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## A Reply to Dr. Freeman

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## A Reply to Dr. Freeman By LEON S. OTIS

First may I say that I do not feel that I have been advocating dualism, nor do I believe that Dr. Freeman believes that I have been advocating dualism. I have, however, been advocating caution and the necessity for more spade work (i.e. parametric studies) both at the animal and human level in order to determine empirically, as I put it in my paper, "what sorts of generalizations the differences and similarities between the behavior of (animals) and men will allow." Until we know what these "differences and similarities" are, I think we would be well advised to hold back on our willingness to generalize. Premature generalization, it seems to me, tends to stifle new ways of approaching known data and also tends to discourage vigorous exploration of relatively uncharted areas of behavior which do not appear to fit some highly cathected and well established model. I suspect that with a few minutes private conversation, Dr. Freeman and I would find that we have much in agreement on these matters.

Dr. Freeman asks "how do the internal S<sup>D</sup>'s previously correlated with pain arise in a given situation?" I suspect that they may arise from any number of events which have common property of reeliciting the internal state which has been previously associated with pain. Thus, if a child is consistently and frequently punished for sex play, the *activity* itself may be inhibited, eventually, because of fear of punishment; but the association of the self-induced sex drive or excitement attending sex play, with the painful event (i.e., punishment) may have resulted in a conditioning process such that the evocation of the sex drive years later (for example, as a consequence of hormonal changes during puberty) may elicit fear or dread, the source of which the individual may have no way of identifying. Again, if the internal S<sup>D</sup>'s associated with hunger, or with elimination, or with breathing or with other internal discriminable stimuli have been consistently associated with pain over prolonged periods of time (as a consequence of illness, harsh training, accident or otherwise), then the occurrence of circumstances in later life which reproduce these internal S<sup>D</sup>'s (perhaps because of illness, accident, change of life, etc.) may evoke the fear previously conditioned to such S<sup>D</sup>'s. Of course, at this stage, all these notions are highly speculative and their validity remains to be established.

With respect to Dr. Freeman's second question, the increase in response strength of my Ss on the first test day (i.e., on the day when the drive which was present during conditioning was re-introduced) cannot be explained by spontaneous recovery alone. The largest number of animals to show spontaneous recovery from one day to the next during the extinction series was nine; on the test day, and only on the test day, all seventeen Ss showed an increase in response strength, which was maintained, incidentally, for as long as the test trials were continued (i.e., 10 days for most Ss and 18 days for a few).