

Drug Use was tested in a series of latent variable longitudinal models, separately for men and women and then contrasted directly. Social Conformity measured at Year 5 (high school age) of a longitudinal study of 654 subjects was used as a predictor of less Alcohol and Hard Drug Use at Year 9 (young adulthood). It was found that Social Conformity predicted less Hard Drug Use for both males and females and less Alcohol Use for females only. Structural patterns between latent variables were quite similar for both males and females for Hard Drug Use, but less so for Alcohol Use. The social implications of the differential acceptability of Alcohol Use by sex are discussed.

NICOTINE AS A REINFORCER AMONG EX-SMOKERS AND NEVER-SMOKERS. Gail K. Strickler, John R. Hughes and David A. King. Dept. of Psychiatry, University of Vermont.

Ten never-smokers and 10 ex-smokers received nicotine or placebo gum hourly for 4 hours on one day and the converse on the second day. On the third day subjects were given concurrent access to nicotine and placebo gums and told to chew ad lib. All of the never-smokers and 7 of the ex-smokers self-administered less nicotine gum than placebo. However, ex-smokers self-administered more nicotine gum than never-smokers. These results indicate (1) nicotine is a punisher among nonsmokers and (2) nicotine is less of a punisher among ex-smokers than among never-smokers.

BRAIN STIMULATION DETECTION: A METHOD FOR ASSESSING CENTRAL DRUG ACTIVITY. Joseph E. G. Williams and Conan Kornetsky. Boston University School of Medicine.

The effects of various drugs on thresholds for the detection of non-rewarding electrical stimulation were determined from different sites of the rat brain. The detection stimulus was delivered through one electrode and served as a cue for the availability of rewarding stimulation delivered to a second electrode located in the medial forebrain bundle-lateral hypothalamic area. Current intensities of the detection stimuli were varied, while the contingent rewarding stimulation remained fixed at a supra-threshold level. This multiple electrode procedure is useful for identifying differential drug effects on the detection of stimulation to specific brain regions.

EFFECTS OF CIGARETTE ROD LENGTH ON SMOKING TOPOGRAPHY. Phillip P. Woodson and Roland R. Griffiths. Dept. of Psychiatry and Behavioral Sciences, Johns Hopkins University.

Clipped tobacco rods were found to produce less intensive puffing patterns than did full length rods. The diminished draw resistance of the former could account for this. Clipped cigarettes also produced a shallower depth of smoke inhalation which could be a defensive response to the hotter smoke generated. A less intensive puff and inhalation pattern should result in less smoke exposure. The lower CO boosts generated by the clipped cigarettes confirm this. Neither of these smoking conditions could, however, fully

account for the changes which occur as a cigarette is smoked down the rod in a more natural fashion.

SUGAR REDUCES IMPAIRMENT WITHOUT ALTERING BLOOD ALCOHOL LEVELS IN MALES. Camillo Zacchia and Robert O. Pihl. McGill University; Simon N. Young and Frank Ervin. Dept. of Psychiatry, McGill University.

Male social drinkers were given doses of alcohol sufficient to raise their blood alcohol level (BAL) to around 0.10 mg%. The drinks contained either 100 g of sugar, 35 g of an artificial sweetener and no sugar. In all three groups BALs were similar. However, various indices of intoxication including subjective feelings of intoxication, memory, reaction times, body sway and pursuit rotor performance showed that the subjects were less impaired when they received sugar with the alcohol. The attenuation of ethanol-induced intoxication was greater with the high dose of sugar than with the moderate dose. Sugar, given without alcohol, had no effect on any performance measure.

DOES SUCCESSIVE DRUG DISCRIMINATION TRAINING DISRUPT ORIGINAL TRAINING? Jay Nierenberg and Nancy Ator. Johns Hopkins University School of Medicine.

Rats were trained (Phase 1) under a food-maintained, drug versus no drug procedure to discriminate either 1.0 mg/kg diazepam (3 rats) or 10.0 mg/kg pentobarbital (3 rats); the two groups subsequently were retrained (Phase 2) to discriminate the other drug from no drug. In Phase 1, diazepam, pentobarbital, triazolam, zopiclone, and meprobamate occasioned drug-lever responding in both groups. In Phase 2, tests with the original training drug indicated that the original discrimination was effectively overridden by retraining with the second drug. Unlike successive drug discrimination training with drugs from different pharmacological classes, successive drug discrimination training with two sedative drugs apparently disrupted control by the original training condition.

EFFECTS OF PAVLOVIAN CONDITIONING ON THE ETHANOL WITHDRAWAL SYNDROME. Robert Numan. Santa Clara University.

Twelve male rats were made dependent upon ethanol using intravenous infusions. Following this, dependence was maintained, but now a tone (CS) was associated with ethanol infusions (US) that reduced withdrawal distress. A pretest-posttest, counterbalanced, repeated measures design was used to determine the effects of three treatments (ethanol, tone, none) on withdrawal reactions (withdrawal signs, body temperature, open field activity) assessed under blind conditions. Our results show that only the ethanol treatment reduced withdrawal distress, suggesting that classical conditioning did not occur. We also found that ethanol withdrawal is associated with hypothermia and hypoactivity, and that ethanol infusions in alcohol dependent rats (at 10 hr withdrawal) lead to hyperactivity. Our data also suggest that handling stress may play an important role in temperature changes observed in studies of classically conditioned drug effects.