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A two-compartment cage of a size suitable for the animal under investigation was constructed of light wire. (See the accompanying illustration.) One compartment, D, is made light tight and is connected by a tunnel, T, to the other, O, which is left uncovered, open to the environmental condition of light. Nesting material, food and water may be assigned to the two portions of the cage as seen advisable.

The cage is suspended to a suitable support by springs, $S_1$ and $S_2$. When the animal is active the cage moves up and down. When the weight of the animal is moved to one compartment the corresponding end of the cage is depressed, while the other is elevated. This shift may be exaggerated by moving the attachments of the two springs nearer to each other. Threads $L_1$ and $L_2$, connected with the ends of the cage and running through suitable pulleys, are attached to light heart levers on a ring stand. The levers make contact one above the other with the smoked paper of a slow moving kymograph. Movements of the animal are registered by both levers. If the upper lever is actuated by $L_1$, from the front end of the cage there is a spreading of the lines of the record when the animal is in front, O, whereas the lines approach each other when it is in the back compartment, D. An interval marker (alarm clock making electrical contact by either hand at twelve o’clock) leaves a time record every hour and a special mark at noon and midnight. A record of time and duration of the illumination of the unit is added by hand. Examination of the fixed paper reveals the time of activity and the position of the animal relative to light and darkness at any time during the experiment.

This method might be applied to various studies of animals heavy enough to move light heart levers in suitably constructed cages, except fish and others which must live in water continuously. That is, the choice an animal makes between two different environments which can be maintained in one cage can be determined and readily studied. For example, temperature choices of frogs, light choices of snails or moisture choices of certain insects might be recorded.

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