

An injury, it is said, may be done by women confessing crimes of which they are not guilty, and it is urged that we cannot foresee what a judge or a jury may consider sufficient grounds to justify the acceptance of a woman's self-accusation prompted really by delusions. How strongly these latter may carry the appearance of reality is no doubt exemplified by the well-known case which happened in London not many years ago, and in which a dentist became almost the victim of the memoranda kept by one of his female patients, noting the places and details of the illicit interviews that in her delusions she had imagined to have had with him, and which were produced as facts and circumstances in proof of her charges of adultery against him. Moreover, it is said that, once the law is enacted that the insanity of a husband or wife is no bar to his or her prosecution for divorce, what safety has the insane wife for not being accused by a wicked husband of having violated the marriage relations in order to cast her off and either marry another woman or relieve himself of her further maintenance and care? What remedy, it is asked, is left to the child unjustly stigmatised as illegitimate, if its mother, continuing in a state of insanity till her death, has no chance to demonstrate the true nature of the insane confession of an adultery which she had never committed?

But the real answer to all this is that, as in the Mordaunt case, so in others of a similar kind—and in such instances as *Baker v. Baker*—the verdict will depend upon the evidence of adultery quite independently of the accusations made by the party accused; in fact, the very contention of insanity which alone brings them into the category of cases of the particular description under discussion, renders self-accusation suspicious, if not altogether inadmissible. The danger lies in those cases in which insanity is not recognised and delusions are mistaken for real occurrences.

The right to institute such a suit as that of *Baker v. Baker* and *Others* admits now of no controversy, while there is every reason to suppose that the adverse judgment to the respondent was delivered upon evidence, which neither she nor the co-respondents were able to disprove.

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#### *Vaso-dilator Function of the Sympathetic.*

Communications recently presented by MM. Dastre and Morat to the Academy of Sciences, and the Biological Society of Paris, establish a hitherto disputed function of the sympathetic, which obviously bears on medical psychology.

In 1858 Claude Bernard, after his experiments upon the nerves supplying the sub-maxillary gland, regarded the

vaso-dilator nerves, as derived from the cerebro-spinal system, the vaso-contractors being, as no one disputes, derived from the sympathetic. Dastre and Morat have now demonstrated, by numerous researches, that the sympathetic is really a mixed nerve, composed of constrictor and dilator nerves, producing the contraction and dilatation of the blood-vessels. These physiologists have discovered, on repeating Bernard's experiment on the cervical sympathetic, that while its irritation determines pallor with diminished circulation in certain parts, it at the same time causes in the adjoining parts redness from increased circulatory activity. These phenomena appear perfectly distinct in limited regions, not from paralysis upon nerve exhaustion, as recently held by Laffont, but, as the experiments show, upon the primitive and active influence of a set of nerves contained in the very trunk of the sympathetic, which, though hitherto regarded as an exclusively vaso-constrictor nerve, contain also vaso-dilator nerves.

It is already well known that the vaso-constrictor nerves terminate in the vascular walls, and are the motor nerves of organic life. As to the dilators, they exert a distant inhibitory influence upon the vaso-constrictor, for they never reach the muscular coats of any vessel, but stop themselves at more or less distance therefrom, in the sympathetic ganglia or in the group of cells distributed along its trunk or branches, wherefrom they exert the above inhibitory or paralyzing influence. The action of the constrictor nerves, as demonstrated by Bernard, is continuous, and hence the dilators are constantly called into activity to regulate it, effecting such influence from the ganglia, which are thus the controlling centres of the system.

The dilator nerve, which gives the best idea of the general action on, and relation with, the constrictors, is the auriculo-dilator nerve. There are two kinds of vascular nerves in the ear: the first, the well-known vaso-constrictors, which originate from the upper part of the thoracic region of the spinal cord; thence ascend with the thoracic trunk of the sympathetic, passing through the first thoracic and the inferior cervical ganglia into the cervical branch of the sympathetic, and, after traversing the upper cervical ganglion, finally go to distribute themselves to the muscular walls of the auricular blood-vessels. Excitation upon any point of this long tract always determines vascular contraction, and nothing else. However, at the level of the first thoracic ganglion

the sympathetic trunk receives, among other communicating branches, a small, very slender loop, detached from the last root of the brachial plexus (eighth cervical nerve), which joins the sympathetic at the level of the first thoracic ganglion. Dastre and Morat have found that excitation of this loop is attended with remarkable dilatation of the auricular vessels. When the nerve is divided, and the peripheral section connected with the ganglion is again excited, the circulatory activity becomes intense. This obviously demonstrates that the loop contains the vaso-dilator nerves of the auricular vessels going to the ganglion. Had they proceeded to supply the blood-vessels themselves, they necessarily would have had to run along the cervical cord of the sympathetic, where their presence could have been detected by the excitation of the trunk, which, as already noticed, only brings forth vascular contraction, thus proving that this part of the sympathetic contains no other kind but vaso-constrictor nerves. The vaso-dilator nerves of the ear, then, do not travel beyond the first thoracic ganglion, and obviously exert their influence therefrom, for unless we excite the nerve above the ganglion there is no dilatation.

In other regions—as, for instance, at the genio-buccal—the dilator nerves terminate in less distant ganglia. They run for a certain length together with the vaso-constrictor along the cervical sympathetic; therefore, excitation of this latter induces simultaneously vascular dilatation in the mucous membrane of the mouth and lips, with marked auricular vaso-contraction. The dilator nerve of this region terminates near the spinal cord, at the first thoracic ganglion.

These conclusions having been contested by M. Laffont, Dastre and Morat have established, to the satisfaction of the Biological Society, and M. Laffont himself, that the vascular dilatation is an active, not a reflex phenomenon, effected by the sympathetic alone.

These researches then prove that the sympathetic possesses the functions of direct vascular *dilatation* as well as contraction—a true vaso-motor nerve, thus confirming the original doctrine of Bordeu and Bichat, who maintained that animal life is under the influence of the cerebro-spinal, and organic life under that of the sympathetic system.