrote Medical Didactic Poems based on Byzantine Theophilus Protospatharius - "De Urinis" - Standard Textbook of Uroscopy till 16th Cent., pays attention to Psychic condition of Patient.
- "De Pulsibus" - takes stand on Galen, Constantinus & Philaretus, deals with ten forms of Pulse, examination & pathology.
- "De Laudibus et Virtutibus Compositorum Medicaminum" - paraphrase of Antidotarium & Glossae.
- Michael Scott - 1175. Medicine & magic art of Astrology. Describes Anaesthetic Sponge - Guthrie p.107.

Due to Salerno that the Healing Art of the Christian West awakened from 5 centuries of lethargy & was able to compete with the Byzantines & Arabs. Preserved the legacy of antiquity of Hippocratis & added original achievement & independent observation. By instruction & didactic literature spread their knowledge, ennobled the Art & established unalterable standards. Graduated as Magister or Doctor. Closed by Napoleon 29.11.1811.

Abu Ali al Hussein ibn Abdallah ibn Sina -

"Prince of Physicians", whose influence lasted 500 years.

He was born in Persia near Bokhara & early showed his great intellectual gifts and thirst for knowledge. He was appointed Court Physician at the age of 18 yrs. He travelled a great deal and spent many years at the courts of various Persian Dynasties as Physician, Astronomer, teacher & author.

He is supposed to have written over 100 works on a great variety of subjects most of which are lost including his original observations on practical medicine. His philosophical works are mainly based on Aristotle and he tried to reconcile knowledge and belief.

His major work was the famous "Kanun" or "Canon" (the code of Medicine) in 5 parts. This has been produced in at least 30 Latin editions alone & "Probably no medical work ever written has been so much studied". Again it is said that it "is probably the longest lived medical work of all time. It is said to be still in use in the East, and was certainly being reprinted in India up to the end of the nineteenth century." Freind says that "it began to prevail so much in Europe, that there was no other doctrine taught in the Schools of Physick ... till the restoration of learning". He also infers that it is culled mainly from Galen, Rhazes and Haly Abbas.

Avicenna certainly tries to reconcile the teaching of Galen with that of Aristotle which he did in a comprehensible, self contained system which seemed incontrovertible. Neuburger points out that its success did not depend on any new discoveries but in its lucid diction and logical exposition of the knowledge of the past so that it was a final codification of all Graeco-Arabic Medicine. It became an infallible oracle of general principles and theoretical premises which were applied at the bedside and prevented real clinical observation, and independent research. It also deterred the study of the ancient literature as if the last word had been spoken and only required to be interpreted.

Avicenna's Psychiatry - Psychic alterations depend on pathological changes in the proportional admixture of the Brain - not on demons. Divided into Intellectual disturbances (Imagination, Memory) & also real Psychoses (Melancholia, Mania, Weak-mindedness). Intellectual disturbances arising from Black Bile give anxiety and sadness, from Yellow Bile, confusion, irritability & violence while putrifying Phlegm calls forth a serious & morose mood. Abnormalities of front part of Brain cause disturbances of Perception (Hallucinations or Imperception); Weak-mindedness and Imbecility depend on abnormalities of Middle Ventricle; failure of memory upon that of Posterior Ventricles. Phrenitis - due to accumulation of Yellow Bile in Meninges or Brain - is derangement arising in acute feverish diseases - forgetfulness of immediate past, confusion & restlessness. Lethargy - intracranial accumulation of Phlegm - forgetfulness with great exhaustion, moderate fever & profuse sweating. Coma-vigil - somnolence with unconsciousness & Vigilia veteriosa - light broken sleep, caused by accumulation of Phlegm and Bile, in former Bile predominates and vice versa.

Psychiatry (continued) -

Mania - Symptoms are insomnia, delirium, great unrest and violence. In a special variety the patient is aggressive but cringing and submissive.

Melancholia - Symptoms are - sick fancies, fear and dread, inclination towards solitude, despair, palpitation of heart, oppression in the hypochondrium etc. the cause being unconsumed Black Bile.

Treatment -

Beside symptomatic treatment, Psychic treatment was also employed, such as cheering the patient with reading and music and in obstinate cases exciting fear.

Mania - According to Marti-Ibanez Avicenna recommends Cold aspersions, diet, derivatives & blood-letting.

Melancholia - Derivatives and Emetics.

"The mind in Melancholia should be entirely occupied by some kind of employment." - Whitwell.

"The different kinds of Madness are countless." † Whitwell.

Abu Bakr Muhammad ben Zakariyya ar-Rhazi (of Rai, where born).

The famous physician of Baghdad. The Galen of the Arabians.

He was a prolific writer and produced more than 200 books on Philosophy, Mathematics, Astronomy, Physics & Chemistry in addition to Medicine.

He was the chief in the Hospital at Baghdad which had a separate division for the Mentally Ill, although it lacked teaching facilities.

His Magnum Opus described as gigantic weighed more than 1½ stones in folio. This was the "El Hawi" or "Liber Continens" (Content of Medicine). It is an 'astounding mass of extracts from Graeco-Arabic and Indian Literature, from Hippocrates to Hunain (Johannitius) as well as numerous records from his own practice, covering the whole range of Medicine.' - Neubourg. He culled from Paul of Aegina & Aetius, and adopted the theories of Galen with the practice of Hippocrates with its individual treatment, dietetics and simple drugs. He was strongly opposed to all magic and quackery and dismissed Uroscopy.

Owing to its immensesize Rhazes wrote a smaller volume for the Governor of Choresan, - al-Mansur Ibn Ishak, called "Kitab al tib Almansuri" or "Liber Almansoris", in 10 parts, the ninth of which was long used for teaching Therapeutics in the West.

Rhazes obtained lasting fame from his book "De Variolus et Morbilis" "On Smallpox and Measles" in which he distinguishes between them. Neuburger regards this book as an ornament to the Arabian Literature and states that it is the earliest monograph on Smallpox. Freind thinks that since none of the Greek authors have written about it the Arabs must have brought it from the East.

Burton quoted by Henry states that Rhazes says that Melancholy is inevitable in the lives of old and decrepit persons.

In the Anatomy of Melancholy he also quotes Rhazes thus -

"Rhazes... doth not only commend, but enjoyne travell, and such variety of objects to a melancholy man, and to lie in diverse Inns, to be drawn into severall companies... it must needs refresh & give content to a melancholy dull spirit". again "Chesse-play is a good and witty exercise of the minde for some kind of men, and fit for such Melancholy..."

Whitwell quotes him on the same topic-

"There can be no better cure for Melancholy than to have some employment or other which may keep the mind occupied and direct their thoughts." ...And on Epilepsy -

"The actual occurence of the fit is governed by the condition of the moon, and related to the light given by it, therefore fits tend to occur, either at full moon or at new moon."

Freind indicates that Rhazes was against all Imposters and says - "Now some of them profes to cure the Falling Sickness, and thereupon make an Issue in the hinder part of the head, in form of a Cross & pretend to take something out of the opening, which they held all the while in their hands."

JOANNES ACTUARIUS

- 13th & 14th Cent.

Last prominent Byzantine Greek writer who followed the Pneumatic Psychology of Galen.

He practised in Constantinople and Freind states that he was physician to the Emperor.

For the use of one of the Court Ambassadors he wrote 6 Books called "Therapeutikon Methodos" based on Galen, Aetius & Paulos.

He writes about Palpitation of the Heart a familiar symptom which attends Hypochondriacal & Hysterical persons for the treatment of which he lays chief stress on Bleeding & Purgings which Freind explains thus - "Where the distemper arises from some particular state of the Spirits & the Blood, must be either to diminish the influx of Spirits into the Nerves, or to take of the resistance in the Vessels of the Heart."

Neuburger recounts that he wrote two volumes "upon the functions & disturbances of the Soul-spirit & the appropriate diet."

The Divine in man, the Soul, is simple & endowed with manifold forces. The organ of the Soul is the Pneuma. The Pneuma Physikon is formed in the Liver from nutriment, the Pneuma which attains the Heart through the Inferior Vena Cava is converted into Vital Spirit, Pneuma Zooticon & distributed through the Arteries. The greatest transformation in the Brain the Soul-Spirit, Pneuma Psychikon takes origin. Mental activities are - Perception, Imagination, Judgment, Understanding & Reason. Reason is highest and is least bound up with Pneuma while Imagination is subordinate to the other faculties. These are localised according to Poseidonius.

Actuarius also wrote 7 volumes on Uroscopy - "Peri Ouron" or "De Urinis"

PAUL of AEGINA - 607 - 690

Paulos Aegineta

The last of the Greek compilers from the works of the past, who took a formal interest in Mental Diseases.

He was born in the island of Aegina and was a great traveller before practising in Alexandria.

He wrote 7 books called the "Epitome" which 'epitomises clearly and succinctly all the medical knowledge of antiquity'. He makes no claim to originality and borrows heavily from Galen and other past writers whom he believed could not have omitted anything of importance from the healing art. He was distinguished as an Obstetrician and a Surgeon and in Book VI he describes many operations so that it was the standard text book until Albucasis (10th Cent.)

He also writes on Paediatrics and states that convulsions in Childhood should be treated by baths.

He describes "Phrenitis" as an Inflammation of the Brain & Meninges & distinguishes it from the Delirium of Fever. The seat of Anosmia is in the Anterior Ventricles of the Brain.

Alexander Trallianus -

A Byzantine Greek writer probably a Christian who gave an account of Insanity above the average - Garrison.

He was born in Tralles, a city of Lydia & was taught by his father Stephanus also a physician. He travelled a good deal, taught in Rome and was of influence in Constantinople.

He wrote "De Arte Medica" in 12 books and although he was well versed in Therapeutics he still had faith in Charms and Amulets. Neuburger refers to his book as a masterpiece where although professing Galen he retains own independence. He treats of General & Special Pathology and Treatment of Internal Disease.

Freind gives a detailed account of his writings & relates thus-

"A Phrensy is very accurately described by him, and he gives good reasons, why it does not arise from a disorder of the Diaphragm, as some imagined, but from the Brain itself. When he could not easily command a vein in the arm, he opened that in the forehead; a practice which Rhazes after him recommends. Tho' he advises Diacodium in obstinate Phrensies, yet he gives very proper cautions about it: and if the patient be of a Phlegmatick Constitution, the Phrensy not very outrageous, and the body weak, he dissuades the use of it. For the Opiates are hurtful and sometimes mortal." "He uses Blistering Medicines as in Lethargy and Squills in an Epilepsy".

"The different sorts of Melancholy are well described... He cures these by diet, bathing and amusements, rather than by much medicine: and disagrees with the ancients in ordering so frequently Cupping, Leeches, and Sinapisms. And even as to purges, Tho' White Hellebore be much cried up by them, he prefers the Armenian Stone, which purges very safely and effectually, without any ill consequences or danger, which the other rough medicine too often occasions." (This stone contains quartz, mica & copper ore.) Hiccough immediately removed by any surprise or intentness of thought as counting money.

The Heathens only used Charms from the Scriptures in the case of Daemoniacs.

Neuburger gives an account of his Psychiatry -

Epilepsy - Due to obstruction of the Brain by Phlegm & Black Bile; three forms according to origin in Head, Stomach or other part of the body.

Phrenitis - An Inflammation of the Brain and coverings due to the Head (mixture of Vinegar & Oil of Roses), Narcotics (Sleep is one & only remedy for Insanity), lukewarm baths & rubbing; Food to be Demulcient drinks & Soups; Quiet.

Lethargy - Due to accumulation of Phlegm in Brain, ushered in by weakness & somnolence, needs cooling & stimulating measures as internal & external use of Castoreum.

Carus - (a kind of Sopor) - Similar treatment. Seat of this is in the front part of the Brain.

Aetius Amidaeus.

First Greek (Byzantine) Christian writer to give Biblical Spells and Incantations.e.g.

"May the God of Abraham, the God of Isaac and the God of Jacob, deign to bestow upon this medicament such and such virtues."

"Bone, as Jonah came out of the whale's belly, come out of the throat". - St. Blasius.

It was through Aetius the first record of the work of Aretaeus was found and that Galen said that febrile delirium (Phrenitis) is caused by Yellow Bile which is also responsible for the irritability & anger of Mania.

He followed Pesidonius (4th. Cent.) in placing the seat of the Imagination in the forepart, Understanding in the middle cavity, & Memory in the posterior section of the Brain, while he gives the same description of Lycanthropy as Oribasius but adds that it is more prevalent in February.

Aetius was born in Amida in Mesopotamia and was educated at Alexandria. He passed his prime at the Byzantine Imperial Court with the title Comes Obsequii (chief harbinger of the Emperor).

He made a compilation consisting of 16 books divided into 4 & known as the "Tetrabiblon" in which the Medicine is taken mainly from Galen, the Surgery from Rhaphos & Archigenes, and the Obstetrics from Soranus etc.

He describes several Cerebral affections e.g. "Erysipelatous" Encephalitis and Encephalitis in children, with a good description of Apoplexy, according to Neubourger.

Freind tells us that Aetius was familiar with the actual & potential Cautery and with the making of "Issues" thus -

"Particularly in a Palsy he says, from Archigenes, that he would not at all hesitate to make an Eschar either way, and this in several places: one in the Nape, where the Spinal Marrow takes its rise; two on each side of it; three or four on the top of the head, one just in the middle and two or three round it. .. if the Ulcers continue running a good while he should not doubt of a perfect recovery." This use of the Cautery was well known to Hippocrates and Celsus, who recommends it in Dropsy, Epilepsy, Sciatica & Phthisis, and the Ulcers should be "suffered to continue running, till the Humour was spent." "Galen expressly says that Oyls stop the pores... Upon the same principle C. Aurelianus argues against the application of Oyl of Roses, in the accession of a Phrensy"

Whitwell in the Analecta Psychiatrica informs us that Aetius ascribes medical attributes to the Magnet in treatment of Mental Disorder.

Physician to the Emperor Julian the Apostate at Byzantium and is the first of the Byzantine Period. Born at Pergamos and studied under Zeno of Cyprus at Sardis and Alexandria. He was a great friend of the Emperor and was made Quaestor of Constantinople.

When the Emperor died he was banished & given over to the Goths but was so successful with them that he was recalled and continued his voluminous writings. He made many compilations from the older writers and introduced Galen to western civilization for the next 1000 years.

He wrote a huge Encyclopaedia of Medicine (Iatrichai Synagoga) in all its aspects which consisted of more than 70 volumes of which only 25 survive the "Collecta Medicinalia" in which he acknowledges the sources of his information, thus bringing to light the works of other writers which had been lost e.g. Antyllus.

He also wrote an epitome for his son in 9 volumes - "The Synopsis" and a popular edition in 4 volumes - the "Euparista".

John Freind in his History of Physic (1726) states that Oribasius gives the first account of a strange and surprising distemper, Lycanthropy, a species of Melancholy and Madness which he describes as follows -

"The persons affected, go out of their houses in the night-time, and in everything imitate Wolves, and wander among the sepulchres of the dead till day break. You may know them by these symptoms. Their looks are pale; their eyes heavy, hollow, dry, without the least moisture of a tear: their tongue exceedingly parched and dry; no spittle in the mouth, their legs, from the falls and bruises they receive, full of incurable sores and ulcers."

He also states that Oribasius was not only a man of great genius but also of great business and experience and cites as example his treatment of Epilepsy thus -

"He describes the cure both of the acute and chronic Sort, that is, in the Fit as well as out of it. When the Fit is over he orders Bleeding: and after four or five days, when the body is a little recruited, Purging: three days after, Cupping & Scarifying. He repeats these evacuations, and sometimes Sinapisms, at convenient distances, and in the intervals gives proper nourishment, and uses warm medicines, such as Castor, Mint, Rue, and the Cyrenaick Juice." Sometimes he uses Specificks such as Paeony-root, and that in the form of an Epileptick Necklace but does not rely on them alone preferring Evacuations. Galen in a letter to Cecilianus speaks of Simples like Scilla & Wormwood as serviceable in this Distemper.

Claudius or Clarissimus.

The Dictator of Medicine which he dominated for 1500 years.

Born in Pergamos where he studied Philosophy after which he studied Medicine in Alexandria. He travelled a good deal then went to Rome where he was very successful and became court Physician to Marcus Aurelius (the Stoic Emperor who wrote his 'Meditations'), to his profligate son the Emperor Commodus also the Emperor Septimus Severus who died in York.

He culled the best from the various Schools of "medicine" which developed after Hippocrates, the Dogmatists or Rationalists who followed the latter's Humoral Pathology, the Solidists or Methodists who believed in tension & relaxation, the Empiricists who relied on experience & not theories, & the Pneumatists who believed in the Vital power of the Pneuma, like a true Eclectic. To this he added his own System including the Vital Spirits which endured until the time of Vesalius & Wm. Harvey, in the 16th & 17th Centuries.

A contributing factor to this was that Galen was a Monotheist & believed that the Body (Soma) was merely the vehicle (tomb) of the Soul (Psyche) a belief which was acceptable to Christians & Moslems alike. Like Hippocrates he believed in the healing power of the Physis or Nature, & like Aristotle believed in the teleological purposive creative power of Nature or God always working towards a definite end which he sought to (and) explain. His teaching was dictatorial & assertive and was accepted without question for generations while he had an answer for every question & a solution for every problem in his supreme self confidence & assurance.

He was the first Neuro-anatomist since Herophilus & Erasistratus of the the Alexandrian School 400 years previously and was the first & only experimental Physiologist before Harvey, (Garrison).

He studied Anatomy in animals & dissected & made experimental sections of the Central Nervous System whereby he definitely established the Brain to be the Organ of Mind and the Heart to be responsible for the movement (ebb & flow) of the Blood, despite Aristotle.

He considered the Brain to be the seat of the Rational Soul, of Thought Reason & of all Sensation & Movement. He does not discuss Plato's concept of the immortality of the Soul (Stafford-Clark) and is contradictory in his remarks concerning it having an independent, immaterial existence, according to Zilboorg.

The Rational Soul or Animal Soul (Spiritual) is divided into two - the External part includes the 5 Senses, the Internal part the functions of Imagination, Judgment, Memory, Apperception & Movement.

The Heart is the centre of the Irascible (emotional), energetic or male Soul & the Liver of the sensual, female Soul. (Zilboorg).

Galen accepted the Hippocratic Doctrine of the 4 Humours, based upon the 4 cardinal Elements and 4 Qualities & according to Garrison introduced the Doctrine of the 4 Temperaments which persisted all through the Middle Ages. The final equilibrium of the Humours is Temperament each dependent upon the preponderance of any one Humour.

Galen's Physiology & Physiological Psychology depends upon his Vitalism whereby Pneuma is the bearer of life & of Vital Forces & is part of the World Pneuma or Soul, and manifests itself in a threefold form - Psychic, Animal & Natural with lesser forms for each organ.

Pneuma modifies Body Warmth excites Vital Processes to activity & is constantly renewed from the Air by the Lungs, by the Pores & Arteries.

Brain, Heart & Liver are 3 main organs, the origin of Animal Spirits (Psychic Pneuma), Vital Spirits and Natural Spirits & the source of Movement & Sensation through the Nerves, Warmth & power through the Arteries and Blood & nutriment through the Veins.

The Liver forms Blood from the foodstuffs or chyle brought from the Stomach and is endowed with Natural Spirit, innate in every living substance, & by virtue of which the food is purified. Earthy matter is separated off for the Spleen to form Black Bile, while Yellow Bile is separated for the Gall Bladder & Watery matter goes to the Kidneys. The Blood with the Natural Spirit reaches the Right Heart where it carries nourishment to the tissues along the Veins.

In the Heart some of the Blood goes through the Pores in the Septum to the Left Ventricle where it becomes charged with Pneuma from the Lungs carrying the Vital Principle and forms Vital Spirits which is carried by the Arteries to the organs & tissues conveying power & Warmth. Some of the blood bearing Vital Spirit of Life reaches the Brain.

In the Brain the Blood becomes charged with the Pneuma of the Soul Psychic Pneuma and forms Animal Spirits which is conveyed through the hollow Nerves to cause Sensation & Movement. The Pneuma Psychicon is prepared from the choicest contents of the Carotids in the Choroid Plexus of the Lateral Ventricle. The word Thalamus meaning a Chamber for for storing the Animal Spirit actually refers to the Ventricle.

The impurities of the Brain are discharged through the Ethmoid into the Nose & Mouth, and Smell is located in the Anterior Ventricle.

The Brain itself is insensitive and moves with Respiration to drive the Pneuma from the Ventricles into the Nerves. The seat of the Soul is actually the Cerebrum not the Meninges.

Galen admits that the Soul could be dominated by the Body instancing the stupidity of children, the loss of Memory & the Deliria of old age, and Mania & Melancholia as resulting from morbid Humours according to Zilboorg. Also the Soul "is the slave of the Temperaments of the body, since the Temperaments may drive the Soul out of the Body, make it delirious, deprive it of Memory & Judgment and make it sad, timid and downcast as we see in Melancholia". - De Placitis Hippocratis et Platonis. Also "The keenness of the Mind depends upon the fineness of the Brain substance. Slow thinking is due to its heaviness... its firmness & stability produce the faculty of Memory. The shifting of opinions is produced by the mobility of the Brain". - De Usu Partum.

"Remembering that the Blood & Spirits are composed of the 4 Elements with their Qualities, Galen founds his theory of Disease on Disorders of Warmth, Cold, Dryness & Moisture" - Poynter.

Nervous Diseases -

Headache is caused by Humoral anomalies, but also strong odours, unwholesome water & penetration of Air into the Veins. Cephalaea is the Chronic form of Headache.

Nervous Diseases from Neuburger -

Hemicrania either primary or secondary is due to Abdominal affections morbid humours and gases entering the Veins & penetrating to the head, the pain itself arising in the Ventricles.

Vertigo is mostly of Cerebral origin.

Apoplexy, total loss of power of Movement & Sensation, with loss of Consciousness, is caused by Plethora & accumulation of Phlegm in the Ventricles & substance of the Brain. Paraplegia is the following paralysis.

Hemiplegia & Facial Paralysis due to Brain lesion. Paralysis of Facial Nerve known as "Spasmus cynicus".

Cramps due to Anaemia or Plethora of Central Nervous System.

Epilepsy due to obstruction of Cavities of Brain with Phlegm or Black Bile. Name "Disease of Hercules" due to its power, "Children's Disease" because occurred in them frequently. Its treatment was Venesection on the Foot, administration of Treacle & Diet.

Psychoses -

Phrenitis - Feverish condition of Mental Excitement associated with Delirium which may be a symptom in many ailments. Seat is in the Brain especially the Meninges which are heated by the determination to them of Bilious Blood. Treatment - Venesection, cold compresses & affusions.

Lethargy - Also in the Meninges but due to sluggish Phlegm. Runs its course quickly & is very dangerous; characterised by suppression of Intellectual activity & Somnolence. May precede or follow Phrenitis. It is an acute feverish condition with marked Weakness & Somnolence.

Typhomania - Between the two with symptoms of both.

Melancholia - 2 forms, one whole mass of Blood affected, other only that of Brain - former Blood-letting is important. Predisposing causes, - arrest of Menstruation, absence of intercourse, grief, worry etc. also sunstroke, acute illness etc.

Mania - Due to thin Bilious Humours & is distinguished from Phrenitis by lack of Fever.

Psychiatric Symptoms include disturbances of faculties of Reason, Imagination & Memory.

Mental Diseases from Zilboorg

Due to disturbance of function of Animal Spirits and may be Direct affection of Brain or due to Consensus or Sympathy.

Dementia (amentia) & Imbecility (Stultitia, Fatuitas) are direct due rarefaction & diminution in quantity of the Animal Spirits & from Coldness & humidity of Brain. - De Sympt Causis.

Mania & Melancholia are direct affections of the Brain.

Phrenitis (present-day Meningitis) & Lethargy - the Soul which is in the Head is affected primarily - De Locis Affectis, II, 10.

Delirium due to Pneumonia - Soul affected by Consensus.

Intoxication - Body filled with warm vapours which disorder the Irascible Soul (Heart) & the Sensual Soul (Liver) & Judgment (Brain) is secondarily impaired - consensus.

Galen's Eclecticism caused confusion in his Humoral Theories of Hippocrates. Febrile Delirium (Phrenitis) caused by Yellow Bile which is also responsible for the irritability & outbursts of anger in Mania. Melancholia more confusing - Views from Aetius (6th cent) in De Melancholia, ex Galeno & Rufo in Contractae Medicinæ III, 2, LX. Occasional references in De Locis Affectis III, 4&6. Thought of Melancholic Humour

Melancholia Cont.#from Zilboorg - Thought of a Melancholic Humour (Succus Melancholicus) as a waste product of the Liver & Spleen while Brain is affected by consensus. The Melancholic is sad because his Sensual Soul is affected and he is deprived of Love & Joy, the two characteristics of the Sensual Soul, the seat of which is the Liver.

The Books of Galen -

He was a voluminous writer on Medicine, Philosophy, Philology & Rhetoric having written more than 500 Books. Many of his manuscripts were destroyed in a fire at the Temple of Peace and many were lost but about 80 remain extant, varying from volumes to fragmentary treatises. Garrison describes these Works as a gigantic encyclopaedia of the knowledge of his time.

They include 9 Books on Anatomy, 17 on Physiology, 6 on Pathology, 16 essays on the pulse, the Megatechne (Ars Magna) or therapeutics (14 books), the Microtechne or "practice", and 30 books on Pharmacy.

His style is described as verbose, declamatory, authoritative & dogmatic & never have the doctrines of one man exercised so long, unbroken & tyrannical power over the minds of others, according to Neuburger.

After his death Medicine declined, the light of progress was dim during the Dark Ages & the Mediaeval Period only to be rekindled at the Renaissance 1400 years later.

527

Galen of Pergamos who practised in Rome is considered to have written more than 500 volumes of which only 80 remain. Like the majority of the medical writers of antiquity he wrote in Greek.

(1516-1565)

In the Latin Edition of 1561 edited by Conrad Gesner the books are in three Volumes containing 7 Classes, Extraordinary & Spurious.

Volume I - Class I - Natura Corporis Humani.	-	32 Books
Lib.1.- De Elementis secundum Hippocratem.		
De Temperamentis. Libri tres.		
De Natura Humani in Librum Hippocrati.		
De Atra Bile.		
	etc.	
Volume II- Class2 - Materiam Sanitatis Conservatricem.		12 Books
Lib.1.--Hippocrates - De Aire, Aquis et Locis		
	etc	
Class 3 - Ad Morborum.		17 Books.
De Inaequali Intemperie.		
De Convulsione etc.		
De Morborum Temporibus.		
De Totius Morbi Temporibus.		
	etc.	
Class 4 - Signa Morbi.		13 Books.
De Locis Affectis.		
Melancholi et Morbo Comitiali.		
Deliria et Deliria Phreniticorum.		
In Prorrhetic Hippocratis.		
Phrenitici.		
Volume III-Class 5 - Pharmacopea.	etc.	9 Books.
De Simplicium Medicamentorum Facultatibus.		
	etc.	
Class 6 - Chirurgie.		5 Books
De Hirudinibus.		
	etc.	
Class 7 - Curandi Methodum		18 Books.
Hippocrates - In Morbis Acutis		
De Remidiis. De Medicinis.		
De Puero Epileptico.		
De Natura Humana.		
De Incantatione. De Oculis.		
In Libri Hippocratis. De Fasciis.		
De Laqueis Oribasius.		
De Machinamentis.		
	etc.	
Extraordinary -		4 Books
In Aphorismus Hippocratis.		
	etc.	
Spurious -		36 Books.
De Historia Philosophia.		
De Melancholio ex Galeno, Rufus & Possidonio.		
	etc.	

Author & compiler of Carthage who wrote in laboured Latin.

Preserved the works of Asclepiades (124-40 B.C.) Father of Psychiatry & of Soranus (78-117 A.D.) Father of Psychotherapy.

Neuburger states that he made a free translation of Soranus with occasional additions of his own & made the teaching of the great Soranus accessible to the general public - He preserved "Methodism" for future generations and has been richly rewarded.

His masterpiece "De Morbis Acutis et Chronicis" is a compendium of Medicine with each disease described clearly a capite ad calcem making use of previous literature from Hippocrates to Soranus. Ackerknecht says that the two major works of Soranus on acute and chronic diseases have survived in his translation.

His treatment excludes all supernatural & drastic measures (bleeding till faintness) and relies on mechanical, dietetic & hygienic means & in chronic ailments on Gymnastics, massage, exercises & baths.

Diseases of Nervous System & Psychoses -

Paralysis - Of sensation or movement or both. Two forms spastic and flaccid. Describes Paralysis of extremities, eyelids, pupils, tongue, smell, lips, chin, gums etc. Treatment includes mechanotherapy and exercises especially in Speech-defects & stammering.

Apoplexy - differs from Paralysis in being acute.

Convulsive Disorders - Tonic & Clonic forms recognised - emprosthotonus, episthotonus, tetanus & spasmus cynicus.

Epilepsy - Distinguished from Hysteria by more profound disturbance of Consciousness. Infantile convulsions & Puerperal eclampsia not differentiated. Incubo or nightmare half way to Epilepsy.

Phrenitis - Ascertain if due to Stricture or Solutio & in the former withhold excitement while in the latter use stimulating methods.

Lethargy - Opposite to Phrenitis not to be confused with poisoning with Mandragora or Hyoscyamus.

Zilboorg says that Caelius wrote on his own account and to present the works of Soranus whom he greatly admired, but places him in 2nd Cent.

He warns against the Philosophers ability to cure mental disease amongst the causes of which he puts Head injury, suppression of menses, exposure to strong sunlight, abuse of wine, digestive disturbances, superstition, and too much love for Philosophy, glory or money. As a "Methodist" he does not separate Soul & Body unduly, and diagnoses from the total picture.

He was repelled by the debauchery and perversions of his time.

The general treatment for Epilepsy was castration which he rejected.

Accepting some of the increasing superstitions he believed certain cases of Furor were clairvoyant, and in his book "De Incubone" he states his belief in the reality of an Incubus, while he also spoke of supernatural Beings Subacti & Molles which caused Insomnia & Night-terrors.

He preached only gentleness but his example was followed only by a few in the course of centuries.

ARETAEUS of Cappadocia

circa 150 A.D.

Aretaeus Cappadox

- the Cappadocian.

The first physician to be interested in Prepsychotic Personalities.

Lived in Alexandria and his work was little known for 1000 years. His work first mentioned by Aetius of Amida (6th Cent) and was thought to have borrowed from Archigenes

He divided diseases into Acute & Chronic including Insanity & Paralysis with the latter. First to distinguish between Spinal (uncrossed) & Cerebral (crossed) Paralysis. Gave its name to Diabetes - passer through

Hippocrates is the only authority he quotes and is thus a follower of the Dogmatic Humoral & Pneumatic School.

Neuburger tell us that his two works "Upon the causes & characteristics of Acute & Chronic Diseases" and "Upon the Treatment of the same" are writings of imperishable value, monuments of the lofty Hippocratic spirit. His Ionic dialect indicates the 2nd. Cent. Strove for accurate diagnosis and simple treatment in conformity with Nature.

The Physis is the sum total of organic forces, the Heart the centre of inherent warmth, pneuma important & Tonus the connecting link. Disease arises from anomalies of the Juices, the inherent warmth or of tone.

Nervous Diseases - He describes Paralytic Conditions - Apoplexy,

Paralysis of Intellectual activity, Sensation & Movement.

Paraplegia, Paralysis of Sensation & Movement. Anaesthesia, paralysis of Sensation. Tetanus - emprosthotonus. Epilepsy with antecedent Aura. Hysteria also occurring in men. Migraine.

Therapy is directed to regulation of life, small number of mild remedies. If energetic required uses Opium, Emetics & Purgatives Blood-letting, stimulants, vesicants, cautery & inunctions.

Zilboorg says he looked for seat of Mental Disease in Head or Abdomen when in latter Head affected secondarily, - Consensus of Galen. Considered Mania & Melancholia as one illness, although Mania may begin spontaneously. Young people develop Mania owing to Heat in the blood. First to consider Senile Mental Disorders as a separate entity.

First to become interested in Prepsychotic Personalities noting that those prone to Mania are "naturally irritable, violent, easily given to joy, have a facile spirit for pleasantries or childish things. Interested in what patients thought & felt.

He gives excellent descriptions of Mania with recurrent attacks, Melancholia which does not affect intellect, Mental Deterioration, & schizoid like conditions. Hysteria is due to Uterus migrating upwards & producing a suffocation.

Dercum says the Uterus was an animal which disliked unpleasant odours & could be driven down by foetid odours to the nose.

Whitwell indicates that Epileptic patients have sinned against the Moon & should be treated by Bleeding or Heira Picra (Sacred Bitters of Aloe & Cinnamon) and even by Trepanning. Melancholia treated by opening Median Vein which drains the Liver also baths of Bitumen, Sulphur & Alum. Mania originates in the Viscera and Parenitis in the Head.

SCRIBONIUS LARGUS

circa 50 A.D.

Physician to the Emperor Claudius whom he accompanied in his invasion of Britain in 43 A.D. Also treated members of the Imperial family including the Emperor's wife the infamous Messalina.

In 47 A.D. he published "Compositiones Medicamentorum" described by Neuburger as a meritorious production. It is a medical pocket-book containing 271 formulae arranged from head to foot (a capite ad calcem) and is dedicated to Claudius.

Scribonius built up a large practice based on extensive treatment by drugs. He collected formulae from the Greek literature and wherever he travelled even by bribery. His book contains in addition to rational prescriptions many popular & magical formulae.

He was the first to describe accurately how to obtain Opium and is regarded as being the first to use Electricity in Medicine and to be the pioneer of Electric Shock Therapy.

Cerletti at the first International Congress of Psychiatry in Paris in 1950 drew attention to the fact that Scribonius in his "Compositiones" had written as follows -

"A chronic and intolerable headache which insistently manifests itself can be eliminated at once if treated by applying a live torpedo fish (Electric Eel), black in colour, to the sight of the pain and leaving it there until the pain stops and the part is swollen (obstupescit). As soon as this occurs the remedy should be removed, in order not to abolish sensibility in the region affected. It is necessary to prepare a certain number of these torpedo-fish, for the benefit of the cure, as reactivation - which is the index of the utility of the effect obtained - is often only achieved after two or three applications."

CELSUS Aurelius (Aulus) Cornelius - 25B.C.-50 A.D.

Feuchtersleben asserts that he is the first writer on Medical Psychology.

The 18th Chap of the 3rd Book of his "De Re Medicina" entitled De Tribus Insanae Generibus etc is the earliest Treatise on Mental Disorder.

Celsus was a cultured Roman of the Cornelia Gens and in all probability was not a physician. About 30 A.D. he wrote a great Encyclopaedia of Knowledge of which only the medical part consisting of 8 books have survived comprising the "De Re Medicina or Medica". This was written in classical Latin so that he has been called the Cicero of Medicine, but was neglected by the Greek writers. However it was one of the first medical books to be printed, at Florence 1478.

Celsus is also the first Medical Historian his book beginning with the history of the various schools of Medicine which had grown up e.g. Empirics, Methodists & Pneumatists in addition to the Dogmatists or Rationalists who adhered to the Humoural Pathology of Hippocrates. He himself was inclined to favour the Methodism of Asclepiades but expressed independent opinions.

He divided diseases into local and general and gives the four cardinal signs of Inflammation - rubor etc.

Book 3, Chap 18 gives an account of the treatment of Mania & Melancholia. Unfortunately Celsus advocated the cruel, harsh repressive measures which were to continue for such a long period.

Zilboorg gives the following translation -

"It is necessary to oppress with very harsh corrective measures all those whose malady does not exceed words or even trifling assaults with the hands; but it is proper to confine those who conduct themselves violently, lest they injure themselves or other persons".

"When he has said or done anything wrong, he must be chastised by hunger, chains or fetters. It is also beneficial in this malady, to make use of sudden fright, for a change may be effected by withdrawing the mind from that state in which it has been."

He also recommended total darkness for certain patients.

He also made use of Blood-letting, Enemas & Clysters also the old favourite Hellebore no doubt to relax the Atoms since he was not a humoralist. For sleeplessness however he gave a decoction of Poppies & Henbane (Morphine & Hyosciamus).

He refers to Epilepsy as Morbus Comitialis because it was of such serious portent that the citizens would hold an assembly - Comitia. As treatment he would purge with Hellebore, shave the head, and give no meat especially pork.

Extracts from the American Journal of Psychiatry.

- July, 1942. Psychogenic Disorders and the Civilization of the Middle Ages. Alfred Gallinek.
- Janr, 1943. Moonlight and Nervous Disorders. John F. Oliven.
Psychiatry as a Social Science. Gregory Zilboorg.
- 1844-1944. Centennial Anniversary Issue. - Benjamin Rush and American Psychiatry. Clifford B. Farr.
The First Four Editors. Richard H. Hutchings.
Amariah Brigham; Founder. T. Romeyn Beck. John P. Gray.
G. Alder Blumer.
Dorothea Lynde Dix. Clarence O. Cheney.
Silas Weir Mitchell. Beverly Randolph Tucker.
Clifford Beers and American Psychiatry. Arthur H. Ruggles.
The Rise to the Person and the Concept of Wholes or Integrates. Adolf Meyer.
The Origins and Growth of Child Psychiatry. Leo Kanner.
- May, 1945. Spain as the Cradle of Psychiatry. Peter Bassoe.
Prefrontal Lobotomy. The Problem of Schizophrenia. Walter Freeman and James W. Watts.
Prefrontal Lobotomy. Fifteen Patients before and after Operation. Josef A. Kindwall and David Cleveland.
Book Reviews: The Psychiatry of Robert Burton. Bergen Evans.
- Novr, 1946. A History of the Development of the Concept of Functional Nervous Disease during the past 2500 years. A. Warren Stearns.
- Sept, 1951. A Criticism of the Terms "Psychosis," "Psychoneurosis," and "Neurosis." Karl M. Bowman and Milton Rose.
- Novr, 1951. A Hypnosis reading list for Professional Instruction. Jerome M. Schneck.
- Decr, 1955. Man - and Human Nature. M.F. Ashley Montagu.
- Novr, 1956. The Academic Lecture. The Great Psychiatric Revolution. Percival Bailey.
Stress and Psychiatry. Hans Selye.
Historical Notes: An Early Neuro-Drug Experimenter: Alexander Monroe II (1733-1817). Earnest Harns.
- April, 1957. Psychotherapy. C.B. Farrar.
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Amariah Brigham: II Psychiatric Thought and Practice. Eric T. Carlson.
Wit and Schizophrenic Thinking. Max Levin.
Book Reviews: Asclepiades. His Life and Writing. Robert Montraville Green.

Extract from the Practitioner.

- Sept, 1954. Vol. 173. No. 1035. Approach to the Recognition and Diagnosis of Psychiatric Illness in General Practice.
By Jonathan Gould, M.B., M.R.C.P., D.P.M.
Consulting Psychiatrist, Broadmoor Institution;
Associate Chief Assistant, St. Bartholomew's Hospital.

Extract from the Lancet.

- 26.7.58. Special Articles:- Community Treatment of Mental Illness. Duncan MacKilloan, FRCP.
Congresses:- Stress and Mental Illness.

We do not know what human drama has been enacted throughout all these changes but no doubt there was a good deal hope and frustration, anticipation and disappointment, ambition & envy.

It is noted for example that Mrs Goff in 1844 succeeded Miss Lucy Vessey of Lincoln Asylum who was appointed Matron to our Institution in 1837. Her letter of appointment written by the Secretary & Treasurer Donald Cuthbertson and dated 4th July of that year is still preserved, & offers congratulations to Miss Vessey.

When the patients were transferred to Gartnavel in 1843 it was divided that each of its two divisions should have a separate Matron, the one in charge of West House being styled Superintendent of Ladies.

Miss Vessey was obviously not chosen to fill this higher role as the following paragraph from the Annual Report of 1844 shows - "In taking possession of the new establishment, in which the house for Patients of the higher ranks is completely separated from that intended for those of the lower, it became evident that the charge of the Female Patients of the former class, must be committed to a lady possessed not only of the accomplishments usually met with in those moving in a higher sphere of society, but also of those moral and intellectual qualities and acquirements which secure respect, and which are requisite for the management of such Patients. Accordingly, the Directors took every means in their power to find a qualified person; and from a number of candidates, amounting to upwards of 80, they, after much deliberation, selected Mrs. Mapleson; who, they are happy to say, has proved herself most worthy of their choice. About the same time, the Matron having tendered her resignation, the Directors, from among the candidates for the office of Superintendent of the Ladies, unanimously elected Mrs Goff to the vacant situation..."

Again Dr. Muirhead may have been disappointed that he was not chosen to succeed Dr. Hutcheson as Physician Superintendent as Dr. Prichard had been promoted previously, or it may have been that he did not agree too well with the new Superintendent Dr. Mackintosh who reported to the Scottish Lunacy Commission on 22nd November 1855 in the following terms - "With regard to the Govan paupers, when I went to Glasgow, there were perhaps 25 at Gartnavel. The Asylum is situated in the parish of Govan, but that parish never subscribed to its erection, and its paupers were charged 6d. or 1s. a week more than the privileged or subscribing parishes. One of my assistants, Dr. Muirhead, married one of the matrons, and went to Langdale. I believe he got Govan parish to send its patients to his asylum, and he keeps them 1s. or 2s. a week cheaper than we do"...

On the following day James D. Kirkwood, Inspector of Poor of Govan Parish since 1850, made the following statement to the Commission - "I cannot say that any arrangement was made with Dr. Muirhead before he left Gartnavel, that, if he left, our lunatics would be handed over to him. That was before I was in the parish". "I consider the patients as well of in Langdale as in Gartnavel. They have to work more at Langdale, and they have more open air exercise;..." "Dr. Muirhead has generally attended to our recommendations most particularly."

written by

DONALD CUTHBERTSON, LL.B.

Secretary & Treasurer of the Institution from its
inception in 1814 until his death in 1864.

Having held the above position for "upwards of half-a-century" Donald Cuthbertson put in his resignation owing to failing health on 22nd November 1864 but died rather suddenly about a fortnight later.

While accepting his resignation with regret the "Directors paid him tribute and referred to "the very satisfactory and efficient discharge of the important and not unfrequently delicate, duties which devolved on him, as well as for his uniform urbanity in trying and difficult situations, his unremitting attention to the interests of the Institution his zeal in their promotion and the fidelity of his general management".

"Some years ago the Directors succeeded in inducing him to sit to Mr. Macnee for his portrait, and the Institution thus fortunately possesses a permanent memorial of one to whom it has been so largely indebted".

On his death he left a legacy of £500 to the Institution and ten years later there was bequeathed by his sisters on their decease a sum of £3000 to supplement the board of three lady Patients in a respectable position in society but in poor circumstances.- the Cuthbertson Bequest.

Donald Cuthbertson is recorded as Secretary in the 1st Annual Report & did not become Secretary & Treasurer until ten years later. He was preceded as Treasurer by John Swanston (1814-17), Wm. Rodger (1818-22) & Wm. Meikleham (1823-24) all of whom were Directors ex officio, but he did not succeed them in this capacity.

It is also a little puzzling when we read the following statement in one of his own letters dated 30th January 1829 the Rev. John A. Bonar, Larbert - "the correspondence which passed on the subject at the time between Dr. Knox and my late father, who preceded me in the office of Secretary & Treasurer to the Asylum".

The letters in this book about 700 of them are practically all written by Donald Cuthbertson except for his infrequent absences usually in September when a very few are written by his two assistants and by his brother A.C. They are all couched in very clear, lucid and respectful terms while he is always very helpful & courteous, anxious to explain procedure & smooth out difficulties only becoming peremptory & emphatic if a relative, a 'surety' or a Parish Authority are not fulfilling their obligation to settle the accounts of a patient's board in the Institution.

The subjects dealt with include the following - Advice concerning Admissions with relative Documents; Discharge of Recoveries & of those who will not benefit further; Discharge of those not being paid for; Refusal of Criminal Cases & of ordinary cases due to overcrowding; Receipts for payment of Board; Legacies; Structural alterations; Appointment of Matron; Contracts for Provisions & Lists of Weekly Visitors in rotation.

Special Subjects & Items of Interest -

Amongst the correspondence there is a letter dated 28th March 1831 to Dr. Charlesworth, Lincoln accompanying copies of some of the Annual Reports which he had requested. Edward Parker Charlesworth (1782-1853) is described by Hunter & Macalpine as the 'kindly progressive physician' of Lincoln Lunatic Asylum which had been opened in 1820 and was supported by voluntary contributions like the Scottish Royal Asylums. There he was joined in 1835 by the House Surgeon or Resident Medical Officer Robert Gardiner Hill (1811-1878) who immediately began his experiments & statistics which ultimately led to the complete abolition of all Mechanical Restraint which was first mentioned in the Annual Report for that Asylum in 1837, six years after the letter. It should be noted that Miss Lucy Vessey the Matron of Lincoln Asylum was appointed to be Matron here on 4th. July of 1837 so that she must have been closely associated with Gardiner Hill's early efforts at Non-restraint which were viewed with abhorrence by the staff and which in his own words stirred up a 'perfect hurrican of opposition' while he himself was for many years 'stigmatised as one bereft of reason' so much so, indeed, that he had to resign his position.

Another letter dated 10th July 1832 is written to Sir Andrew Halliday, Bart., Hampton Court London accompanied copies of the existing 18 Annual Reports, the Regulations, the printed Admission Forms & the 'Report of the proceedings of the original Committee of Subscribers, previous to the opening of the House in 1814'. Although Sir Andrew had published his "Present State of Lunatics & Lunatic Asylums" in 1828, he must still have been prosecuting his enquiries no doubt in support of his advocacy of a Board of Control & General Inspectors.

Following representation to the Lord Advocate concerning the applicability of the Madhouse Acts of 1815 & 1828 to Royal Asylums a correspondence is opened with a Solicitor in Edinburgh to place certain specific enquiries drafted by Dr. Balmanno before the Solicitor General especially with reference to the 2/6 fee charged by the Sheriff Clerk for the Sheriff's Warrant now made obligatory. Despite the Solicitor Generals view that this only had reference to the License required for a patient in a Private Asylum as stated in the Annals Report for 1830 our Secretary in a letter to the Secretary of the Royal Asylum Perth, dated 1.2.1831 "our Sheriff-Clerk declined giving up what he considered the vested rights of his office, but he agreed not to charge any fee in the case of paupers". The Directors evidently decided reluctantly not to contest the matter further in the Court of Session. Previously on 30.1. 1830 the Secretary had written to the Secretaries of all the other Royal Asylums in Scotland to ascertain what the position was with reference to the Sheriff Clerks of their Counties.

Prior to the Poor Law, Scotland, Act of 1845 the Kirk Sessions & Heritors were legally responsible for the welfare of the Poor in their Parishes so that a large number of letters are written to the Ministers, Session Clerks, Kirk Treasurers & Clerks to the Heritors (one to the Presis of the Committee of the Heritors of Falkirk), Treasurers of the Parish & in some places of the Poors Committee. A number of enquiries are received about admission procedure and he includes the relative documents to be filled up & placed before the Weekly Committee.

In his replies to enquires about Admissions the Secretary is always at pains to emphasise the necessity of appointing a local person who will act as "surety" for the patient & sign the necessary printed Letter of Obligation. In a letter to a gentleman in Belfast dated 24.1.1832 he writes - "Besides regularly paying the board, the surety is bound to provide the patient with sufficient ~~clothing~~ supply of clothes and other necessaries - to take him away from the establishment if this were to be required by the Directors, in consequence of his being declared incurable, or for any other cause - to remove the body in case of death etc. and one great object in requiring a responsible surety on the spot, is to avoid the trouble & delay which would be incurred if the Directors had to correspond about these things with parties residing at a distance".

The Secretary also stresses the necessity of obtaining a Sheriff's Warrant under Sect. V of the 1828 Madhouse Act. In a reply to a letter from Thornhill dated 30th. July 1831 he writes - "a late Act of Parliament has made it requisite that a Warrant be obtained from the Sheriff of the County, previous to the admission of every patient. A form of this Warrant also is prefixed, which, after being properly filled up, may be torn off, and sent along with the patient. The person who takes charge of bringing him to Glasgow, will get it signed at once by the Sheriff, on presenting it to him at his chambers here, along with the medical certificate of Insanity". This is asserted in several letters so that no difficulty seems to have been encountered in getting the Sheriff's signature although in the first few reports of the General Board of Lunacy after the 1857 Act it is pointed out that there is no uniformity in granting Warrants throughout the country, indicating how some Sheriffs would grant Warrants which others would reject, but there seems to have been no trouble here.

In answering enquires concerning the rate of board of pauper patients the Secretary explains that those from Glasgow City Parish & from those 'privileged' parishes who have made the appropriate financial contribution are admitted at the lowest rate. In a letter dated 15th Oct. 1831 to an enquirer from the Isle of Man he writes - "With regards to your enquiry as to a Contribution from your Island, I have to mention that the Regulations of the Asylum do not hold out any privilege (sic) except to parishes, and the provision as to them is that a parish consisting of not more than 1500 inhabitants, on contributing £75, shall be entitled to recommend its insane poor for admission to the Asylum on the same terms as as those of this City, that is, at the very lowest rate chargeable at the time: and, when the population of a parish exceeds 1500, the contribution is to be in this proportion of £75 for that number or one shilling for each inhabitant. The Rate of Board for such patients is fixed at the beginning of each year, by a Committee consisting of two of the Directors of the Asylum, two of those of the Town's Hospital, and one of the City Magistrates". On 21st January 1829 he writes on this subject to the 'Preceptor of the Town's Hospital'.

A letter is also written on 4th March 1829 to a Minister in 'Demerary' which had contributed the sum of £260 in 1815 when the Privileged Parish contribution was £50 which had been raised to £75 in 1819 - "The amount therefore, required from the Colony of Demerary, which I understand is divided into ten parishes, will be at the rate of £50 for every 1500 souls to be ascertained by a properly authenticated certificate of the population of each parish.... The Directors understand that white freemen only are to be sent, as the Institution was not intended for those of a different description, & there are many strong reasons.... why men of colour, or negroes, could not possibly be admitted into the Asylum".

With reference to the refusal of Admission of Criminal Patients the Secretary makes the position clear in several communications - in a letter dated 11.12.1829 to a Lawyer in Edinburgh he states "I have been favoured by your letter of the 7th Current, which I have laid before a Meeting of Directors of the Glasgow Lunatic Asylum; and I have been desired by them to inform you in answer, that they have no separate apartments for the accommodation of lunatics convicted of crimes, and that they have reason to believe it would be productive of most injurious consequences to the Institution under their charge, if patients of this description were to be admitted, and allowed to associate with such as were of unblemished character". He elaborates in a letter dated 28.4.1831 to the Town Clerk of Dumfries thus - "In answer to your letter of the 23rd addressed to the Directors of the Glasgow Lunatic Asylum, I have, as Secretary & Treasurer to that Institution, to inform you that they are extremely averse to receive Criminal lunatics as patients as it tends very much to hurt the feelings of the relations of those who have been of respectable character to have them associated with such as have been of a very different description, and of course to injure the general utility of the Establishment". He gives chapter & verse in a communication dated 5.5.1834 to an enquirer from Wigtown as follows - "For your further satisfaction on this subject I send you herewith the tenth and nineteenth Annual Report of the Institution, in both of which, at the 11th page, you will find some remarks as to the admission of such Patients".

Chronic patients and those not likely to benefit were also refused & the Secretary becomes quite emphatic on this point in a letter dated 12.8.1835 to a Minister in Balmaclellan saying that the Directors "resolved to decline admitting the patient.... They were induced to form this determination chiefly on the ground that their Institution is to be regarded as a place of cure, not of permanent confinement for such as appear beyond the reach of any benefit from the Medical and Moral treatment which it affords and I dare say, you will be sensible that were they to grant admission to persons of the description you mention, the House might very soon be filled with the hopelessly incurable, to the exclusion of those on whom its treatment might be expected to terminate in cure or improvement." The same sentiment dominates several other letters like the one dated 23.8.1837 to Mr. J.M. Norfolk Street Academy, Laurieston namely - "A.N., a patient sent to the Lunatic Asylum here on 21st of June last from the Parish of Govan, having been reported as not likely to derive any benefit from a longer residence in the Asylum, and therefore an unfit patient for continuing in the House, I have been instructed to request that he may be forthwith removed, to which I beg your early attention."

Towards the end of the decade Overcrowding becomes acute leading to the following letter dated 3rd Nov. 1837 to a Lawyer in Alloa - "The Physician of our Lunatic Asylum having reported that R.C. from the Parish of Alloa, is not likely to derive any benefit from a longer residence in the Institution, and the House being at present extremely crowded, I have been desired to request that this patient may be removed as soon as arrangements can be made for that purpose...", also one on 6.11.1838 to the same person "our Lunatic Asylum is at present exceedingly crowded, so much so that I fear the Directors may be unable to admit the patient from Clackmannan Parish whom you allude to." while a letter dated 27.7.1837 to the Session-Clerk at Beith indicates the same position.

The Secretary conveys Reports about Patients given by the Physician, Dr. Balmanno & the Superintendent, Mr. Galbraith to enquirers, as given in a letter of 3.12.1829 to the Treasurer of the Abbey Parish of Paisley - "I .. applied to the Physician.. for his opinion of the two patients you mention, he has given it to me in the following terms viz - 'Mrs C. is much better, and very useful in assisting in the work of the Ward. She is, however, still too flighty & unsettled, I fear, to admit of her dismissal - E.W. is better, but unfit for dismissal (sic)'. In another Physician's report dated 17.2.1831 we find "His mind remains as formerly, and at his advanced age, with a mental affection of so long continuance, there is no prospect of improvement. He is impatient a little of confinement, offering immense sums of money to the Physician & Secretary to procure his liberty, proposing when liberated to endow all the public Institutions of Glasgow most richly. But, on the whole, his time seems to pass pretty comfortably and he is often much occupied in drawing diagrams to exhibit his profound knowledge of astronomy and great genius for mechanical invention". To an enquirer in Bristol he writes on 1.5.1832 - "I have to mention that, on applying to the Superintendent, he informs me that Mrs. W. continues to enjoy good bodily health, but he cannot say any mental improvement has taken place". In a letter dated 19.5.1835 written to a Minister in Dumblane Dr. Balmanno's report is given thus - "There has not been any improvement in the case of M. since his admission, and the symptoms are of a very unpromising nature. There is a degree of stupidity, and at the same time of ~~off~~ abstraction of mind about him, which I have reason to fear will end in incurable fatuity" - Is the doctor here sensing one of the earliest cases of Schizophrenia long before its recognition as an entity?

A considerable amount of correspondence requires to be carried out before a satisfactory settlement is reached in some cases concerning the payment of the Patient's Board with the Secretary threatening to take drastic action. In the case of I.A. from Beith at least ten letters are written in one of which to the Session Clerk dated 11.1.1832 he writes - " - and as there seems to be no prospect of any person coming forward either to give an obligation for the payment of her board in the Institution or to remove the patient, and convey her to her friends, I have to intimate that the Directors have no course left them but to appoint some trusty person to take charge of conducting her to Beith, and of leaving her with you, or with the Minister of the parish," while on 24.5.1832 he writes in the same terms to the Minister himself.

On 24.7.1829 the Secretary sends a letter to Mr. A.B., Collector of Police, Gorbals - "I received your letter of the 3rd. engaging to settle the arrears of C.M's. board etc. to the Lunatic Asylum on Tuesday last. But as you have not kept your promise, I have now to intimate that the Patient will certainly be dismissed on Thursday forenoon if a settlement does not take place tomorrow." After getting a Solicitor to write the Secretary sends a letter dated 1.2.1830 to the Minister of Gorbals containing the following - "I made many unsuccessful applications to him for payment before commencing legal proceedings, and they have now been brought to that point, that I am ready immediately to point his effects, or to put him in prison".

The husband of a private patient received the following intimation dated 16.11.1830 - "The Weekly Committee of Directors ... gave me instructions to inform you immediately that she will be sent home without fail if this board is not completely paid up on or before Saturday next, the 20th current, as well as satisfaction as to the ..."

When the Matronship became vacant after Miss Elizabeth Houston had occupied it for 10 years there were many applicants for the position & the Secretary answered enquirées from about thirty six sources including the following Asylams - Lincoln, Limerick, Wakefield, Royal Military Chelsea, St. Patricks Dublin & Newcastle also from Steven's Hospital Dublin, & the House of Industry Dublin and, in addition, the Orphan Asylum, Frome, Somerset. Altogether the Secretary wrote about fifty two letters in connection with the appointment in his usual helpful & polite manner e.g. "Mrs. T., House of Industry, Dublin, Madam, I have been favoured with your letter of the 4th current, and agreeably to your request I now return by Captain Oman, of the Arab Steamboat, the testimonials, twelve in number, which were formerly lodged with me on your behalf, as a candidate for the Matronship of the Lunatic Asylum here. I hope they will reach you safely, and be of service to you on some other occasion", dated 9.8.1837. To another unsuccessful applicant from London he writes on 4th July 1837 the very day of Miss Vessey's appointment - "If you wish to receive back your testimonials, which are much to your credit, I shall be happy to return them to you in any way you may desire".

To an enquirer from Lincoln, probably on behalf of Miss Vessey, he answers on 30.3.1837 as follows - "So far from there being any objection to an Englishwoman having the situation, I may mention that, of the three who have held it since the Institution was opened, two have been Englishwoman; and I have been desired to order the advertisement which has met your eye to be inserted in some of the most widely circulating English, Irish and Scotch Newspapers, that the best qualified Matron who may offer herself from any part of the united kingdom, may be obtained".

A few of the Secretary's replies are in a caustic & satirical vein and he writes thus, to an enquirer from Edinburgh, on 23.3.1837 - "I have received your of the 20th current, but I am sorry to say, it is so illegible, that I have been able to read a few words of it here and there. As the Matron for our Lunatic Asylum is required to be a person of good education, I doubt, from the bad spelling of many of the words which I have been able to make out in your letter, that you do not answer this description; and, at any rate, as the Matron has to keep accounts, and to be sufficiently qualified for any pen and ink business as may come in her way, one with such an indistinct hand-writing as yours would not suit for the situation".

To a Minister enquiring from Glasgow he pens the following reply on 17.4.1837 - "In answer to your note of the 15th. I beg to mention, that I do not think there is any thing connected with the duties of the Matron of the Lunatic Asylum here which the Lady you allude to could deem objectionable, unless she were to view in that light the duty of taking charge of the female patients during their attendance on divine service on the Sabbath evenings, which is conducted by the Chaplain of the Institution, a preacher of the Established Church".

With further reference to the Hospital Chaplain, after the first Chapel was opened on 6.7.1828 we find the Secretary writing to Mr. Ferrie the second full-time Chaplain, on 13.1.29 as follows - "I beg to inform you that, at a Meeting of the Directors of the Lunatic Asylum held today, it was resolved, in consequence of the comfortable accommodation which the Chapel now affords, that divine service should be performed in it every Sabbath evening, in place of only once a fortnight as hitherto, and that your ~~salary should be increased from Twenty to Forty pounds per annum~~ ^{the office of Chaplain to the Glasgow Royal Lunatic Asylum having become vacant...} candidates are requested to lodge & testimonials with Mr. Cuthbertson ... at No. 242 George Street".

Asylum

Owing to the unsatisfactory condition of the Approach Roads to the until Parliamentary Road was opened up in 1835 we find the following communications - 12.11.1829 "The Directors of the Lunatic Asylum have desired me to state to you that they have been very much molested in the use of the footpath for which they pay you £5 a year, by its being employed for the breaking of horses, in consequence of which it is not only cut up, but rendered dangerous for passengers. In proof of this I have to mention that Miss Barry, the assistant Matron, was rode down by one of these horses on Tuesday last and considerably hurt." This footpath evidently ran by the side of St. Enoch's Burn.

Also on 22.12.1829 we read - "J.C., Council Chambers, Glasgow, Dear Sir, A heap of lime, which had been lain down for some purpose connected with the new Road, a little eastward from the gate of the Lunatic Asylum, is still lying there, encumbering very much the approach to the Institution and was lately the cause of overturning a carriage, by which it was broken, and some of the persons in it considerably hurt. I have in consequence been desired by the Directors of the Asylum to request you would give immediate orders for having this lime removed to some spot where it will be less dangerous than it is at present to carriages coming in the dark, especially when it is covered with snow."

Furthermore on 20.10.1831 we encounter - "J.H., Statute Labour Office, Glasgow, I have been desired by the Directors of the Lunatic Asylum to beg you would call the attention of the Statute Labour Trustees to the miserable state of the causeway in Taylor Street, and to request that they give orders for having some repair immediately bestowed upon it. They must be aware, I think, that the unfortunate inmates of the Asylum are generally brought to it, and conveyed from it, in carriages; and, as the only access to the Institution at present is by Taylor Street and Dobbie's Loan, the wretched state of the former is severely felt both by them, and by those who go in carriages to visit them".

Trouble was also experienced owing to the lack of Street Lighting thus - "20.10.1831, J.C., Council Chambers, The Directors of the Lunatic Asylum have requested me to state to you, that during the dark season last year there was a lamp regularly lighted near the bridge where the road to the Asylum branches off from Dobbie's loan, and that in the present state of the road it is very necessary for the safety of those going to or coming from this and the Magdalene Asylum after it is dark, to have the lighting of this lamp resumed, in which opinion you will no doubt agree with them". Again on 27.2.1837 the Secretary writes - "To the Hon'ble Commissioners of Police for the City of Glasgow, The Directors of the Glasgow Royal Lunatic Asylum have desired me as their Secretary to call your attention to the total want of lamps on the new Parliamentary Road in front of the Institution".

On 7.5.1835 a letter was written authorising work to proceed to make a Brick Sewer from the present one to the Common Sewer of the New Parliamentary Road, leading from the Kirkintilloch to the Port Dundas Road, and another on 29.9.1835 directing the Architect to erect Gate Pillars of separate Stones or Blocks, which are probably those still standing.

The introduction of Gas and the inadequate supply of Water were also themes, while a large correspondence was conducted commencing 1.11.1836 with William Burn, Architect, Edinburgh concerning the making of extensions which were now found to be absolutely essential.

Copy Letter Book -

Correspondence about non-payment of Patient's Board -

Pp. 77 (2); 79 (3); 81 (2); 83 (2); 84 (1); 96 (2); 103 (3);
114 (1); 122 (1); 132 (1).

Correspondence about Patient from distant Parish -
Stongy-Stratford. -

Pp. 114 (2). 115 (2). 117 (1 & 2). 123 (1). 131 (1). 145 (2).
160 (1 & 3). ~~142~~ (1). 182 (3). 249 (4). 259 (1).

Correspondence about a Legacy -

Pp. 12 (1). 25 (2). 33 (1). 39 (2). 40 (2). 41 (2). 44 (2). 45 (2).
46 (2). 64 (3). 65 (2). 87 (1). 79 (1).

Correspondence about Extensions with Wm. Burn, Architect. -

Pp. 206 (2). 207 (1). 209 (1 & 2). 213 (1). 217 (1). 230 (1).
242 (2). 243 (1 & 2).

Case Record No.2. Robert Stevenson.

Old Monkland. Aged 20. Short stature, black hair, blue eyes, fair complexion. Pulse feeble, 80. He became insane in 1795, when he had small-pox. Then he was seized with convulsive fits, in them lost power of left-side. Since then insanity has been increasing. Tears his clothes and is occasionally dangerous. He was admitted Decr. 28, 1814. Had a slight fit on 29th and again on 31st, the last he remained in only 5 minutes. His hair was cut close. January 2nd, he remained as before. Jany. 3rd. He had a slight fit. Jany. 5th. No improvement. Jany. 11th. He had another fit. Jany. 12th. Another fit more severe than former ones. Jany. 14th. He is not quite so well. 16th. Do. 18th. He is much improved. 19th. His head to be shaved. He remains better. 22nd. Do. 24th. Do. 25th. He is a little less troublesome. 26th. He broke a pane of glass in the gallery and struck one of the patients. Very high. 27th. He is more composed. 30th. Do. Feby. 3rd. Do. 6th. Do. 10th. He remains quiet. He assisted rolling the grounds. 13th. Remains quiet. 17th. Do. 20th. Do. Since he assisted on the roads he remains better. 24th. He had a slight fit. 26th. Had a very severe fit in which remained 15 minutes. Shave his head and apply a blister. March 2nd. His head to be shaved each week. He had a slight fit this morning. 4th and 6th he remains the same. 11th. Wrist-locked him in consequence of his quarrel with Wm. Lang. 12th. Shaved his head. No improvement. 13th. He still continues locked. 16th. Gave him his liberty again. Remains much the same. 19th. Had slight fit. 21st. Much as usual. 23rd. He struck Alexr. Bell on the face, without provocation. 25th. He is still confined to his room. 28th. Threw away his broth and broke the bowl. 31st. Remains the same. April 3rd. Do. 4th. Do. 8th. He is a little improved. 11th. He had two slight fits. No improvement in mind. 14th. He occasionally assists John in the grounds. 16th. He remains in much the same state as usual. 20th. Do. 24th. He is not quite so well. 26th. A little improved. 28th. He assisted in digging grounds before the house. 30th. He had a slight fit this morning. May 3rd. Is not quite so well this morning. 5th. He had a slight fit in the middle of the morning. 9th. He continues in mind much the same. 11th. He has had no fit these two days but appears dull and stupid. 14th. He is rather better. 17th. Do. 20th. Do. 23rd. Do. 29th. He occasionally assists in the garden. June 2nd. He had a slight fit. 6th. He is same in mind. 8th. He has three slight fits. 13th. No improvement. 16th. 21st. 24th. 26th. 28th. 30th. DO. July 4th. He had two slight fits and appears dull and stupid. 7th. Rather better. 10th. He continues so. 12th. Two slight fits from which he soon recovered. 14th. 15th. DO. Cut his hair close. 22nd. He had a severe fit. 26th. He continues rather better. 30th. Had slight fit. Continues same in mind. August 1st. Just the same. 3rd. 6th. 8th. DO. 11th. Slight fit. 14th. Jacketed him for taking keeper's keys. 17th. Gave him his liberty. 19th. Dull and stupid. September 2nd, 5th, 8th, 13th, 15th, 19th. DO. He continues tolerably rational and extremely serviceable, but never entirely free from epileptic attacks, which always leave his looks fatuous and speech faltering. His friends have expressed wish to take him home. They were strictly enjoined to shave his head regularly, keep his bowels very easy, to give him regular employment but always short of fatigue, to avoid all causes of agitation or irritation. He was dismissed CURED but still epileptic and consequently very liable to relapse.

Govan Combination Poorhouse - Merryflatts

Govan Parochial Asylum

Southern General Hospital

In 1865 land was acquired by the Parochial Board at Merryflatts for the erection of a new Poorhouse and it is noted in the Commissioners' Report for 1866 that "plans are before the Parochial Board which comprehend an Asylum, constructed with reference to the requirements of the patients" and it is also stated that the Lunatic Wards in Eglinton St. are overcrowded being licensed for 45 of each sex but at the moment housing 103 patients.

Two years later we learn that male patients from the Lunatic Wards are working three days per week at the site of the new Poorhouse and that the Parochial Asylum there is in course of erection and the "external aspect is stately and pleasing". It should be noted in passing that the patients in the Lunatic Wards have already had an excursion to Millport and that a number join the annual excursion of the other inmates of the poorhouse to Tigh-na-bruaich.

The new Poorhouse is again visited by the Commissioners in 1870 and although satisfaction is expressed about the accommodation on the Lunatic Department doubt is felt as to whether there will be sufficient land for the adequate employment of the patients.

In the 1873 Report we read that "The patients in the Lunatic Wards of Govan Poorhouse have been transferred to the Asylum which has been erected in connexion with the new poorhouse at Merryflatts, to which a first class license has been granted, and which will accordingly take rank as a Parochial Asylum." The first official visit took place on 28th November 1872 when the hope is expressed that the wards will be made as bright and comfortable as those of any Asylum in the country as they will soon have the more unmanageable patients of the parish under the new license.

Good reports continued to be made about the administration and care but there was an unfortunate number of cases of Erysipelas occurred so that some of the poorhouse wards had to be taken over to provide Sick Wards. Structural faults necessitated workmen being about for a long period causing a degree of restlessness so that restraining gloves & jackets were used more than normal. At one time also there was a disagreement between the Governor & the Medical Officer which interfered with the administration.

The Asylum had been licensed for 90 patients of each sex so that the patients from the combined Parishes of Govan & Gorbals were brought from Cartnavel but soon the old difficulty of overcrowding became manifest and on 13th Sept. 1881 there were 214 patients while the staff consisted of "one head male and one head female attendant, of seven ordinary male and eight ordinary female attendants, and of two night male and of two night female attendants".

Occupation continued to be provided for the female patients by doing work for the city shops but a Laundry is advocated to provide more employment. Exercise both within & without the grounds is recommended and fears are often expressed that there will not be enough work for the male patients after the present restricted grounds are laid out & cultivated. In order to provide more facilities for recreation & occupation the estate of Crookston Hall was purchased in 1875, consisting of 47 acres, at a cost of £20,750.

PARISH of GOVAN

POORHOUSE, Cavalry Barracks, Eglinton Street.

Psychiatric Wards - Licensed Lunatic Wards -

Prior to the Poor Law Scotland Act 1845 the insane poor from the Parish of Govan were housed in Gartnavel which stood within its domain, although Govan was not a 'privileged Parish' and Hillend Private Asylum, Greenock opened in 1840, the proprietors of which were Messrs Thomson whose father had opened a previous house in 1822.

After the Poor Law Act, about 1848 the Parochial Board of Govan whose Annexation Poors Office is given as 23 Norfolk Street and later Dale Street, Tradeston, (now Tradeston Street) & whose Inspector of Poor was John Cassels, rented an Old Mill (probably a Hand-Loom Weaving Factory) at the head of Dale Street and fitted it out as a temporary Poorhouse & Hospital which was occupied as such for the next 5 years, according to Erskine. In 1852 the Post Office Directory gives the address of both the Office & the Poorhouse as 125 Dale Street. There is no doubt that some quieter mental patients and mental defectives would mix with the ordinary poor people of the Parish.

In 1853 the Parochial Board acquired the Cavalry Barracks on the west side of Eglinton Street which they altered into the Poorhouse & Hospital and occupied for about twenty years. The Barracks had been erected in 1821 during a period of industrial unrest when the Cavalry were brought into the city from Hamilton. They occupied an extensive site on either side of the present Kilbirnie Street, opposite Devon Street, and were ultimately sold to the Glasgow Tramway Company and after a few months bought by the Caledonian Railway Company for the erection of Eglinton Street Station when their lines were extended from Gushetfaulds Station to the Central Station.

In the Report of the Royal Lunacy Commission for Scotland 1857 in Appendix D. the Poorhouse is not included under those which "avowedly and habitually receive lunatic and fatuous patients", but amongst those "casually receiving patients, which almost all the others do".

In his evidence before the Royal Commission on 22.11.1853 the Inspector of Poor of Govan Parish Mr. James D. Kirkwood asserted that he had been Inspector since 1850 having come from Tranent. He states "We have at present in Asylums 23 lunatics chargeable to the parish. We have only one imbecile. There are a few, 8 or 9, which might have been so classed, but have not been. The medical officers did not think these should be returned as such; they are able to take care of themselves. Five are in the poorhouse as ordinary inmates, and the remainder are with relations". Only 2 patients remain at Gartnavel the others 20 in number being at the Private Asylum of Langdale in Bothwell which was opened about 1848 by Dr. Muirhead who was previously a medical officer in Gartnavel while his wife had been one of the Matrons there. The patients had been removed from Gartnavel firstly for financial reasons then because the hospital would not admit any more Govan patients. Six or Seven of the patients at Langdale were removed from Hillend, Greenock in 1850 because the "Lunatics' Committee" were not satisfied with their treatment and accommodation. He states that prior to June 1850 the Parish was in 2 districts under 2 Inspectors.

Licensed Lunatic Wards -

In his evidence before the Royal Commission the Inspector of Poor, Mr. Kirkwood asserts "Our committee had in view to erect a lunatic ward in our own parish, for our own parish only. I don't think that would be desirable; but where the number of lunatics is larger than ours, it might be proper. We have $4\frac{1}{2}$ acres within our boundary walls".

It is not known if a licence was ever obtained from the Sheriff of the County under the Madhouse Act of 1815 and acted upon but we read in the First Report of the General Board of Commissioners in Lunacy for Scotland under Proceedings of District Boards, No. 12 District of Glasgow, comprising Lanarkshire thus - "On the other hand, we have recently licensed lunatic wards in the Govan Poorhouse for the reception of harmless & incurable cases only, of which class they are capable of receiving 18 males and 18 females." Whereas the lunatic wards in both the City & Barony Poorhouses which are much larger are "licensed for the reception of patients affected with every form of insanity". This was done under the short Amendment Act 21 & 22 Vic. c.89 but the Sheriff of Lanarkshire says there is no authority to grant a restricted license and he will act only on the ordinary Certificates. Appendix K to the Report gives Rules for the Reception of Lunatics into Poorhouses Class I being admitted on the Sheriff's Order but Class II patients on a conjoint Order of the Sheriff and Sanction of the Board.

In the Second Commissioners Report dated 1860 we find the following favourable entry "22nd April 1859 - Visited the lunatic wards of the poorhouse, which at present contain 8 males and 14 females. All have previously been inmates of asylums, with the exception of two brought from the ordinary wards and one from the parish. The accommodation consists of a large dormitory and two day-rooms for the males and females respectively.... The males are occupied in house work, pumping water etc. and generally go out for a walk with an attendant in the after part of the day... As there are no single rooms, and no means of separating excited patients from the others, it is obvious that the greatest care should be exercised in selecting cases for admission,... Though the visit was made at rather an early hour, all the patients were found dressed, the wards all in order, and the house clean and free from any offensive smell." "29th October 1859 - A very decided improvement has been effected in the male department, by the removal of the wall which bounded the airing-yard on the east side, and the consequent increase of the provision for exercise... A considerable collection of books & periodicals was found in the public room of the males, who have, besides, access to the library in the poorhouse. Of fourteen male patients seven are readers."

The Commissioners Report on his visit on 10th May 1860 is also in a favourable strain "Great order and tranquillity prevailed in both the male and female department.... The male airing court is extremely neat with flower borders; and a fish pond or basin is at present being erected. Rabbits, pigeons and a peacock have likewise been supplied for the amusement of the patients.... A large proportion are employed in various ways, and generally once a week they assemble in the female department for a dance". 15th December 1860 - "... A distinct ward, containing three beds, opening from the general dormitory on the male side, which it is proposed should be used as an infirmary, is now ready for the reception of patients; that on the female side is far advanced but not yet finished.

(Cont).

Licensed Lunatic Wards -

Commissioner's Report for 15.12.1860 continued - "The division in the day-room has been removed, and the apartment, when visited, presented the appearance of a large, cheerful, well-lighted hall, the walls of which were ornamented by pictures; which contained ample wardrobes, a clock, musical instruments, benches with backs, and in the centre a table, spread with a cloth for the evening meal, upon which rested vases for gold-fish etc. At dinner, knives and forks of the ordinary form and material are allowed to every inmate. A fish-pond and fountain have been placed in the centre of the airing yard for males, while that of the females has been neatly laid out. All the patients of both sexes now take exercise beyond the walls - the females being accompanied by two nurses and a male attendant, whose interference has never, however, been required.... The Reporter has been very favourably impressed, both by the condition of the inmates and by the disposition of the Parochial Board, not merely to adopt the suggestions made to them, but to originate what they conceive might be conducive to the benefit of the paupers."

The Commissioners' Report dated 1862 also contains many eulogies & indicates that large parties of the patients occasionally attend the concerts in the City Hall. Several alterations spontaneously made by the authorities are approved e.g. the erection of glazed porches at the entrance of both day-rooms. In 1863 it is recorded that the accommodation has been increased by the addition of a dormitory on each side so that the numbers are now 38 males and 34 females. "The establishment continues to be conducted with much liberality, and in a very judicious manner," while other improvements are cited. A particular impression is made by the acquisition of 4 acres of land at a distance of 2 miles from the poorhouse for the employment and recreation of the patients to which nearly all the men repair - "...about 26 of the men are daily beyond the premises, and it is one of the most pleasing and characteristic features of the establishment, the extent to which exercise of this kind is carried". A grand piano and ornamental gaseliers have been added to the female day-room while it is proposed to take all the patients an excursion down the Clyde.

Favourable comments continue to be made in 1864 especially upon the liberality of the remuneration given to the attendants while the numbers of patients reach 40 of either sex. The 1865 Report stresses that additional occupation is being provided for the women "by taking in work from the warehouses of the town, and, as an encouragement, part of the proceeds is given to the patients". "Large parties, comprising about 24 of the men and 37 of the women, walk regularly beyond the premises, and the usual monthly entertainments are carried on, if possible, with increased interest! "... 27 women were seen sewing, most of them making shirts for the warehouses in the town" - this seems a very modern procedure.

The comments for 1866 assert that "The reports on the Lunatic Wards of Govan Poorhouse are, as formerly, very favourable. The plan of allowing the patients to share in the proceeds of their industry has been attended with the best results". "... 3500 shirts have been made. And... the cash proceeds have been so considerable as to enable the Governor to provide curtains, a carpet, a large increase in the number of ornaments, and to add to the domestic recreations, apart altogether from the comforts and indulgences allowed by the Parochial Board." Nevertheless the Commissioners had to refuse an application from the Parochial Board for a first-class license which would allow of the admission of any kind of patient but it is pointed out that 24 acres of land has been acquired at Merryflatts where suitable accommodation could be provided.