preparation when incubated with egg white in 0.3 per cent HCl for two hours at 40° C. showed digestive powers from 36 per cent to 37 per cent of that of 1:3,000 hog pepsin solution of the same per cent strength. These experiments also showed that this pepsin or pepsin-like material contained in the calf rennin preparation can be removed from its solution to the extent of 84 per cent to 92 per cent by absorption on egg white without appreciable removal or destruction of the rennin activity. The filtrates resulting from the egg white absorption process possessed only slight pepsin proteolytic power, but had from 87.5 per cent to 91 per cent of the milk curdling power of the original rennin solutions.

It was also observed that a mixture of hog preparation and calf preparation when incubated with egg white in 0.3 per cent HCl showed digestive powers equal to the sum of the two. The study shows, therefore, that practically complete separation of hog pepsin and calf rennin can be made by absorption on acid treated egg white and that the calf preparation contains two activities which can be separated from each other without destruction of either one, by absorbing the respective activities upon the proper proteins at properly controlled pH values.

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Effect of visual impulses on the posture of the head.

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It is a well known fact that the normal position of the head is maintained through impulses coming mainly from the otoliths (labyrinthine righting reflexes on the head). An animal with both labyrinths destroyed will not be able to preserve the normal posture of the head when held in the air in various abnormal body positions. According to Magnus,[1] the cat, the dog, and the monkey are exceptions to this rule, in that through visual im-

[1] Magnus, R., *Koerperstellung*, Berlin, 1924, p. 19, 224, 261, 267.

pulses they are still capable of righting their head even after bilateral labyrinthectomy.

In our experiments we have employed normal puppies, rabbits, guinea pigs, fowls and pigeons. All these animals are capable of maintaining the normal posture of the head, as indicated by the direction of the snout or beak, when held in the air in the side position or in the supine position. The latter involves a very sharp ventroflexion of the head, the snout or beak being turned towards the tail. With one eye kept closed by pasting a strip of adhesive tape over it, all these animals are capable of preserving the normal posture of the head when held in the air in the lateral position in such a fashion that the open eye is uppermost. If, however, the closed eye is uppermost, the head is held in the normal position only for a few seconds and then gradually begins to sink sideways, until it assumes a position characteristic of an animal without labyrinths. The difference in the two lateral positions is especially striking in the case of the fowl.

When the animal is completely blindfolded (by pasting adhesive tape on both eyes) it loses completely the symmetrical righting reflexes on the head when held in the air in the supine position. Here, too, the posture of the head is normal for a short while, but this posture is not maintained, as the head gradually begins to sink, until it hangs lifelessly with the snout or beak directed downward. When the animal is in this condition, removal of the plasters from the eyes causes an immediate righting of the head.

From these results it is evident that while the otoliths are necessary for the elicitation of the righting reflex on the head, when an animal is held in the air in the supine position, the impulses coming from them are not sufficient for maintaining the normal position of the head under these conditions. The visual impulses play an important rôle in keeping the head in the normal position once it is brought there through labyrinthine impulses.