1145-68-2164 **Jorge Diaz*** (transcripciones@mail.com), P.O. Box #9021288, San Juan, PR 00902-1288, and **Christian Romero** (christian.romero1@upr.edu), Hogar Padre Venard, P.O. Box #9020274, San Juan, PR 00902-0274. *A Mathematical Model of Conciousness, with Applications to AI.* Preliminary report.

Let us consider a Venn diagram of three interconnecting structures: they stand for the brain, which processes thoughts; the cerebellum, which coordinates voluntary movements; and the medulla oblongata, which controls involuntary movements. The area that is shared by all three structures; the intersection of the three circles also represents the pons; and the Ego, according to Freud's theory of personality, may be thought to reside therein. The Id, which embodies our most basic instincts, may be thought to reside in those areas of the diagram that do not intersect with each other. The Superego, in contrast, may be thought to reside in the intersection of two of any of the three main components. (The Id and the Superego may be thought to be in constant turmoil.) We thus propose a schematic model of conciousness, based on Freud's theory of personality; and the basic gross anatomical structures of the encephalon, with their corresponding functions. While simple, the model appears to be essentially complete. If we extrapolate, we may propose that a computer network of three processors, connected in parallel, is sufficient to implement a system that exhibits conciousness; to the extent that the proposed hardware may be supported by appropriate software. (Received September 24, 2018)