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# This Week's Citation Classic™

**Bakan P.** Hypnotizability, laterality of eye-movements and functional brain asymmetry. *Percept. Mot. Skills* **28**:927-32, 1969.
[Michigan State University, East Lansing, MI]

The direction of lateral eye movement upon reflection in answering a question is related to hypnotizability. Leftward eye movement is related to greater hypnotizability. Lateral eye movement and hypnotizability are related in terms of functional asymmetry of the cerebral hemispheres. [The *Social Sciences Citation Index*® (*SSCI*®) indicates that this paper has been cited in over 185 publications since 1969.]

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**"In 1968, I was awarded the Thomas Welton Stanford Fellowship to work in E.R. Hilgard's Laboratory for Hypnosis Research at Stanford University. My interest at that time was in investigating correlates of the lateral eye movements associated with the beginning of reflective thought after a person is asked a question. It had earlier been shown that the direction of those lateral eye movements was characteristic for each individual and that a person could be classified as a right or left mover. It was suggested that left movers were more subjectively oriented than right movers.[1] Since highly hypnotizable subjects had also been described as subjectively oriented,[2] I decided to test the hypothesis that left movers were more hypnotizable than right movers. This hypothesis was confirmed and the results were reported in my 1969 paper.**

**"In considering an explanation of this result, I felt that there might be a relationship between my results and brain laterality. Functional asymmetry of the right and left cerebral hemispheres was then an area of growing interest, especially in light of reports of the results of split-brain surgery. My search of the literature on eye movements revealed that lateral eye movements are contralaterally controlled, i.e., right hemisphere stimulation leads to left eye movements and left hemisphere stimulation leads to right eye movements. In my paper, I proposed that the characteristic direction of lateral eye movements in individuals was a reflection of relative hemispheric dominance, or hemispheric ity. I interpreted the right-left eye movement typology as a left-right hemisphere typology, with right movers considered as left hemisphere people and left movers as right hemisphere people. The behavior of the right mover is related to greater reliance on left hemisphere functioning and that of the left mover to greater reliance on right hemisphere functioning. The association between hypnotizability and left eye movements was due, I concluded, to a greater reliance of hypnotizable people on the right hemisphere. The theory also suggests a possible localization of hypnotizability in the right hemisphere of the brain.**

**"The high citation count for this paper is due to several factors. The interpretation of the right-left eye movement typology in terms of a left-right hemisphere typology was congruent with the explosive interest in brain laterality. Individual differences in behavior could now be seen as differences in lateral hemispheric organization. An easily observable eye movement response became available as an indication of hemispheric ity.[3] The paper suggested a possible localization of hypnotizability in the right hemisphere and provided a simple indicator of hypnotizability. More generally, the work served as a bridge between the interest in states of consciousness and brain laterality. The paper has stimulated a large body of research tending to support the theoretical position. Subsequent work on CLEMS (the acronym I use for conjugate lateral eye movements) has been the subject of several reviews."[4-6]**

1. **Day M E.** An eye-movement phenomenon relating to attention, thought and anxiety. *Percept. Mot. Skills* **19**:443-6, 1964. (Cited 110 times.)
2. **Hilgard J R.** *Personality and hypnosis*. Chicago: University of Chicago Press, 1979. 309 p.
3. **Bogen J E, DeZure R, Ten Houten W D & March J E.** The other side of the brain. IV: the A/P ratio. *Bull. LA Neurological Soc.* **37**:49-61, 1972. (Cited 90 times.)
4. **Bakan P.** Two streams of consciousness: a typological approach. (Pope K S & Singer J L, eds.) *The stream of consciousness: scientific investigations into the flow of human experience*. New York: Plenum Press, 1978. p. 159-86.
5. **Ehrlichman H & Weinberger A.** Lateral eye movements and hemispheric asymmetry: a critical review. *Psychol. Bull.* **85**:1080-101, 1978. (Cited 95 times.)
6. **Gur R & Gur R.** Correlates of conjugate lateral eye movements in man. (Harnad S, Doty R W, Goldstein L, Jayne S J & Krauthamer G, eds.) *Lateralization in the nervous system*. New York: Academic Press, 1977. p. 261-84.

 