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Note on Possible Physiological Effect of Cosmic Rays
Linus Pauling, 31 October 1956

At 6 a.m. today, a few minutes ago, I experienced again a phenomenon that I have interpreted as possibly caused by the impact of a cosmic ray with some part of the human body.

The phenomenon is one that I have noticed a number of times before - perhaps, in roughly similar form, a dozen times before. I was lying in bed, and was in the process of wakening. I believe that I was conscious, and was thinking rather vaguely about the work of the coming day, but I may have been having a little dream. I began to turn my head. I then had the sensation corresponding roughly to the explosion of a revolver in front of me; that is, to a small explosion. There seemed to be some visual and some auditory sensations connected with the phenomenon, but neither the auditory nor the visual was the more pronounced. There was not a flash of light through the whole visual area (my eyes were closed); perhaps I had the sensation of a flash of light in a restricted area, perhaps somewhat larger than the apparent size of the moon, but I am not sure of that. I had the feeling that the explosion was seen only by my right eye. I felt also as though I had heard the explosion, but there was no ringing in the ears, and no concentration of the sound in either ear. I retained the memory of the general pitch of the explosion, substantiating the auditory aspect.

The whole experience was of very short duration, essentially instantaneous - perhaps of the order of milliseconds.

I remember that on earlier occasions, which have come usually as I was lying in bed quietly, either ready to go to sleep or ready to waken, I have sometimes had the impression of greater auditory effect, and sometimes of greater visual effect, without auditory association at all.

It seems to me that an experience of this sort may be the result of an impact of a cosmic ray with a part of the brain or the nervous system. Another alternative is that it is due to the rupture of an arteriole. I think that it may be that the extremely short time in which the experience occurs is an argument against the latter explanation. The explosion occurs essentially instantaneously, and there are no after phenomena of any sort.

I have also occasionally had ~~an~~ experiences of another sort that seem to me possibly to be due to cosmic ray impact. While lying quietly in bed, without moving at all, I have ~~not~~ experienced a sudden pain in some part of my body, perhaps in my toe, my leg, or elsewhere. It has seemed to me that a reasonable explanation for a sudden stab of pain of this kind, while I was lying perfectly still, is that a cosmic ray has struck a nerve and excited it. Perhaps [^] of the probability that cosmic rays would have such an effect.

Linus Pauling