

administered through a tracheal fistula, so as to avoid the spasm of respiration produced by its contact with the nares. Immediately the vessels of the sound side dilated, while those on which the divided nerve was being irritated remained unaffected. By this is shown that the action of amyl-nitrite is not on the vessels, nor on the nerves, but on the nerve centres. The effects of amyl-nitrite on the heart was found to be different in frogs and in mammalia. In both classes of animals a *large* dose caused slowing and feebleness of action. A small dose in frogs produced no effect, but in mammalia (men, rabbits, dogs) a very considerably increased rapidity was noticed. That this was due to a paralysing action on the vagus centre in the medulla-oblongata was shown by a somewhat similar experiment to that noticed above. The author divided both vagi in the neck of a rabbit, and then Faradised the lower end of one of them with a current of such strength that the rapidity of pulsation of the heart was the same as before the operation. Then amyl-nitrite was administered, and, although the effect on the vessels of the ear was well marked, no increase in the cardiac pulsations occurred. The difference in the effects of the drug on frogs and mammals is explained by the absence of a *constant* inhibitory action of the vagus on the heart in frogs. If in these animals the vagi be divided, no increase in the number of pulsations occurs, while such an increase always occurs in warm-blooded animals, showing that, in them the vagus is constantly in action. The increased rapidity of respiration which follows inhalation of amyl-nitrite is supposed not to depend on a direct influence exerted on the respiratory nervous centres, but to be due secondarily to the alterations in the vascular tonus and the cardiac action. A paralysing action on the vaso-motor centres of the head and neck and on the vagus centre, similar to that caused by amyl-nitrite, is produced in men by mental emotion, such as shame, or timidity, which is accompanied by blushing and increased frequency of pulse. For interesting remarks on this similarity of effect, and for a criticism on former experiments, we must refer to the paper itself.—*Pflüger Archiv*. IX. 470. J.M.P.