MBS 94-06 Multiple Awareness and Heat Engines Vladimir Lefebvre

The phenomenon of multiple awareness can be represented as the result of the work of an abstract heat machine consisting of a series of elementary heat engines and two tapes on which each engine prints out its working parameters. Each engine (except the first one) receives from a reservoir exactly the amount of heat that was yielded to this reservoir by the preceding engine and performs an amount of work equal to the loss of available work by the preceding engine. In addition, each engine measures the work which it performs and registers it in two ways: as a portion of the heat received from the reservoir and as a portion of the work which would be performed by a reversible engine under the same conditions. The engine prints out these two numbers on two external tapes. We may consider these printed figures to be theoretical analogues for subjective processes and prove that the "text" printed by such a heat machine is formally equivalent to the picture of a subject's multiple awareness given by the phenomenological model of awareness which we developed earlier.