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Herrn Prof.Dr.Mario Bunge Foundations & Philosophie of Science Unit Mc Gill University 3479 Peel/Street Montreal, PQ, Canada H3A 1W7

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## Dear Mario,

I owe you at least two letters, one with respect to the "Fyssen International Prize". Not answering your request (cv, list of publications, summary of my research) is an expression of my opinion that I dont't qualify. (For your entertainment, you will get my cv & list of publications). I started to think about my work when I read your letter and I came to the conclusion that not much has been accomplished. And insights I am proud of don't show in such lists. The interesting thing about my life is (I think) that I was able to go to a high school even got a university education. That was the most difficult part and one does not get prizes for that. Already in the university I was extremely lucky meeting scientists who stimulated my studies and thoughts and works like Jürgen Aschoff (the chronobiologist), Ivo Kohler (the experimental psychologist), Konrad Lorenz (the ethologist), Hans-Lukas Teuber (the neuropsychologist). Everything else was then sort of automatic: Doing some experiments (usually against the establishment like in parapsychology, neurophysiology and neuropsychology of vision) and publishing some of the work. Due to laziness I have not published much. I was extremely lucky to become a professor (the faculty wanted somebody else, but the other one preferred Zürich university; thus, they somehow were forced to take me).

Scientifically I am thinking now on temporal problems. It turns out that this is extremely difficult - probably too difficult for me. For the first time in my academic life I even got a grant application turned down. You see, taking everything together: One should not even <u>think</u> of somebody with respect to prizes. And driving a Jeep in Acapulco like 007 is not enough either.

That takes care of <u>that</u> letter. There was another one which had some difficult questions on the "psychology of moral emotions". #Some time ago a few of us (crazy neurobiologists) thought to

start a study group on "Biological aspects - or even basis - of ethics", but it would not be launched.

Your <u>postulate</u>: "All moral emotions (..) are learned specific functions of cortico-limbic systems." That is certainly wrong, because nobody can ever test this; let's change it to "some moral emotions....", and I would never doubt that. But why only learned. I believe that some moral emotions are already hardwired; others might be learned.

It is a well-known fact that after frontal ablations patients seem to alter their moral behavior. I do not know about animal experiments. I guess it would be pretty difficult to evaluate them anyway. My experience with primates is that they are pretty egoistic to begin with.

If one discusses moral behavior one probably should think more about "imprinting" as a mode of learning. Let's assume that there are genetically defined neural programs that are meant to regulate behavior. These programs have to be verified by experience during specific phases of ontogeny. If this verification is lacking, amoral ( or para-moral) behavior may result. I believe imagine that differences between cultures with respect to moral behavior are due to such differences in imprinting (e.g. take "infanticide" as an example).

A final question: Did you get the proof of your article for the book I am editing? I hope so and I hope you are content with the translation and the small alterations of the text. The lector of the publisher was an old-fashioned German philosopher and I had to do a lot of fighting for your article.

Sincerely yours

Ernst Pöppel

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