

114.7

**Size bias by mental health professionals:  
Use of the illusory correlation paradigm**  
Loewy M.I.

*San Diego State University, California, USA*  
Two studies examined if stereotypes about fat people affect the perception of psychotherapists. The first looked at whether the processing of information about people of different sizes by all psychotherapists was affected by whether the information presented was congruent or incongruent with prevailing stereotypes. Psychotherapists were found to make more errors in processing information about fat people than thin people, regardless of stereotype congruence of the information. The second compared two groups, general practitioners and eating disorder specialists, regarding their ability to process information relative to size. Psychotherapists were found to make less errors overall if they specialised in eating disorders.

114.8

**Group identification and stereotyping**  
Ikegami T.

*Aichi University of Education, Kariya, Japan*  
University students were asked to list and evaluate stereotypical characteristics of several universities, including the one they belonged to. Before listing tasks, half the students answered a questionnaire reminding them of links between self and their own university (High GI). The other half answered a questionnaire which did not remind them of such links (Low GI). As a result, Low GI students listed more negative characteristics for their own university and evaluated them more critically than High GI students. Low GI students viewed other universities more favourably. The results were discussed in terms of social identity theory.

## 115 IPS

**The use of insects as models  
to investigate learning**  
(D.A. White)

115.1

**Acquisition and retention of maze learning  
in the grain beetle, *Tenebrio molitor***  
Alloway T.M.

*University of Toronto, Mississauga, Ontario, Canada*  
*Tenebrio molitor* adults and larvae learned position discriminations. After training they were either kept at room temperature or refrigerated for intervals of 1 to 5 days before receiving a test of retention. Both adults and larvae showed typical forgetting during warm retention intervals. Cold facilitated retention at all intervals for larvae and most adults. However, cold adults refrigerated for 2 days showed little re-

tention. These results suggest adult beetles have a 2-stage memory system in which consolidation is vulnerable to disruption after 2 days in the cold. A second experiment demonstrated that adult beetles retain maze learning acquired as larvae.

115.2

**T-maze turns by *Tenebrio molitor* in one  
laboratory setting**

Akhtar Y.(1), Tobach E.(1), & White D.A.(2)  
(1) *American Museum of Natural History, New York, USA*; (2) *Rhode Island College, Providence, USA*

Turn direction of commercially obtained larvae was not affected by substrate freshness; few larvae made more right or left turns more frequently in free runs (8/20; 3/10) and experiencing forced right or left turns did not significantly affect frequency of turn directions in subsequent trials (9/20 mealworms showed some effect).

115.3

**T-maze learning by grain beetles and  
possible effects of ELF magnetic field  
exposure**

White D.A., Jocelyn D.L., Moryka K., & Knezevic M.

*Rhode Island College, Providence, USA*  
Forty grain beetles were used to test the effects of extremely low frequency magnetic fields (ELFMF) on T-maze learning. Statistical analyses suggested learning but did not demonstrate either an interaction effect or a main effect of ELFMF exposure on learning. This latter finding is not in accordance with other animal research. Possible explanations for this and reasons (e.g., biological) for the continued use of grain beetles in similar investigations are discussed.

115.4

**Escape learning in the grain beetle  
(*Tenebrio molitor*)**

Kelley S.P., Skjoldager P., & Ward J.P.  
*University of Memphis, Tennessee, USA*

Using an experimental analysis of behavior approach, we examined the effects of a compound light and heat stimulus on locomotor behavior in a runway. A trial started with illumination of a 120-watt flood light, and was completed when the subject ran 18.3 cm. Compared to an operant baseline, all three subjects maintained low starting latencies and run times. Under extinction conditions, where a running response did not terminate the aversive stimuli, all subjects eventually failed to make a running response. These results show that the running behavior of the grain beetle can be controlled by operant contingencies.

115.5

**Maze learning and neurochemistry of  
learning in insects**

Punzo F.

*University of Tampa, Florida, USA*

*Tenebrio molitor* larvae demonstrated the ability to learn a complex maze over a seven-day training period. The mean number of blind alley errors decreased from 132.4 to 17.1. Retention of learning through metamorphosis was demonstrated in this species. Neurochemical events associated with learning and localization of brain function in insects will be discussed. A significant increase in brain RNA and protein synthesis (protocerebrum) was shown to accompany avoidance / maze learning.

## 116 PPR

### Sensory-motor processes

116.1

**Different spatial functions for the  
labyrinthine apparatus**

Blouin J., Gauthier G.M., & Vercher J.-L.  
*URA CNRS 1166, Université de la Méditerranée, Marseille, France*

Experiments were carried out to compare subjects' capacity to use vestibular signals during passive whole-body rotations, respectively for coding rotation magnitude and for updating the internal representation of a memorized visual target position after the rotation. The results showed (1) good accuracy in determining rotation magnitude in complete darkness and (2) underestimation of rotation magnitude (about 40%) when coding body orientation with respect to a previously-presented visual target after the rotation. These results suggest different central processes for determining changes of body orientation in darkness and for coding a target position with respect to the body after rotations.

116.2

**Do absolute pitch possessors have  
categorical perception?**

Levitin D.J.

*University of Oregon, Eugene, USA*

I will report a series of experiments that compared Absolute Pitch possessors and non-possessors in two categorical perception tasks: classification and discrimination of tones. Whereas AP possessors' labelling ability helps them to retain pitch information in long-term memory, the labelling may interfere with their ability to discriminate tones, by replacing sensory memory codes with verbal labels in a "many-to-one" mapping. Previous research on this topic has yielded contradictory results. Differences between categorical perception in speech and musical pitch are discussed, and differences between the underlying cognitive codes used by APers and non-APers are also discussed.