

UNIVERSITY of PENNSYLVANIA

PHILADELPHIA 4

October 15, 1965

The School of Medicine

INSTITUTE OF NEUROLOGICAL SCIENCES
Department of Anatomy

Dr. Victor Hamburger
Department of Zoology
Washington University
St. Louis, Missouri

Dear Dr. Hamburger:

I am a pre-doctoral fellow at the Institute of Neurological Sciences. Your article "Some Aspects of the Embryology of Behavior" (Quart. Rev. Biol. 38(4) 1963) interests me a great deal since I am concerned with developmental changes of neurological structure correlated with behavioral changes. I had considered working with rats, transecting their spinal cords at different stages of development and then charting the isolated spinal cord's reflex and structural ontogeny. I was then going to train these animals to see how plastic the isolated cord could be if transected early in development and had conceived of using spinal conditioning because of some work that has been done by Dr. R. A. Dykman ("Successive maintained conditioning in spinal carnivores" J. Comp. Physiol. Psychol. 49(1) 1956) and Dr. J. S. Buchwald ("A study of conditioning in chronically spinalized kittens" The Physiologist 8(3) Aug. 1965 abstr.).

My sponsors, Dr. W. W. Chambers and Dr. C. N. Liu suggested I talk to Dr. H. Holtzer since some of his former work had been in this area. He suggested I use the chick since I could begin at earlier stages of development, because working on this animal would be of more use to me in the future, and because of the work that you and Dr. Balaban had been doing.

Before committing myself to either animal and, in a sense, to pre as well as post-natal development, I thought I had better ask you about the feasibility of the project. Would the chick survive hatching if his cord were transected so that a chronic post-natal study would be possible? Do you know of any work that has been done on the reflex ontogeny of the chick(post-natally) so that this work doesn't have to be completed before beginning the actual project? You mentioned in your article that you were observing the pre-hatching and hatching behavior of the chick. How has this work progressed and is the work that I proposed already been planned by yourself or Dr. Balaban? Since I hope that this work will be the first of a number of projects in the same area, I am very interested in the work you are now engaged in and in any advice you might be able to give me. I hope that my work can in some way be complementary to your own. Thank you very much for your time.

Sincerely,

Dennis Stelzner
Dennis Stelzner