



NORTH CAROLINA DEPARTMENT OF MENTAL HEALTH

DIVISION OF RESEARCH

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March 25, '70

Dear Viktor -

Your letter arrived here just prior to the mail strike but I expect my answer will be delayed considerably - By the time you receive this you will probably have already met Mr. Forliss, I hope he has a pleasant visit.

Concerning the frequency data. I don't think we will confuse people if it is always made very clear what measure is being used. For example, when it is stated that the embryo is active 70-80% of the time at 13 days we should qualify that by stating the measure from which that value was obtained. My paper on the duck which compares the three measures also goes into some detail between the differences in the various measures. Since it isn't the embryo that is performing differently, only the experimenter, I don't think there are any real discrepancies in our studies. It simply demonstrates that we are aware of the artificialities in our measuring methods.

With regard to the brain-hatching work, I am attempting to obtain more cases and in fact since my last letter I have added 4 more cases, all of which tell the same story. I strive for 15 cases. While I haven't ~~well~~ worked out the ventral medbrain (that was the rationale behind the diencephalic removal with pituitary transplant) the fact that this area is made up of largely of fiber tracts leads me to the tentative opinion that the diencephalon is crucial. I certainly agree with your cautionary word about a "hatching center." I didn't realize



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I used that term since it is really contrary to how I think of such things. If I get anything at all with the thyroid-agar implants I will then try using labeled thyroid (or other hormones) to get at the specific sites of uptake. I may also attempt micro-injections of hormones through cannulae ~~implant~~ implanted in various brain areas.

I should have a working copy of the pigeon ms ready soon and would appreciate your comments on it. After a rather complete search of the literature I am unable to turn up even one paper, study or description of hatching in an altricial form. Kaspar mentions looking at some passerines but says nothing about hatching or prehatching behavior.

I look forward to hearing more of the rat work. As you probably know CH has informed me that he won't be able to work with me in June so I have cancelled my planned visit. When does he plan to leave?

Best wishes,
Don

P.S. The duck paper was accepted in Animal Behavior some months ago but I haven't received the galley proofs yet so it will likely be 3-6 mo. before it appears.

Ron. letter 3/2/70

ext. complete midbr. all 5' in 17-dry position

ext. complete forebr. can hatch

ext optic lobes can hatch

Wants to stimulate diencephalon after pipping to elicit hatching move
" - implant thyroid eggs plates into brain " " " "

pigeon (hatch day 18). altricial, hatching move. exactly like chick
autoradiograph. after hatching. Mitosis in brain?

letter 3/25/70

confirmation of midbrain data

Decker, cerebellum and bilat. olivary nuclei highly active after day 17