

so apply it to the genitals. I do not know  
if I am proceeding in a proper scale.  
But the lungs perhaps are still more  
subjected to these variations, that render  
them liable to nervous diseases: Some  
Epilepsy &c. —

### Lect. LIX. Feb. 10<sup>th</sup>.

I showed yesterday how far the various  
parts of the Body, affected the equilibrium  
of the nervous system. The whole econ-  
omy of the animal parts depend perhaps  
upon the equilibrium of the nerves. We  
must not just now enter into the Etiolo-  
gia & Symptomatology. We have in ma-  
ny cases laid a foundation of the connec-  
tions between impression and contraction.

The doctrine of sympathy comes in here, M  
but the term is occult and signifies no  
more but that there is a communica-  
tion, and a cause of that communication  
but of which no Idea is conveyed. Such  
general terms are necessary in philoso-  
phy, but there is always danger of abusing  
them. So Tho' Norton, in attraction has quar-  
relled against the abuse of the term, yet  
foreign Philosophers justly brand us for  
the abuse of it. We ought to keep to the  
strict meaning ~~and~~ and to limit the ap-  
plication as much as possible. —

### Sympathy. —

This has been distinguished into general  
and particular. Pain or other irritation  
of one or other part shewing an affection

52 of the whole system, I call sympathy. When it is a general affection it is called general sympathy. It is a universal communication of the nerves. If an irritation in one part produces sensation or contraction in another part only, without affecting the whole, and when that is no other but the determined contraction, it is particular sympathy. So when a disagreeable acute sound, to the ear, gives a disagreeable sensation in the teeth and no where else we say this is a particular sympathy between the ears and the teeth; but this says nothing more than that there is a communication of the parts of the nervous system. Since the cause is evident in the continuity of the medullary substance

which is accompanied with an oscillating fluid; general sympathy is improper. I shall use the term however but in Dr White's sense. But particular sympathies do require our especial notice if such there are; as they point out so many particular Laws. It is necessary, however that we admit no more than truly and properly exist; therefore I begin with them that I would reject. First sympathy between man and man is not the particular sympathy between one part of the nerve and another. White has observed that Spanning, &c. is the effect of a sympathy of the nerve; But music and dancing might be brought in as an equally good instance of this. They follow another

like law. I reject all these actions that are associated by habit, as the uniform motion of both eyes, and the motion of the two pupils. When in an amaurosis, a light applied to the sound eye will affect the other, that is an instance of similar circumstances producing similar effects. That no communication of nerves is in the case appears from this, that the most separate actions may be arbitrarily associated. There are consents between distant parts of the body that have been referred to sympathy, but to be explained in another way. In the economy of the course of the circulation, the times and circumstances must be uniform in the two kidneys, hence an association of motion; &

if one kidney is constricted the other will ~~be~~ be so also. And when one eye is affected with inflammation, it happens commonly to the other, as in a cataract: This is owing to the blood entering them at the same time &c. There is then ~~a~~ probably an association which explains these phenomena. Thirdly I reject those successive motions that commonly produce one another. A convulsive motion of the Stomach and Intestines often spreads to the Throat. By a convulsion in ~~the~~ great guts, an inverted peristaltic motion is communicated to the stomach, which is not sympathy, but a successive propagation of motions. A fractured skull produces bilious vomitings. The connection with the stomach produces vomitings. But the inverted motion of



56 The Duodenum produces an emulging of  
the biliary duct. —

### Proper sympathy

White begins this output with pains of  
the head, but they are a general affection  
of the sensorium, and it is no other than  
a general sympathy. If the stomach is  
first affected it is because it has a more  
constant relation to the sensorium  
commune than other parts. Wounds and  
contusions of the skull which give bilious  
vomiting, if they did so from their hap-  
pening in one part and not in another  
they would be instances of particular  
sympathy. But on any part of the head  
they produce the same effect, and only  
when they are to a certain degree do

they produce these vomitings. All these  
effects whether general or more particu-  
lar, that arise from pleasure, pain, im-  
pulsion or volition, are instances of gene-  
ral sympathy. So when the effect depends  
upon the degree of sensation. In fainting  
fastid applications to the nose rouse the  
person so affected, by increasing the pow-  
er of the heart. A number of other im-  
pulsions increase its power, for instance  
a glass of wine taken; this comprehends  
the wonderfull connection of the stomach  
seemingly with so many parts of the bo-  
dy. A glass of wine taken into the stomach  
is no more a proof or removing fainting  
by particular sympathy, than the applica-  
tion at the nose. One lady that I know

48 from the state of her stomach has headach  
and Delirium, another has vertigo, and  
a third an inclination to break wind  
downwards. The eyes lose their lustre  
lustre after hard drinking, and after  
a large dose of opium, but the same  
opium injected into the anus or perhaps  
applied to the crown of the head will produce  
the same effect. It proves that opium  
affects the sensorium commune and it  
may be produced by a great number of  
narcotics. Various poisons operate upon  
the stomach because it is exquisitely  
sensible, and first receives the food. But  
I have seen *iguta* operate in the same  
manner when applied to the shoulder.  
I add if these effects are the usual im-

pressions from a variety of causes pro-  
duced them, they only show a connecti-  
on that all of them have with the Brain.  
Pain arises from the unexpected seeing  
of a serpent; but the accidental hearing  
of the his of it, or touch of its tail, would  
do the same thing. Some ladies who are  
equally alarmed at the sight of a mouse;  
if it gets into their drawers, will turn  
pale whether they see, hear, or touch it.  
This will explain how grief, vexation  
or fear dry up the saliva and occasion  
a loosness. Great and unexpected sounds  
will make us close our eyelids, which  
is a general sympathy. I shall give one  
illustration more; the sight of grate-  
full food occasions an uncommon flux

So of saliva in a hungry person. The beautiful figure of a joint of mutton or the smell of roasted Beef will do the same thing; nay even speaking of them will do it. It is hunger that produces the flow of saliva; and what is very curious Boyle tells us of persons that were purged by smelling a cathartic medicine. I imagine that is not the case in fact, but it is the odour of the particular cathartic that had been used before and was accompanied with nausea, griping and purging, which sensations are again revived in the memory; This is what I called the effects of signs; it is not because there is any particular sympathy in the nose, but because it is the organ

that communicates the impressions. 54.  
Thirdly if the effects are more owing to the state of the parts moved than of the parts impressed, they also will furnish so many instances of general sympathy. Thus if the eye is the particular organ of the expression of the passions, If fear, a fever, a stone in the biliary or urinary ducts; if hemorrhoidal, or menstrual pains, or inflammations of the bowels will all produce vomiting, it is to be said that all these do produce a certain state of the sensorium commune, and are all instances of general, not particular sympathy. The locking of the jaws and the tetanics, are not only the effects of wounding the temporal muscle but they will



52 arise from a variety of other wounds, as amputation of the extremities. The locking of the jaw is merely a degree of the tetanus. They are general effects properly depending upon the degree of affection, and these muscles being nearer or more remote from the common origin.

~ Lect: IX. Feb. 16<sup>th</sup> ~

I have taken off the mystery arising from particular sympathy, by showing how many of these may be general. I said that communication of actions from degree of impression, general effects from variety of particular impressions; and what has been called particular, is truly general sympathy. Last by however particular it may seem to be, if the effects depend more upon the state of the parts

mood than that of the parts impress: 53  
Sic, that that too is general sympathy. Also the effects of volition are not particular sympathy and are here to be explained. I have said that the effects of volition appear in more or fewer muscles; it has been supposed that there is a particular sympathy between the muscles, so combined, and the impressions; but there is not: the impression is only ~~connected~~ connected with the volition and this last with the several motions, which is as arbitrary a connection as that between perception and motion. — White has observed that an irritation on the extremity of the rectum convulses the diaphragm, but this action of the diaphragm arises equally from irri-

Stimulation of the Bladder of urine and intestines, and from every general effort to raise a weight; The irritation is not only connected with the Diaphragm, but is extended to the muscles of the scapula, humeri, those between the vertebrae and extend to the face. There is a place of particular resort in this neighbourhood, where you may study the expression of the cavities as the painters call it. one man shuts his eyes to perform this action, another keeps them quite open; in the former case the depressores palpebrarum, in the latter the levatores are employed. It is a sympathy, rational, or just officii, and is perfectly arbitrary. I know some people who tho' they have no desire, yet think it

would to them serve to go to stool &c. and in doing so they shut their eyes and grin as if the real stimulus was present. To this head belong a great variety of Particular sympathies. Tickling occasions laughing. It has no connection with the skin of the ribs; tickling the sole of the foot will have the same effect. Acids applied to the nose give sneezing, and various irritations on the trachea give cough. In most of the instances where a variety of muscles are combined, it depends upon connection between volition and these, but is chiefly supported by habit. We shall be ready to believe that there are no particular sympathies at all; but there are some



86 that can not be rejected by the reasons  
I have advanced, such as the sympathy  
between the ears and teeth. The well known  
communication of nerves between the  
ears and teeth establish this as an instance  
of particular sympathy. I can not sup-  
pose that the impression is propagated  
along one fibre of a nerve and returned  
by another in a particular manner;  
much less can I suppose that it passes  
from the fibres of the auditory nerve  
to the common trunk, and returns to  
the teeth. If this was the case it would pro-  
duce not only very indistinct sensations  
but innumerable sympathies. It can be  
explained by oscillations ~~continued~~ propaga-  
ted along contiguous & continuous mem-

branes. White is averse to such explana-  
tion. It was necessary for him to estab-  
lish a connection with the sensorium  
or sentient principle. But the propa-  
gation of oscillation is illustrated by  
Hawes distinguishing sounds with the  
soles of his feet and the tips of his fin-  
gers. Nothing is more evident than that  
vibrations can be communicated from  
the teeth to the ear, and therefore a re-  
turn of vibrations from the ear to the  
teeth. But Dr Hawes perceiving sounds  
by the tips of his fingers and soles of  
his feet shews that soft parts are ev-  
ery where interposed. Therefore I do not  
hesitate to think that certain sounds  
make the gums bleed

Other instances. When White observes that cold water produces contraction of the small vessels, this shows to me that the skin, is liable to have oscillations over the whole body.

Flushings will give an idea of this particular communication. An irritation of the Larynx will not only produce a cough but Vomiting. so in another place "as the ear is frequently inflamed when the fauces are inflamed," the communication with the Eustachian tubes is obvious; and the same thing explains what follows "a pain is often felt about the eyebrows by eating strong mustard, and a pain in the forehead from drinking cold water?"

Nothing is more evident here than the communication between contiguous and continuous membranes. "a stone in the kidney"

"water!" Oscillations spread along membranes but they are not felt equally in every part of their course, but chiefly at the extremities.

The irritation is at the neck of the Bladder, the other is at the orifice of the urethra where this last is very sensible thus it is that a shock is chiefly found in the articulations. There is a peculiar titillation, in tickings of the nose from worms, many feelings shoot out at the ends of our fingers, and some at the top top of the head; a pain in the hip and