

Laboratory Study of Tunnel Construction by Rats

Zhvania, Z.; Gugushvili, D.; Roitbak, To; Betaneli, M.; Tsotskhalashvili, G.; Adams, D. B.

Abstract - Reports of Georgian Academy of Sciences (USSR) 1983/1984

Tunnel construction by rats in laboratory conditions is shown to be a workable and inexpensive model for the study of behavior sequencing and complex spatial orientation. Use of glass aquaria makes it possible to observe the behavior clearly. Under these conditions rats construct tunnel systems quickly and reliably, using stereotyped motor patterns, and well-defined division of labor. the tunnel system, rats. The animals quickly adapt their behavior to becoming shy and easily frightened like wild

The model may be used to study (1) precise sequencing of acts by means of kino film and computer-assisted statistical analysis, (2) comparative tunnel construction by animals at various phylogenetic levels, (3) brain organization of behavior, (4) the role of learning in tunnel construction, (5) labor in complex zoo-sociological relations, and (6) division of different frequency and function of social behaviors such as offense and nest defense depending upon whether they occur above ground or inside the tunnel system.