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AN  
INAUGURAL DISSERTATION  
ON  
INSANITY:

Submitted to the Examination

OF THE

REV. JOHN EWING, S. T. P. PROVOST;

THE

TRUSTEES AND MEDICAL PROFESSORS

OF THE

UNIVERSITY OF PENNSYLVANIA;

FOR THE

DEGREE OF DOCTOR OF MEDICINE,

ON THE NINETEENTH DAY OF MAY, A. D. MDCCXCIV.

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By EDWARD CUTBUSH, of Philadelphia,

HONORARY MEMBER OF THE PHILADELPHIA MEDICAL AND CHEMICAL  
SOCIETIES, AND MEMBER OF THE AMERICAN MEDICAL SOCIETY.

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“ ——— MOODY MADNESS, OF WILD PASSIONS BORN,  
“ MUSES, RECLIN'D IN GHASTLY STATE, FORLORN;  
“ OR WEEPS, OR LAUGHS, OR DESULTORY SINGS,  
“ TOTTERS ALONG, AND SPEAKS UNMEANING THINGS;  
“ OR WITH FIERCE EYE, LANK JAW, AND HORRENT BROW,  
“ LOUD RAVING CLANKS HIS IRON CHAINS. ——— ”

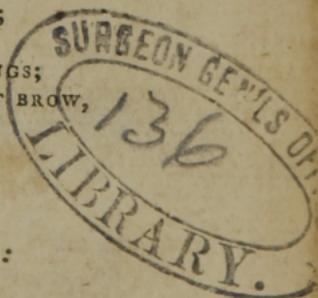
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MDCCXCIV.



Dr Drysdale  
with the Complts  
of the Authors

TO  
WILLIAM SHIPPEN, JUN. M. D.  
CASPAR WISTAR, M. D.

*Professors of Anatomy, Surgery and Midwifery;*

A D A M K U H N, M. D.

*Professor of the Practice of Physic;*

B E N J A M I N R U S H, M. D.

*Professor of the Institutes and of Clinical Medicine;*

J O H N F O U L K E, M. D.

*Lecturer on Anatomy, Surgery and Midwifery;*

A N D

T H O M A S P A R K E, M. D.

*Physicians and Surgeons to the Pennsylvania Hospital.*

*Gentlemen,*

I T affords me the highest degree of satisfaction, to be able, in this public manner, to offer you my sincere acknowledgments, for the instructions I have received from your valuable lectures, and judicious prescriptions and observations, in the Hospital of Pennsylvania. It would be presumptive in me, to attempt, in this dedication, to enhance the value of your characters as men of science and professional abilities; Fame has already proclaimed them abroad, and the echoes have long since been heard in this western world, where Liberty and Science embrace each other.

To whom can I inscribe the following pages with more propriety, than to the Physicians and Surgeons of the Pennsylvania Hospital? under whose direction I have had the honor of prosecuting my medical studies. Accept, therefore, this small tribute of respect for the many favors I have received; and of the politeness, with which you have always honored me, I shall ever retain an heart-felt remembrance.

*I am, Gentlemen,*

*Yours, affectionately,*

*May 5th. 1794.*

T H E A U T H O R.

TO

JOSIAH HEWES,  
OWEN JONES,  
JOSEPH PASCHALL,  
SAMUEL CLARK,  
THOMAS PENROSE,  
WILLIAM M·MURTRIE,

LAWRENCE SECKEL,  
PATTISON HARTSHORNE,  
ELLISTON PEROT,  
BARTHOLOMEW WISTAR,  
SAMUEL COATES,  
THOMAS MORRIS,

Managers,

AND

MORDECAI LEWIS, *Treasurer,*

OF THE

PENNSYLVANIA HOSPITAL,

*Gentlemen,*

TO you, also, I am under many obligations, for the numerous marks of friendship, with which you have been pleased to honor me, during my residence in the institution over which you preside. In this asylum of human misery you have long exercised, in a conspicuous manner, that benevolent principle which Providence has implanted in you—namely, Humanity. May it continue to be the most prominent trait in your characters, and may it shine forth like a brilliant luminary, to guide your successors, which I hope time will not obscure; also, may your present undertaking,\* be the means, by which many worthy members of the community will be again enabled to enjoy, in this land of liberty and charity, the blessings of a healthful body and a sound mind.

*I am, with gratitude,*

*Yours, affectionately,*

THE AUTHOR.

*May 5th. 1794.*

\* The Managers of the hospital are now building a large and commodious addition for the reception of lunatics only.

P R E F A C E.

**M**AN, the noblest work of the Creator, is endowed with intellectual faculties, by which he is capable of being exalted to attainments the most refined; but, the numerous vicissitudes that the body and mind undergo, from the impulse of the passions and other various occurrences, in this great theatre of the world; those heaven-born blessings by which we claim the first link in the great chain of animated beings, are frequently so much perverted, as to level us with the brute creation.

“ That innate reason we so greatly boast,  
 “ Is oft by ignorance dull’d, by passions cross’d,  
 “ In winding doubts, and mazing errors lost.” }  
 DRYDEN.

Of all the mental powers with which it pleased the Supreme Governor of the universe to implant in man; none appear to be more essential to his happiness, or to the tranquility of those around him, than an uninterrupted use of his reason: this sublime power is absolutely necessary for the well-being of all societies, both civil and religious, its absence constitutes a direful disease, which frequently eludes all the powers of medicine, and at length sets the goddess Hygeia at defiance.

Seeing that the possession of the intellectual faculties, is so nearly connected with the happiness of mankind; and having been a frequent witness to the horrid situation of many of my fellow creatures, laboring under a total or partial loss of them; induced me, to make insanity the subject of the following pages. As there are many hypothetical assertions, and little to boast of, in my composition, and less in judgment, I submit the following sheets with peculiar diffidence, but as I write not from choice but necessity, I beg the candid indulgence of my readers—the whole dissertation being little more than a mere skeleton.

THE AUTHOR.

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## INTRODUCTION.

*AMONG* the numerous train of diseases, with which the human race is afflicted, there are none, which more deserve the attention of medical men, than those of the mind: and none, I am sorry to add, have been so little attended to. Notwithstanding the rapid accumulation of medical knowledge, the disease, which is the subject of the present Thesis, still remains in great obscurity, and in part the opprobrium medicorum: but I hope the time is not far distant, when the veil that obscures our researches, will be boldly drawn aside by some rising Harvein, who will penetrate the untrodden wilderness of the brain, and explore the host of morbid foes, that, at times, infest it. Permit me to add, that, in this glorious æra which I anticipate, I presume every faculty and operation of the mind will be found to possess different parts, in this great receptacle or repository of the soul.

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A N  
INAUGURAL DISSERTATION  
O N  
I N S A N I T Y.

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**I**NSANITY has (with few exceptions) been considered from the earliest periods of medical science, down to the present age, as consisting of two kinds, *viz.* mania, and melancholia: but in the present inquiry, I shall consider melancholy as an inferior degree or state of mania, depending on the same exciting causes, only varied with regard to their force, and the condition of the brain or system in general. I infer that they are different states of the same disease, from their frequently alternating with each other, of this I have seen various instances, and many more may be found in the records of medicine.

Insanity generally attacks young men more frequently than old, and more frequently men than women. Males and females from  
the

the age of fifteen to forty-five, generally speaking, are most frequently attacked with that state of Infanity, in which all the faculties and operations of the mind are more or less deranged; while those from the age of forty-five to seventy, are subject to the lowest state, or that, in which the understanding is most commonly perverted. Infanity after this time of life, is a rare occurrence; at this age the memory and the other faculties begin to fail; from this we may date second childhood, and even descend sometimes to a "second infancy."\*

It has been observed that children are not subject to Infanity. The fact is true and I presume the reason obvious—The faculties of the mind, are evolved in a certain regular succession, and I believe, with this evolution, the consistence of the brain is altered. In two children, one of nine months old, the other of six, whom I examined, I found the  
brain

\* I met with an instance of a woman between eighty and ninety, says Dr. Rush, who exhibited the marks of a second infancy, by such a total decay of her mental faculties as to lose all consciousness in discharging her alvine and urinary excretions. Med. observ. and inq. by Dr. Rush, vol. 2d. page 311.

brain much softer\* than the brain of an adult, and probably, the firmness of the latter was acquired, as the faculties were disclosed; which firmness, is in some measure lost by the time we arrive to the age of eighty; after this period it assumes its primitive state. Hence, Insanity is uncommon in either of those states. Further, Dr. John Gregory remarks; in childhood the mind can attend to nothing but what keeps its active powers in constant agitation, nor can it take in all the little discriminating circumstances which are necessary to the forming a true judgment either of persons or things. For this cause, it is very little capable of entering into abstract reasoning of any kind, till towards the age of manhood.† This is undoubtedly true, and daily observation fully evinces the fact; therefore—as Insanity in part depends on a false judgment of either persons or things,

B

and

\* Query. May not this softness of the brain in children be one reason, why they are more subject to hydrocephalus internus after blows, &c. than adults? and not from the size of the brain and the quantity of blood circulating therein.

† See a comparative view of the state and faculties of man with those of the animal world. By John Gregory, M. D. F. R. S. vol. 2d. pages 75 and 76.

and children do not possess the power of judgment and reasoning, consequently they are strangers to the disease. I have in a former part of this essay observed, that Insanity generally takes place between the ages of fifteen and seventy; this I believe to be varied in the same manner, as the uterine system is, by climate and situation in life.

I have not been able to find but one case of Insanity under ten years of age, and this was extracted from the Bedlam Register\* by Dr. Black, who gives us the following account: during fifteen years, from 1772 to 1787, of two thousand eight hundred and twenty-nine insane males and females, their respective ages and numbers in each interval of life, when classed, were as follow: under ten years of age, one; from ten to twenty, one hundred and thirty-two; from twenty to thirty, eight hundred and thirteen; from thirty to forty, nine hundred and eight; from

\* I am sorry it has not been customary to insert the ages of the insane, in the register of the Pennsylvania Hospital; if it had, the number of patients admitted since the year 1755 to the present time, would have furnished us with an instructive table. I beg leave to suggest to the Managers of that charitable institution, the propriety of inserting the age of every patient on admission.

from forty to fifty, six hundred and thirty-two; from fifty to sixty, two hundred and sixty-six; from sixty and upwards, seventy-eight. It appears, from this table, that when the mind arrives to its acme, which is between thirty and forty; there is a greater probability of its being affected, by the causes which produce Infanity: hence the number that are affected is greater between those periods, than in early, or the decline of life.

When there is an hereditary diathesis, it makes its appearance commonly between the ages of thirty and fifty: General Montgomery wished to die in early life, suddenly, and, if married, childless; this extraordinary wish, says Dr. Rush, appears truly proper, when the reason is shown.—His family was subject to an hereditary madness, which generally attacked them about the age of fifty; to escape it, he wished to die before that age; he wished a sudden death, for the same reason that many others do, that he might avoid pain; and depart childless, that he might not entail so dreadful a malady on a successor.\* The celebrated Dr. Gregory, in

\* See Dr. Rush's manuscript lectures.

his advice to his daughters, wisely suggests the impropriety of a connection with a person thus predisposed—He says, avoid a companion that may entail any hereditary disease on your posterity, particularly (that most dreadful of all human calamities) madness. It is the height of imprudence to run into such a danger, and, in my opinion, highly criminal.\*

Having offered a few cursory remarks, I shall now (for the sake of perspicuity) proceed to consider the two different states of Insanity under the appellation of “tonic and atonic mania.”†

These states of Insanity, sometimes make their appearance without any premonitory signs, but, in general, tonic mania is preceded days, weeks, and even months by the following symptoms: quick motion of the eyes and eye-lids, attended frequently with a distention of the vessels of the adnata, pupils contracted,

\* Works of Dr. John Gregory, late professor of medicine in the university of Edinburgh. Vol. I.

† So called by Dr. Rush.

tracted,\* head-ach, vertigo, instability in all pursuits, unusual extravagance, by high or low spirits, loquacity and watchfulness, and commonly a voracious appetite. The precursors or premonitory symptoms of atonic madness are—languor and inactivity with regard to all undertakings, indifference with respect to external things, love of solitude, watchfulness, uncommon taciturnity, costive habit of body, and lastly, a great propensity to be starved. But from the known tendency that both these states have to alternate with each other, it is difficult to predict, which the patient will be attacked with, the precursors of both making their appearance, at different times in the same person. Having now described the premonitory signs of tonic and atonic mania, I shall proceed to deliver a general definition of the disease; and here, I am met with almost an insurmountable difficulty, as the poet justly observes—

“ Great wit to madness sure is near allied,

“ And thin partitions do their bounds divide.”

#### DEFINITION.

\* This symptom I have observed uniformly to take place about the accession of a paroxysm.

## D E F I N I T I O N.

I AM aware of the difficulty of circumscribing the limits between the insane, and the multitude of others, who are said to be truly rational. Dr. Black observes, that it is not confined within the porticoes of bedlam and madhouses: we might find it sprinkled over the earth, not only among the fanaticks of Asia, &c. but through every rank and station of civilized communities.\*

The ingenious Dr. Gregory also remarks—  
 “ Nullus tamen existit limes accuratus inter  
 “ sanam mentem et vesaniam. Omnis præ-  
 “ ter solitum hilaritas ad insaniam vergit; et  
 “ mœstus et meticulosus animus ad melan-  
 “ choliam appropinquat.”† And I may add, every extravagance in human affairs and pursuits, borders on Insanity; but madness in so extensive a sense, I shall exclude from the present dissertation.

That insanity of which I <sup>am</sup> about to treat, is defined to be “ a false perception of truth; with conversation and actions contrary to right reason, established maxim, and order.”‡

\* See Black on the human species.

† Vid. *Conspectus medicinæ theoreticæ*. Auctore Jacobo Gregory, M. D.

‡ See Dr. Rush's manuscript lectures.

*Symptoms of Tonic Mania.*

On the ebullition of tonic mania (which may be considered the monarch of all mental diseases) the looks, voice and gestures are impetuous and wild; in many, audacious and ferocious; irascible, impatient, and extremely violent when contradicted or restrained; great increase of strength.

Madmen, if suffered to have their liberty, resemble beasts, rather than men; they tear their cloaths, besmear their faces with their excrement, and fly from human society; they ramble with wonderful rapidity from one object to another, with shouting, singing, and laughing; some, while they roam through the lofty regions of fancy, count the stars, and mark in their imagination, the revolution of the planetary system—others are personating every being and object terrestrial and celestial; while others are spreading their vent'rous wings and flying to different parts of the earth, and from earth to heaven. These symptoms are varied in different temperaments, and by the number of the powers of the mind affected. Insane persons endure  
hunger,

hunger, cold, nakedness, and want of sleep with astonishing degree of impunity; they are very insensible to the operation of contagion, vomits, purges, &c. During the paroxysm, they obstinately refuse food and medicine; in the decline, they become stupid and mournful, and when they come to be acquainted with their situation, they are much dejected, and oftentimes burst into tears.\*

A madman in the hospital, a few years ago, could always inform his keeper, when a paroxysm was coming on, and would request to be chained and handcuffed, to prevent him from doing mischief. This was a happy circumstance, as the management of him was always attended with difficulty if his request was not complied with; but from what symptom he knew of the accession of the paroxysm, I could never learn.

Shakespear, in his tragedy of king Lear, has given us a striking picture of Insanity, in the characters of Lear and Edgar.—

*Edg.*

\* I have always observed a gradual recovery to take place after this symptom; a return of former habits is also a sign of returning health. The recovery of the king of England was predicted by Dr. Baker, from his resuming his former mode of talking.

“ *Edg.* ————— And am bethought  
 To take the basest and the poorest shape  
 That ever penury in contempt of man  
 Brought near to beast: my face I’ll grime with  
 filth,

Blanket my loins, put all my hair in knots,  
 And with presented nakedness out-face  
 The winds and persecutions of the sky.

The country gives me proof and precedent  
 Of bedlam beggars, who with roaring voices  
 Strike in their numb’d and mortify’d bare arms  
 Pins, wooden pricks, nails, sprigs of rosemary;  
 And with this horrible object, from low farms,  
 Poor pelting villages, sheep-coats and mills,  
 Sometimes with lunatic bans, sometimes with  
 pray’rs,

Inforce their charity.\* —————”

SHAKESPEAR.

The Demoniacs, we read of in Sacred  
 Writ, no doubt possessed the true tonic spe-  
 cies of Insanity; they were affected various  
 ways, according to the condition of their  
 excitability; sometimes they rent their gar-  
 ments, and ran about naked, striking ter-  
 ror in all those they met, and even wound-  
 ing their own bodies; so very furious, that

C

though

\* See Pope’s edition of Shakespear’s works, vol. 6th.

though bound in chains and fetters, they broke their bonds, and rambled in the most lonely places, and among the sepulchres of the dead.\* It also appears that they were cured by the presence of our Saviour, or by the twelve persons, whom he sent forth:† their presence probably acted similar to fear on the system, which produced a change in the constitution; this, in all latter ages, has been considered as a very essential step towards curing Infanity.‡

In atonic madness, the mind is generally fixed to one subject; many are cogitative, silent, morose, and fixed like statues; others wander from their habitations in search of solitary places, they neglect cleanliness, their bodies are generally cold, with a change of color and dry skin; all the different secretions are much diminished, the pulse slow and languid.

The disease of king Saul appears to have been of this kind, and David removed it by  
playing

\* See Mead's works; also, see Matthew, chap. 8, ver. 28, et seq. Mark, chap. v. ver. 2, 3, 4, et seq.

† Mark, chap. vi. ver. 7.

‡ We are not informed whether there were any relapses.

playing on his harp;\* Nebuchadnezzar the king also labored under this state of Insanity; pride appears to have been the remote cause of his disease.† In like manner the daughters of Præteus were said, by Virgil, to be insane, when they ran into the fields lowing like cattle—

“ Implerunt falsis mugitibus agros.”

VIRGIL.

It is not a little surprising, that if patients, when laboring under other diseases, become insane, they are freed from their former complaint, and vice versa.

Dr. Mead relates a case of a young lady about twenty years of age, of a lively cheerful temper, but weakly constitution, who, from a bad habit of body, fell into a dropfy of the abdomen, with great wasting of flesh.‡ The doctor tried all the usual remedies for dropfical complaints without any good effect; she was, on a sudden, “ seized with madness;” this cured her of her disease, and some

\* Samuel, chap. xviii.

† Daniel, chap. iv.

‡ Mead's works, page 486.

some months after she recovered perfect health of both mind and body. He also relates another case, of a young lady, who labored under pulmonary consumption.\* It appears she was in the last stage of the disease, but from the interposing power of Insanity, the disease was arrested, and her whole habit of body increased, as the mind grew less capable of governing it.

A circumstance similar to the former, occurred in the Pennsylvania Hospital: A man who had been insane for some years, was suddenly attacked with ascites and anasarca, attended with "excess of action in the arterial system."† As the bulk of his body increased from the water, his Insanity was relieved; but on drawing off twenty-nine pints by means of the operation of paracentesis, his Insanity returned; on the evening following he complained of a great heat in his abdomen, which was succeeded by violent vomiting; on the third day after he expired.‡

How

\* Mead's works, page 487. Also, Dr. Rush's med. obs. vol. 2d. page 90.

† Dr. Rush makes two states of action in dropsy.

‡ See dissection, No. 5.

How did the dropfy operate to procure him relief from his Infanity? Was it from diftention? If fo—Why are women not relieved from it during pregnancy?\*

I beg leave to trouble my reader, with a fact of a man, who recovered perfectly from his Infanity, by an attack of an intermittent fever, which proved very obftinate; he, however, was difcharged from the hofpital, cured of both his complaints. I have fince heard that his mind remains in perfect health, two years having elapsed fince his difcharge.†

It was the opinion of the ancients, that Infanity was under the particular influence of the moon, and many medical men of this enlightened century, ftill entertain ideas, fimilar to thofe of their worthy predeceffors. But without entering into a minute detail of the fupposed influence of the moon on maniacs, and, at the fame time, paying the  
greateft

\* Margagni has alfo taken notice of this fact; alfo Dr. Black, in his treatife on the human fpecies, page 239.

† It is particularly common to meet with people in intermittents, who poffefs a clearnefs of ideas and facility of expreffion, which is not ufual to them at other times.—Valli's experiments, page 239.

greatest deference to those worthy characters, that support the opinion, I must candidly acknowledge, that from the observations I have been able to make, during my residence in the hospital, I never found the maniacs to be in the least under the direct action of the moon: If it were the case—Would not all the maniacs be more or less affected at the same time?

#### R E M O T E C A U S E S.

ALL our mental operations, all our thoughts, passions, sensations, and exertions, are accompanied with corresponding motions or vibrations,\* of which, though the nature is obscure, the existence cannot be doubted. † Slight and transitory thoughts, passions, and sensations, produce but feeble impressions on the sensorium, consequently they excite but a gentle motion, and no permanent change is induced. Close application to any object or pursuit, or strong and lively passions, generally produce motions, corresponding with the force of their impression; these frequently

\* Hartley on man, vol. I. page 114.

† Arnold on Insanity.

frequently induce violent commotions in the brain, and are often productive of serious consequences.

I. *Intense application of the mind.*

INTENSE Study is generally accompanied with an increased action of the vessels of the brain; this appears obvious, from the heat and sense of fulness, with a giddiness of the head, which more or less are attendant on men, whose minds have been attentively engaged in the investigation of any abstruse subject. This close attention will produce indirect debility of the brain, and its operations will become languid, unsteady, and undecisive. Should not this intense application of the mind be neutralized, by some other pursuit, Insanity will sway her power, and Reason be dethroned.

II. *Passions of various kinds, when sudden and violent or habitual.*

THERE is no doubt, but what the bountiful Parent of mankind implanted the passions in us, for wise and beneficent purposes; but man, ever prone to folly, frequently  
perverts

perverts them to the most absurd and pernicious.

As every passion, as I before observed, is attended with more or less motion, so a vigorous vibration or motion may obscure a slight impression. This superior force of impression, continued any length of time, will, if not overcome, produce an habitual motion in the brain, which will render it less susceptible of receiving impressions of a weaker force; or, in other words, the first impression produces so great a commotion in the brain, that it will exclude, or draw into the vast vortex, every other motion, and Insanity with her numerous train of attendants, will usurp her sway over sovereign Reason.

I shall now proceed to consider such passions as frequently produce Insanity.

### I. J O Y.

THE sudden acquisition of riches, has been a fruitful source of Insanity. Dr. Mead, in his treatise on madness, says, that he formerly heard Dr. Hale, physician to the Bethlehem Hospital, and of great experience in these

these matters, say, more than once, that in the year 1720, ever memorable for the iniquitous South-sea scheme, he had more patients committed to his care, whose heads were turned by the immense riches which fortune had thrown in their way, than of those who had been completely ruined by that abominable bubble.\* Dr. Goldsmith relates a fact of lord Molyneaux, who unexpectedly coming to a large estate, was so overjoyed, as to hang himself in the madness it occasioned.†

The rapid accumulation of the value of bank scrip, in the year 1791, by which many of our citizens became wealthy, produced Infanity in many instances.‡

## D

## A

\* Mead's works. Joy, however, has contributed to restore the understanding. Alex. Trallianus relates a story of a woman, who being depraved in her understanding by concern for the long absence of her husband, was instantly restored to her senses by his unexpected return. See a note in a dissertation on the influence of the passions upon disorders of the body. By William Falconer, M. D. F. R. S. page 32. It is probable she labored under the lowest state of Infanity, and the stimulus of joy raised her system to the healthy point.

† Dr. Rush's manuscript lectures.

‡ Dr. Kuhn has informed me that there were exceptions to this observation, some became insane in consequence of losses.

A certain nobleman, on being made governor of New York, which he had long solicited, was so rejoiced, that he made a large entertainment, called all his friends together, and after retiring into another room, cut his throat.\*

If joy takes place very sudden, it will frequently produce immediate death; of this we have many instances on record: one in particular occurred in this city. The door-keeper of Congress, an aged man, died suddenly, immediately after hearing of the capture of lord Cornwallis's army.†

## II. L O V E.

LOVE, says Dr. Arnold, between the sexes, when reciprocal and uncontaminated with appetite, consisting in the most exalted feelings of the tenderest friendship, without having yet excited a desire, or even a thought of any sensual gratification, is the sweetest, gentlest and most amiable of the passions; and produces the same effects as temperate  
joy.

\* See Dr. Rush's manuscript lectures.

† Dr. Rush's med. obs. vol. I. page 224.

joy.\* Love softens the manners and temper, inspires courage, sharpens and animates every faculty of the mind. But, alas! if it increases, and the furious flame is not extinguished by the possession of the object beloved, it will consume its votary. This passion is the least governable by reason, and is frequently productive of Insanity, of which, I have seen many instances. An immoderate indulgence of the appetite, connected with this delightful affection, produced Insanity in a man of fifty years of age; and I have been informed, by a gentleman of veracity, that an inability to perform the duties of a husband, in a man aged seventy, after marriage with a young healthy woman, produced the atonic state of Insanity. When old men are thus unfortunately addicted to venereal desires and gratifications; they not only injure the mind and body, but they abstract one of the stimuli, which in part, would prolong their lives: and Dr. Gardiner justly observes, that they consult their passions rather than their abilities. It may be said of them what

Virgil

\* See Arnold on Insanity, vol. 2d.

Virgil mentions of the bees when they sting:  
 “Animasque in vulnera ponunt.”\*

### III. G R I E F.

THIS when carried to a certain point, and attended with tears, is not oftentimes succeeded by ill consequences. Grief, on its first attack, if the cause be great, produces violent agitation in the brain and nervous system, and if it be sudden as well as great, its effects are exceedingly aggravated, which, if not relieved, as I before observed, by tears, will frequently terminate in Insanity. The effect of grief in suddenly changing the color of the hair is well known.

IV. TO these may be added anger, jealousy, &c. The last affection of the mind, though not least important, is that anxious apprehension of eternal punishment in the life to come, or “religious fear.” I think it ought rather to be termed a false idea of religion; it is a fruitful origin of Insanity,† of which there  
 are

\* Observations on the animal œconomy, by John Gardiner, M. D. page 42.

† Two cases occurred in the Pennsylvania Hospital of this kind; one, in consequence of taking an oath, which was said

are numerous grades; an account of them would far exceed the limits of the present thesis. Those who wish to be particular on the subject, I beg leave to refer to Dr. Arnold's treatise on Insanity.

V. INSANITY has been also produced by the suppression of the menses, lochia, and hæmorrhoidal flux. The French suppose it sometimes to be produced by a translocation of the milk to the brain; they term it "depot laiteux sur le cerveau."

So great is the sympathy between the brain, uterus, and mammæ, that diseases of them frequently affect each other in a reciprocal manner. A young woman was admitted into the Pennsylvania Hospital sometime ago, who became insane in consequence of being disappointed in matrimonial affairs. I was informed, that her disappointment happened to be made known to her, during her

her  
said to be false; he was so much agitated in mind, that he expected to suffer eternal punishment, and was continually crying out for "water to cool his tongue." He was cured by coercion and hard labor. The other was in a state of despondency; and said, that he had been guilty of self-pollution, for which he expected to suffer violent punishment. He was relieved from this state by depriving himself of his manhood.

her menstrual period; the shock was so great as to produce a sudden cessation of the discharge.\*

VI. OPIUM, and other narcotics and poisons, have produced temporary Insanity.

VII. INTEMPERANCE in the use of ardent spirits. This frequently produces Insanity. It generally affects the understanding first after intoxication. This sublime power of the mind, says Dr. Rush, is first debilitated in hard drinkers; they discover a torpor in every mental exertion. To this debility in the understanding, succeed the loss of memory and the perversion of all the intellectual powers, in melancholy and madness, and in some cases the total extinction of

\* This unfortunate girl remained sometime in a deplorable situation; at length she was attacked with violent pains in her back, extending down her thighs, also, pains in her head. From these, I judged it to be her menstrual period, and accordingly administered tinct. melampod. ℥ss. at bed time. This medicine having been highly recommended for producing immediate effects; it had also been lately used by Dr. Kuhn with success in the hospital, in a case of obstructed menses. The next morning I found her free from pain, her mind calm, and was informed her menses had appeared: she gradually recovered her senses, and at the expiration of a few weeks, I had the happiness to find her so far recovered, that her friends were able to remove her from the hospital.

of them in idiotism.\* In short, to give a description of the pernicious effects of this liquid fire in producing diseases, would require many more pages than I have allotted for this dissertation; but, happily for mankind, that Insanity from intemperance, opium, &c. is more under the management of the physician, than any that I have yet treated of.

*Lastly*, CAUSES which operate on the brain in a mechanical manner.

Numerous dissections have been presented to the world by many accurate observers; all of them prove more or less the ossification of different parts of the brain and its meninges, polypi in the sinuses, adhesions of the dura and pia mater, serum in a preternatural quantity in the ventricles, hydatids, ossification of the internal carotids, with many others that my reader may consult in the works of the celebrated Morgagni, Lieutaud, Bonetus, Haller, or in Arnold on Insanity. All these appearances are, probably, the effects of the disease; but from these effects,

we

\* Medical observations and inquiries, by Benjamin Rush, M. D. &c.

we may judge of the propriety of administering remedies known to remove obstructions in other parts of the body; and, in my opinion, we are justifiable in using doubtful remedies, rather than abandon our patients, by consigning them to confinement in a cell for life, where they suppose themselves “haunted with all the horrors of Tartarus, or even chained within the gloomy dungeons and inexorable bars of Cerberus.” With this I finish the remote causes, and, I think, may justly conclude, that the avenues and symptoms of Insanity, are almost as numerous, as the gurgling rills that empty themselves into the majestic stream of the Delaware.

### PROXIMATE CAUSE.

THE Proximate cause of Insanity, consists in an excess or defect of motion, in one or more parts of the brain. It remains now to be considered in what manner these motions are produced, whether they are from the circulation of the blood simply? Whether from the inconceivable fine fluid which Boerhaave supposed was secreted in the brain? Or  
whether

whether from the subtle æther, which is said by Sir Isaac Newton to pervade all the material creation? but as these are not proven by experiment, may I not with more propriety assert, that all our motions, either of body or mind, depend on an electric or electroid\* fluid; this has been emphatically called “the enlivening spirit and soul of nature;” who knows but the intricate structure of the brain was wisely intended for its peculiar modification and common receptacle, and that the dura and pia mater, with the tunica arachnoides, were intended by the provident Author of the creation, to prevent this fluid from being dispersed among the surrounding parts, and destined it to be conveyed only by the nerves, through the different parts of the body, to answer the purposes of the animal œconomy? And may not the periodical attacks of Insanity be owing to a want or to an accumulation of this electricity in the brain. It may be asked, Where are your proofs of the existence of this fluid, which bids so fair to unravel the numerous mysteries

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in

\* A name given it by Dr. Rush.

in Physiology? Although I have not yet made the experiments necessary, it is with pleasure I can answer, that its existence has been proved by the ingenious Galvani,\* Valli,† and Fowler,‡ whose observations I must beg leave to recommend to the perusal of those, who wish to be particular on the subject; as the recital of their experiments, would far exceed the limits of this dissertation.

### CURE OF INSANITY.

WE are informed by physiologists that one eighth part of the blood circulates through the brain; therefore every increase of circulation, must be the cause of a greater quantity of electric or electroid fluid being separated therein;§ consequently from my former position,

\* The extraordinary discovery of the existence of animal electricity, was, like many others, the effect of accident; for an account of it, see the New London medical journal, part 4, page 376.

† Experiments on animal electricity, by Eusebius Valli, M. D. &c.

‡ Experiments and observations relative to the influence lately discovered by M. Galvani, and commonly called animal electricity, by Richard Fowler.

§ Valli's experiments, page 237.

position, its motions must be increased and vice versa.

Previous to my entering on the treatment of tonic mania, it may not be improper to remark, that the patient should be removed, if possible, from his family and dwelling; if this is not complied with, the apartment should be stripped of all its furniture; his acquaintance and none of his family, should have any intercourse with him; great attention should be paid to cleanliness, and if confined in a public mad-house, the horrid custom of satisfying the idle curiosity of visitors should be prohibited; as their impertinent questions, frequently aggravate the disease, especially if they should be on a subject to which they have an aversion.

## R E M E D I E S.

### *I. Blood-letting.*

THIS remedy I believe only to be useful in a recent case, and in young plethoric subjects, the fulness of the pulse must be our guide. When there is a sense of fulness in the head and face, arteriotomy has been recommended, also deep scarifications in the back part of the head, cold applications to  
the

the head after it has been shaved: Dr. Cullen recommends ice and snow, but if these cannot be procured, the noted clay-cap is recommended; as this is a disagreeable application, I would prefer the use of æther, as chemistry teaches us that the evaporation of it will produce cold sufficient to freeze water.\*

## II. *Purges.*

These should be generally of the drastic kind; the white hellebore, which was so highly recommended by the ancients as almost a specific for the cure of mania, is now found to possess no other virtues than a drastic cathartic.

## III. *Emetics,*

WHEN given in full doses, so as to produce vomiting, are not often attended with success. I have seen very good effects from the exhibition of tart. emet. when given in doses sufficient to produce a nausea; but from the trials I have made, I do not think it deserves the praises bestowed on it by medical writers.

## IV.

\* Nicholson's chem. page 18.

*IV. Camphor.*

THIS has been esteemed a valuable medicine in maniacal cases; I have exhibited it to several patients, but found it to succeed only in two. It should be given in doses from forty grains to  $\text{ʒj}$  and upwards, three or four times in twenty-four hours, otherwise no good effect can be expected. In one case, it had a powerful effect on the pulse, in reducing the frequency from ninety to sixty-five strokes in a minute. In Percival's essays, a case is recorded in which camphor had been given with success; the pulse was reduced from eighty to seventy strokes in a minute. It was administered in doses of one scruple, to the amount of three drachms in twenty-four hours.\*

*V. Opium.*

THIS is a sovereign remedy when the disease arises from intemperance, also from parturition, the dose should be always accommodated to the excitability of the system.

VI.

\* Percival's essays, vol. II.

*VI. Digitalis.*

MANY cases on record, testify the good effects of this remedy. Dr. Withering\* relates many cases wherein it was useful, but all of them appear to be combined with ferous effusions. Dr. Rush prescribed it in one case in the Pennsylvania Hospital with success. †

HOW does digitalis operate in curing Infanity? Is it from the increased secretion of urine which follows its exhibition? Or may it not be owing to its direct debilitating power? I have given it to patients that have been ungovernable merely to quiet their rage, and with the happiest effect, without a preternatural quantity of urine being discharged; I have used it from two to eight grains; the pulse after its exhibition was diminished in one case from sixty to forty-five strokes in a minute, but I have never had the happiness of seeing it produce a perfect cure.

*VII.*

\* See an account of the medical uses of digitalis, by William Withering, M. D.

† See manuscript lectures, by Dr. B. Rush.

*VII. Compressing the carotid arteries.*

WE are indebted to Dr. Parry of Bath for this new mode of suspending mania; it is done by mechanical compression of one or both the common trunks of the carotid arteries, by means of the fingers or thumbs.\* In many instances, it is said in recent paroxysms to procure instantaneous relief. I never attempted to try this remedy but in one case, in which it did not succeed. The experiment ought to be made, when the maniac is not under any restraint, otherwise, we cannot form a true judgment, on the efficacy of the remedy; as I received a severe blow at the time I attempted it, I have never repeated the experiment, nevertheless I think it worthy our particular attention.

*VIII. Is mercury proper in mania?*

Yes.—It has been used with success by Dr. Clarke; he supposes it operates “by inducing and supporting a condition or state of the system, totally opposite to that of the existing disease. And on this principle I have  
given

\* Medical commentaries, by A. Duncan, M. D. &c. vol. XIII.

given it in four cases of recent Insanity with the most happy effects."\* I have used this remedy in one case of recent Insanity, and this was attended with the venereal disease, which probably might have been the remote cause, by inducing a callosity of the dura or pia mater, which the mercury removed.

### IX. *Fear.*

THROWING a patient suddenly into the water, has been practised with relief; it always tends to make them more tractable. Boerhaave recommends throwing them into the sea and keeping them therein until they are nearly drowned.† Exposure to cold has been the means of restoring a maniac: A man in Maryland, who when mad, ran out from his friends in the night naked, and spent the whole night exposed to the cold in a marsh; in the morning he returned home in perfect health.‡

X.

\* See Clarke, on hot climates, vol. II.

† Boerhaave, aph. 1123.

‡ See Dr. Rush's manuscript lectures.

X. *Hard labor.*

THIS has been practiced with success in the hospital. It has been highly recommended in Europe.

XI. Query—Would not a paroxysm of Insanity be considerably relieved, by exposing the patient to an atmosphere in which one twelfth part of fixed air, or carbonic acid gas is contained?\*

XII. What would be the effect of a violent shock of artificial electricity in mania?

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*Lastly,*

\* The muscular force of maniacs being much increased, this remedy may prove powerful by rendering them more tractable.

If the strength of maniacs depends on the stimulus of the electroid fluid, acting on the oxygenous principle in the muscles, lately called the principle of irritability, is it not probable that the carbonic acid gas, by combining with the oxygen, will decrease the muscular force, and reduce the motions of the brain also to their primitive state?

An accident that happened some time ago, leads me to offer the conjecture. A number of lunatics confined in the hospital, were observed to be very silent; on examining the cells, some were found apparently dead: the fixed air from the coals that were made use of was the cause; the usual ventilators not being open. Those that were apparently dead lay near the stoves in which the coals were deposited; it is remarkable, that as they recovered from this state of asphyxia, they possessed all their faculties and reasoned well for some time after.

Mr. Joseph Henszey, who has been fourteen years Steward of the hospital, informed me, that a similar circumstance to the above took place some years ago, but that they spoke rationally only for a short space of time.

*Lastly, Coercion.*

THIS will conduce more to the cure of tonic mania, than any of the remedies usually prescribed. Celsus recommends stripes, these are seldom or never necessary; when they are, they should be practised with lenity, in the same manner as a parent would correct a child. It is of great use in practice to bear in mind that mad-people commonly are great cowards, and can at times be awed even by a grim look from the keeper; they ought to be immediately impressed with fear when the curative plan is commenced. The most proper mode of employing coercion, is by the\* strait waistcoat; by this, they are prevented from injuring themselves or attendants. When the waistcoat is put on, the patient should be laid on his back, his arms drawn over his chest in such a manner that his right arm may be secured on the left side of the headstead by means of a cord, the left arm to be secured in the same manner; his

\* Dr. Rush remarked to me, that when maniacs are restrained by men, they endeavour to resist more than when by the strait waistcoat; and they retain great rancour towards the former and none to the latter.

his feet should be also secured by means of a band passed round his ankle and fastened to the foot of the bedstead. In this manner the patient is to continue. Nauseating doses of tartar emetic will now be found useful; his diet should be accommodated to the state of his system. He will perhaps be much agitated with this treatment, but in a few hours he will become perfectly calm, and will commonly express great surprize at the usage; it however should be continued. This treatment should never be known or supposed to be the direction of the Physician; he should always appear to act the part of a friend, that will espouse the cause of the maniac in his disputes with the keeper. If he continues calm he may be suffered to walk out of his room with his attendant, who should endeavour to divert his mind from particular objects; but if there are any symptoms of a relapse, the former treatment should be immediately renewed, and this alternation of confinement and liberty ought to be continued, until a perfect recovery.\* This treatment I believe has been attended

\* I saw this remedy first tried under the direction of Dr. A. Kuhn, and it was attended with the wished for success.

attended with more success than any that has hitherto been proposed, and I doubt not, but what it would be effectual in almost every recent case. It is to be regretted that the relations of the Insane, in general, are so void of humanity, that on the first attack of the disease, they will not suffer this treatment to be put in practice: I say void of humanity, because every person, who would prefer seeing a relation confined insane for life, rather than have a remedy tried, which has been known to be effectual, certainly does not possess an affection for the relation, or humanity towards his fellow creatures.

*Remedies for the atonic state of Insanity.*

IT is evident, from the distinguishing character of this state of Insanity, that the management of the mind and passions require our particular attention.

The great object to be aimed at in the cure, is to neutralize or interrupt the attention of the mind; this requires great delicacy and caution. The patient should be drawn into chear<sup>e</sup>ful company; a circle of lively females should

should be preferred, as they are known to have a greater power of animating the dejected; except, when they have been the cause of the complaint. The allurements into company should not appear to be intentional. Confinement at all times is extremely improper.

“ Chiefly where solitude, sad nurse of care,  
 To sickly musing gives the pensive mind:  
 There madness enters; and the dim-ey'd fiend,  
 Sour melancholy, night and day provokes  
 Her own eternal wound: the sun grows pale,  
 A mournful visionary light o'erspreads  
 The chearful face of nature, earth becomes  
 A dreary desert, and heav'n frowns above:  
 Then various shapes of curs'd illusion rise:  
 Whate'er the wretched fears, creating fear  
 Forms out of nothing, and with monsters teem  
 Unknown in hell.—————”

ARMSTRONG ON HEALTH.

Travelling, either on horse-back or in a carriage, induces many pleasing objects and subjects of attention, which, says Dr. Falconer, are the more pleasing as they have not the appearance of being intentionally introduced.\* What would

\* Falconer on the passions.

would be the effect of employing certain passions, such as anger, terror, &c? Shame has cured the disease. Plutarch relates, that the virgins of Miletus were seized with an epidemic madness, that prompted them to destroy themselves. This was in vain attempted to be prevented, until it was ordered that the bodies of those who thus put an end to their lives, should be dragged naked through the streets.\* The introduction of such sports and amusements as would moderately exercise the faculties, may prove useful.

Cælius Aurelianus recommends diverting the mind of literary men with philosophical questions; the farmer with discourses on agriculture; the sailor with naval affairs; others may be diverted with games of chance:† A woman in Philadelphia county, was cured by a number of persons playing cards with her the whole day, one succeeding the other as they grew tired.‡

### Music

\* Plutarch de virtutibus mulierum, quoted by Dr. Falconer, in his treatise on the passions, page 118.

† Cælus. Aurel. 1. 5.

‡ Dr. Rush's manuscript lectures.

Music is considered a powerful remedy, the tunes should be lively; the disease of king Saul was cured by music; its influence is very great, and is capable of raising and soothing every passion and emotion of the soul.

“ Music exalts each joy, allays each grief,  
Expels diseases, softens every pain,  
Subdues the rage of poison and the plague;  
And hence the wise of ancient days ador'd  
One power of physic, melody, and song.”

ARMSTRONG.

*What medicines are proper?*

BLOOD-LETTING is seldom necessary in this disease, except to enlarge the surface of excitability.

*Purges.*

THESE are generally necessary as costiveness is an usual attendant: the aloetic cathartics, appear to be peculiarly adapted to this state of Infanity.

Antispasmodics have been found useful; musk, opium, æther, and assafœtida have been found beneficial; the latter of these remedies

remedies should be given to the amount of a ʒi. or a ʒiſs. in twenty-four hours. Peruvian bark with opium is recommended by Dr. Ferriar, and cafes related of its ſucceſs.\* The warm bath has proved ſerviceable; the patient is not to be detained too long in the water, and when taken out, ſhould be well dried with a cloth; afterwards, the fleſh-bruſh will be uſed with advantage.

The cold bath has been recommended; but if there is not a glow on the ſkin after its uſe, it ſhould be diſcontinued. The different metallic tonics have all been uſed with apparent ſucceſs.

Wine may be allowed, alſo, a generous diet: cleanlineſs ſhould be ſtrictly attended to; the beard frequently ſhaved, and a frequent change of clothes ſhould be recommended.

*What would be the effect of electricity in this  
ſtate of the diſeaſe?*

DR. RUSH remarks, that dephlogiſticated air, when taken into the lungs, produces

\* See medical histories and reflections, by John Ferriar, M. D.

duces cheerfulness, gentleness, and serenity of mind.\* Does not this oxygene gas, or dephlogisticated air, appear to be a plausible remedy in atonic mania? I have never tried it, but from the above fact it deserves our attention.

## D I S S E C T I O N S.

IN the preceding part of this dissertation, I observed, that by dissection we discover the effect of a disease, rather than the cause; nevertheless, they frequently cast forth a glimmering light, which enables us to penetrate the obscure mazes, and assist in the method of cure.

Many dissections of the brain and abdomen of maniacs, have been presented to the world at various times, sanctioned by the names of eminent men; therefore, I submit mine with a greater degree of reluctance. As I always conceived Insanity to be perfectly a local disease when it continued any length of time, I thought it proper to confine my examination to the brain only, un-

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\* Medical observations and inquiries, by Benjamin Rush, M. D. &c. vol. II.

less it attended, or alternated with another disease. The rewards of my disagreeable researches were as follow:

## No. I.

Martha P—— died February —— 1791. This woman labored under tonic mania for a considerable time, the consequence of long continued grief. On examining her head, I found the dura and pia mater much indurated, the longitudinal sinus ossified in several places, the brain more firm than what is commonly observed.

## No. II.

David G——, laboring under tonic mania, died May —— 1791. The probable cause of this man's Insanity was not known. On removing his cranium, I found the dura and pia mater adhering together on the left side of the longitudinal sinus, the inferior portion of the septum lucidum by some means removed, so that there was a large communication between the lateral ventricles, which contained a small quantity of a serous fluid.

## No. III.

Henry O——— died November ——  
1791. This man had labored under atonic  
mania six months, love was said to be the  
cause of his disease. He died after three days  
illness of cynanche maligna; on opening his  
head, I found many livid spots on the dura  
mater, the inferior and superior parts of the  
left lateral ventricles adhered together and  
appeared to be the consequence of inflam-  
mation.

## No. IV.

E——— B——— died February ——  
1792. This man had laboured under the  
tonic state of Insanity some time, the cause  
of his disease not known; he recovered his  
senses in some measure from an abscess which  
formed in his groin and extended over his  
thigh, which being laid open discharged co-  
piously; in a few weeks after the wound  
cicatrized, he was attacked with a violent  
cough; in a paroxysm of which, he ruptured  
a blood-veffel, which proved instantaneous  
death. On examining his thorax, the hæ-  
morrhage was found to proceed from one of  
the

the ramifications of the pulmonary artery; there were no preternatural appearances in his brain or its meninges.

No. V.

C——— L——— died November —— 1792. On examining his head, I found his brain uncommonly hard, with a small quantity of serum in its ventricles. On opening his thorax I found the left lobe of his lungs adhering to the ribs, in the right evident marks of inflammation, and a small quantity of water in the cavity of the thorax. Having laid bare the abdominal viscera, I found the intestines considerably inflated; the omentum drawn upward and much thickened; the liver greatly contracted and indurated (the whole weighing only one pound nine ounces) with every appearance of a former ulceration; the convex surface adhered to the diaphragm; the gall bladder filled, as it is generally observed in debilitated habits.

The spleen enlarged and hardened; pancreas and kidneys in a natural state. The water remaining after the operation of paracentesis

centesis abd. amounted to nine pints, the whole making thirty-eight pints.\*

No. VI.

John P—— died Nov. —— 1793. On opening his head a small quantity of serum was found between the dura and pia mater. In the lateral ventricles of the brain, there were three ounces of a limpid fluid. The frontal sinuses were filled with a puriform matter. He died in convulsions.

With this, I finish my observations on Infanity; and as I conceived the probable remote causes, and the condition of the system should always be held in view, I have only troubled my reader, with an account of those remedies in the method of cure, that have been used with the most success. If I have offered a single fact, or conjecture, in the preceding pages, that will lead to the discovery of any new mode of treatment, or in any manner be servicable<sup>e</sup> to my fellow creatures, I shall think myself well rewarded for my trouble.

\* See page 20.



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