leys. Mr. Perry the younger, of Perry's-place, Oxford-street, about eighteen years of age, fell on the point of the shoulder at Amersham, and was supposed by Mr. TENNANT, his surgeon, to have dislocated the head of the humerus, which he duly reduced. It did not, however, remain in its situation, and was, I believe, again replaced. Still there was something wrong about it, and at the end of three weeks, the young gentleman was brought to me. On examination I found the elbow was carried very far back, and the head of the os humeri proportionally forward, and apparently luxated in that position; but the prominent part was not round like the head of the bone, and did not give that sensation to the touch; on the contrary, it felt to me as if the head of the bone was split as well as dislocated. I had the pulleys prepared here, and brought him down; the extension was made and kept up for nearly an hour, until, in fact, he could bear it no longer. The bone moved considerably from its original situation on the inner edge of the glenoid cavity under the extension; but it did not long remain in that position when the extending power was removed. As soon as the skin of the arm, which had been abraded by the bandages, had healed, I once more submitted him to the pulleys, exerting even a greater power upon him, whilst in a state of exhaustion from loss of blood, and from the effects of tartar emetic. I brought the whole head of the bone below the level of the glenoid cavity, but I could not entirely remove the prominence. When taken out of the pulleys, the outer portion of the head of the humerus appeared to be in the glenoid cavity, but the inner and greater part of it was internal to it. This arm assumed, however, more of its natural appearance; the elbow was in its proper direction, and could be readily pressed against the ribs. In order to prevent another escape of the bone, I had recourse to the same apparatus as in Colonel Yorke's case, and treated it altogether in a similar way. He recovered at the end of several weeks, and went into the country with a very useful arm.

In this case the capsular ligament of the shoulder joint must have been torn; and I believe the whole of the head of the humerus was dislocated as well as split, which may be a reason why it so readily became displaced a second, and even a third time; for there is no reason to doubt its having been duly reduced by Mr. TENNANT, at Amersham, although he could not restore the protuberant part to its place, for the reason I have assigned.

I have seen a case in which the humerus

was broken, and the head alone remained in the glenoid cavity, but it did not resemble the cases here described. Nothing will effectually clear up the uncertainty which envelops the subject but a dissection of the parts interested in it.

REMARKS ON THE FOREGOING CASES, By MR. LYNN.

[Mr. LYNN, the senior-surgeon of the hospital, having felt peculiar interest in the case of *Louisa Chapman*, politely requested that the gentleman by whom notes of the lecture were taken for *THE LANCET* would furnish him with his report previous to its transmission to the Editor. Mr. LYNN, having examined the report, has obligingly forwarded to us the following commentary thereon for publication in *THE LANCET*.—ED. L.]

My friend and colleague, Mr. GUTHRIE, truly states that I differ from him in opinion as to the nature of the case of *Louisa Chapman*. When I first saw her the tumefaction of the shoulder was so great, that no accurate opinion of the case could be formed. In a fortnight the swelling subsided, when I distinctly felt two moveable bodies under the deltoid, and which I inferred to be the epiphyses of the acromion and of the humerus. It is to be recollected that the patient is only twelve years old, and that consequently the cartilaginous union of these epiphyses is but feeble, and very likely to yield when a concussive force is applied to the surface of the joint. The girl, the subject of the injury, fell out of a second-story window, and her shoulder pitched on the cover of a water-but. The shoulder, then, came in contact with a flat surface, and the injury was produced by concussion. In that case the weakest parts would give way, which parts are the epiphyses. Mr. GUTHRIE, in his extensive military practice, may have observed many examples of oblique fracture through the head of the humerus, which he designates a *split*, for the penetrating impetus of a sabre, or of a bullet, or of any other of the various modes of operation of compound forces, may produce any form of injury. In the case before us the force was simple, and the consequent mischief such as one might *a priori* have inferred. I have by me a youthful joint which I recently macerated for the purpose of demonstrating to the pupils the points I have alluded to.

An examination of the affected joint as it now exists will afford indications of the true nature of the case. Looking direct

on the glenoid cavity, the joint is broader and flatter. The limb is shortened about an inch. The upward movements of the arm are much impeded, though the patient manages to place her hand on her head. A little in front of the joint, and under the anterior part of the deltoid, is a projection, as described by Mr. GUTHRIE, which is manifestly the end of the humerus. A careful inspection shows the end of this projection to be broad and flat, affording such a surface as the end of the humeral shaft, denuded of its epiphysis, would give. The farther deviation of this bone inwards and forwards is prevented by the coracoid process, and the long head of the biceps with its ligamentous attachments. The projection moves in consent with the shaft of the humerus. A body is felt, both from examination in the axilla and from above, to be in the glenoid cavity, and this body moves also in consent with the humerus. All the movements of the joints are performed, though in some respects imperfectly. What then is the inevitable conclusion, but that the epiphysis of the humerus was in the first instance separated from the main bone, the emancipated head of which was dislocated as far as its attachments would allow?—that an angular or diagonal union has taken place between the shaft and the epiphyses?—that the contact of the articulating surfaces has never been destroyed, nor the integrity of the joint invaded?—and, finally, that the embarrassment of the motions is due to the obliquity of the union I have mentioned? The epiphysis of the acromion being supported in its place by the head of the humerus, was speedily united, as might have been expected.

Of two cases mentioned by Mr. GUTHRIE I have some recollection. The case of the boy I think was analogous to that of the girl just related. The accident of the drayman, who was an adult, forty years of age, and whose bones must have been perfectly consolidated, can scarcely be considered similar to those of the boy and girl. A fracture of the surgical neck of the os brachii affords unambiguous indications of its nature, by the deformity produced. A mere split of the bone, as described by Mr. GUTHRIE, would hardly produce the appearance manifest in the case of Louisa Chapman, for the ligaments would retain the joint entire, and prevent any projection; and if the ligaments were lacerated, much greater deformity would ensue than appeared in any of the cases quoted by Mr. GUTHRIE. For these reasons I am disposed to think that the injury in the adults was a fracture of the anatomical neck of the humerus, where the relations of the separated surfaces

would be pretty much the same as in dialysis of the epiphyses. Mr. GUTHRIE lays much stress upon the opinion of Dr. DELPECH, a French author, who has written on the subject. It appears that this gentleman saw the case of Colonel Yorke one day after dining with Mr. GUTHRIE. I conclude that my worthy colleague, in choosing his opportunity for obtaining the opinion of his distinguished friend, acted upon the generally-admitted principle of "In vino veritas." But wine, although it must be acknowledged to open the heart, may not be so efficacious in sharpening the intellect. It is, however, a singular fact, that Dr. DELPECH is the only surgeon who concurs in Mr. GUTHRIE's views, which views are diametrically opposed to those which, on a former occasion, DELPECH deliberately wrote, printed, and published.* It would be a nice speculation to decide how much of the concurrence is due to the claret (Mr. GUTHRIE's is exceedingly good,) and how much to DELPECH. The cases quoted, however, are highly interesting, because they are rare.

EXPERIMENTS

ON THE

HEAT OF THE BLOOD;

Performed to ascertain the Difference between Blood left to Cool and Blood agitated with Air.

"Développer les phénomènes des opérations chimiques qui s'accomplissent dans le corps vivant, est le but scientifique auquel tendent, en dernière analyse, les efforts de la chimie animale, et fait le but principal de la physiologie, science de la plus haute importance pour l'art de guérir."—*Traité de Chimie, tome septième, par J. J. Berzelius, 1833.*

To the Editor of THE LANCET.

SIR,—The following experiments were performed upwards of three years ago in order to ascertain the difference, if any, between blood left to cool in a flask and blood agitated with atmospheric air in a similar flask. I transcribe the results from a book which I keep at our Infirmary for recording my experiments:—

"Infirmary, 28th June, 1830:—At 20 minutes past 10 a.m. Twenty ounces of venal blood were received in one of my experimenting capped flasks, from an adult male. This blood appeared to be in a normal state. Soon afterwards I took the flask containing the blood into my experimenting room. The thermometer indicated 68° in the shade.

* DELPECH published a case of fracture of the anatomical neck, in his *Chirurgie Clinique*.