

within one another. They found the bodies at eleven o'clock. The King's watch had stopped at 6.54. When found the rigor mortis had come on in both bodies. It would thus appear that the tragedy had taken place shortly after they had left the chateau.

This is the sum of what these two physicians have to tell us about this terrible event. That it should form the subject of a tragedy is not to be wondered at, it is a subject worthy of Æschylus. Klingner's drama is the first, but it will not be the last, written on the life and death of Ludwig Wittelbach. To judge from what has gone before, Germany may have many insane kings before she produces a historical dramatist like Schiller. We do not know whether Klingner's work has yet been produced on the German stage, and do not pretend to judge whether it is well adapted for that purpose. Taste is changeable, and audiences must be humoured. The author has evidently made himself acquainted with all the circumstances connected with the events. In portraying insanity he evidently clings to the time-honoured belief that it consists essentially in delusions. Ludwig is represented as intending to throw himself from the tower because he thinks he can fly, and his last words are, when drowning himself, "I shall be the lake-king! For the first time a true king! Bavaria, farewell! For the last time thy lake-king greets thee!"

Insanity has its own characteristics and limitations. This may do for the theatre, but it will not do for the Medico-Psychological Association.

Om Sindsbevaegelser et Psyko-Fysiologisk Studie af C. LANGE. Copenhagen: 1885.

Ueber Gemüthsbewegungen, eine Psycho-Physiologische Studie; von Dr. C. LANGE. Autorisirte Uebersetzung, von Dr. H. KURELLA. Leipzig: T. Thomas, 1887.

This is an octavo pamphlet of 91 pages by Dr. C. Lange, Professor of Medicine in Copenhagen, and editor of the "Hospitals-Tidende," a weekly medical journal. Though the author thinks that the English word "emotion" is equivalent to his "sindsbevaegelser," literally mind-motions, we are not sure that this would bring out the same idea without further explanation. Dr. Warner's term "physical expression" is more exact. Dr. Lange proposes to examine the question, What effects have the emotions upon the bodily functions?

He seeks to arrive at a precise definition of what is an emotion. He puts in one group sorrow, joy, pleasure, anger, in another love, hatred, contempt, and wonder. The first group he calls emotions; the second passions or feelings. This classification is, perhaps, made more for the author's convenience than from any natural distinction. At any rate, some affections of the mind are less complicated than others, for example, terror is a simpler emotion than shame or envy. Dr. Lange observes that it seems as difficult to give a definition of a thing so purely subjective as an emotion as to define what is red or blue. As long, he observes, as men knew no more about colours than the effects they produced upon themselves the study of colours had nothing to do with science, but when Newton discovered the refrangibility of the rays of light the scientific study of colours began. In the same way the expression of the emotions eludes scientific inquiry until we take our departure from the study of their outward expression.

Dr. Lange goes on to describe the sensible effects of grief, pleasure, fear, anger, and, in less detail, of other emotions. Let us take a diminished outline of his picture of sorrow. It has a paralyzing effect on the voluntary muscles; the movements are slow and heavy, and there is an indisposition to exertion; hence the gait is sluggish and uncertain, with hanging arms; the neck is bent forwards and the head hangs; the eyes seem larger owing to the paralysis of the orbicular muscle, but the upper eye-lid droops a little. On the other hand, there is a contraction of the involuntary muscles which especially implicate the muscular fibres of the walls of the vessels; hence the paleness of the face. The voice is weak and husky on account of the diminished power of the vocal muscles. The person a prey to sorrow is generally depressed and silent. In women the secretion of milk is stopped; on the other hand, the secretion of tears is much increased, save in very great grief. The contraction of the fine vessels of the lungs causes oppression of breath; one feels as if he would burst for sorrow. If the grief lasts long there is a deficiency in the blood supply. The early appearance of greyness in the hair, or baldness with furrows in the forehead, he treats as the result of atrophy, and thinks that this atrophy extends to the internal organs, especially to the kidneys. Hence people who live sad lives die early. In fear the symptoms are analogous, only they are more decided. Joy and anger belong to another group. Instead of contraction we have widening of the smaller vessels. In the

angry man the face flushes, even the eyes become red; no doubt the vessels of the brain are also enlarged, there is a widening of the veins, and notably the veins of the forehead swell.

“Ora tument ira, nigrescunt sanguine vena.”—Ovid.

This Dr. Lange considers to be owing to some impediment to the return of blood to the heart or to the pulmonary circulation. There is an increased innervation to the voluntary muscles, with diminished co-ordination. The angry man feels a desire to be moving, takes long steps or bounds. Instead of shunning others, like the melancholy man, he seeks his fellow-men in order to vent his rage upon them. These, of course, are generalized pictures. Sometimes in grief the subject is restless and agitated, and instead of the voice being weak and without tone it has an unusually pathetic power; on the other hand, some people become pale with anger, or, perhaps, that is the variety which takes the form of hatred. In some people the effects of passion do not seem to extend to the brain so much as others, for there are men who, though they show lively manifestations of anger, or joy, or embarrassment, never seem to lose their wits as others do.

Dr. Lange has a much more difficult task when he seeks to explain the connection between these manifestations of passion and the feelings themselves. He, while doing justice to the power of observation shown by Darwin in his book “On the Expression of the Emotions,” considers that the great naturalist has set out from a totally wrong standpoint. The changes observed by Darwin during passion are associated phenomena, many of them having no causal connection with the passions themselves.

Dr. Lange points out how different emotions may be evoked by material agencies. Wine produces gladness, often ending in combativeness; the old Berserkers brought on a transitory fury by the use of certain kinds of mushrooms (fluesvamp); antimony and ipecacuanha induce a depressed condition that has much similarity with the effects of fear. He observes that the power of cold water to cause diminution of angry fury can scarcely act on the soul, but upon the vaso-motor functions. Then we see individuals who fall into a state of melancholy although there is a complete consciousness of the absence of all mental causes for sorrow. On the other hand, we have mental states of insane joyfulness, as shown in the early stage of general paralysis.

Dr. Lange observes that in bromide of potassium we have a medicine that has a paralyzing effect upon the vaso-motor apparatus. Through it we can induce a condition of apathy in which the individual cannot be either glad, or annoyed, or sorrowful, or angry, because the vaso-motor functions are suspended. The difference, he observes, between a fungus-intoxicated Berserker, a maniac, and a man who has suffered a mortal affront consists only in the difference of the causes and the consciousness of what these causes are or the want of knowledge of any cause. Drinking wine induces a feeling of *bien être*, in which the individual is disposed to receive pleasurable emotion, but in the joy following the reception of a piece of good news the idea itself causes the pleasurable affection. Such ideas are accompanied by a wave of excitement which may pass to the whole body. This was pointed out by Alexander Bain thirty years ago in his book on the "Emotions and the Will."

Dr. Lange observes that it is the vaso-motor system which we may thank for the whole emotional side of our mental life, our joys and sorrows, our happy and unhappy hours. Had the impressions through our senses not the power to put the vaso-motor centre into action we should wander through life without passion and without interest. All impressions from the outer world would only enrich our experience and increase our knowledge without rousing us to pleasure or bending us to sorrow or to fear.

Surely this is assigning too much to the influence of the sympathetic system. No doubt our feelings would be materially modified if no wave of excitement radiated from the brain during an emotion, but even if the blood vessels were only elastic tubes with no contractile fibres, pleasurable and painful impressions would still be transmitted through our senses to the brain, pleasurable and painful ideas would be evoked, and there would be desire, hope, and fear. Even if the sympathetic system lost its function in whole or in part, the primary nerve-cell and fibre and the primary idea would remain, even if no outward manifestations were visible.

Dr. Lange remarks that it is a tendency of education to diminish the power of the emotional reflexes. In fact, the civilized man tries to turn the excitement of his brain into words and actions. Dr. Lange considers that in the course of generations the emotional activity of the sympathetic system will be lost, and our descendants will reach the ideal man of pure reason of Kant, who regards every affection,

every pleasure, or sorrow, or terror, if he ever feels such temptations, as an unseemly disease or mental derangement.

We trust that enough has been said to show that Dr. Lange's treatise is a work of importance. It is full of learning, close observation, and acute analysis. As Danish is but little read on this side of the North Sea, those who desire to study the work will be glad to avail themselves of the German translation done by Dr. H. Kurella, which is both clear and faithful to the original. Dr. Kurella has also made his knowledge of Danish of general benefit by publishing in the "Archiv für Psychiatrie" (Band xix., Heft 1) a translation of another work upon a similar subject, "Studies upon the Central Cause of the Vaso-Motor Nerve Tracts."

Intracranial Tumours. By BYROM BRAMWELL, M.D.,
F.R.C.P.E., F.R.S.E. Edinburgh: Young J. Pentland,
1888.

When we take up a work by Dr. Bramwell we expect it to be characterized by thoroughness, clearness, and excellence of illustration. Very careful perusal of this book on intracranial tumours has not disappointed us in any of these respects. It is based on lectures delivered to students, and, although the style throughout is that of the lecture-room, there are none of those crudities and vain repetitions which so frequently distress readers of published lectures. The illustrations are numerous and admirable, and as they are nearly all original they must represent an immense amount of painstaking work. But this is a prominent feature of the book. Every page gives evidence of most careful clinical study, combined with extensive research. If all lectures delivered by professors and teachers in the Edinburgh Medical School are as thoroughly satisfactory as these, the students are to be congratulated on advantages enjoyed only occasionally elsewhere.

To the psychologist there is no special feature of interest; the work is a contribution to the study of one department of nervous diseases; but as the psychologist should be a thoroughly cultivated physician, he will find here much to interest him, and though he may feel disappointed that several of the puzzles which have troubled him so long seem no nearer solution, he may experience some consolation in observing that many points formerly ignored are now attracting minute attention. Progress during the past