but the proof is still missing. We hope to isolate, by the procedure of COHN, a pure naive plasma protein-LSD which should produce, when given intravenously, an immediate psychological action if BLOCK's theory is true concerning the LSD.

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THE EFFECTS OF DRUGS ON CONDITIONING AND HABITUATION TO AROUSAL STIMULI IN ANIMALS

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The effects of drugs on the thresholds for EEG and behavioural arousal responses produced by afferent (auditory) stimulation have been studied in conscious, chronic cat preparations carrying permanently implanted cortical recording electrodes. In these preparations the effect of the drug was tested simultaneously on unconditioned

and conditioned arousal responses in an attempt to distinguish between the action of the drug and the process of habituation. The animals were conditioned to arouse upon the presentation of a particular tone. The conditioned response, consisting of both EEG desynchronisation and behavioural arousal from sleep, was obtained by pairing an electric shock, delivered to the feet of the animal from a metal grid, with the particular tone chosen. It was found that the thresholds for arousal produced by the conditioned stimulus were progressively lowered to a level which probably approached the threshold of hearing for the cat. It was also found that the arousal thresholds remained stable from day to day and the stimulus could be presented at short intervals for 30–40 trials without extinction taking place.

This was in contrast to arousal responses produced by repeated presentation of an unconditioned (neutral) auditory stimulus. At threshold intensities habituation took place very rapidly and by the 8th to 11th trial no EEG or behavioural arousal could be obtained. In addition, the thresholds only remained stable from the first to the fourth trial and also tended to fluctuate from day to day.

Chlorpromazine in doses of 15–20 mg/kg i.p. blocked unconditioned and conditioned auditory induced arousal responses simultaneously, irrespective of the intensity of the stimulus employed. Reserpine (200–250 μg/kg i.p.) produced only a slight rise in the thresholds for conditioned arousal responses. Its effect on inconditioned responses could not be distinguished from the process of habituation.

LSD 25 produced no change in the thresholds for conditioned arousal responses but thresholds for arousal produced by neutral auditory stimuli showed a marked decrease, even following doses as low as 5 μ/kg i.p. Moreover, auditory stimuli, to which the cat had become habituated, now produced an arousal and repeated presentation over periods of 1–3 h brought about no decrement in the response.

Amphetamine (0.5–1.0 mg/kg i.p.) also produced a fall in the thresholds for unconditioned arousal without affecting the conditioned arousal response. After 1.5–2.0 mg/kg i.p. amphetamine, however, the animal became permanently alert.

DE L'ACTIVITÉ ANTICONVULSIVANTE EXPÉRIMENTALE AUX APPLICATIONS THÉRAPEUTIQUES

CAS DU SCTZ

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Après avoir découvert avec CHARONNAT l'activité anticonvulsivante des sels de l'ester chlorhydrique de la fraction thiazolique de la vitamine B_1 (méthyl-4-β-chloréthyl-5-thiazole ou SCTZ), nous avons cherché à localiser le point d'attaque de cette substance dans l'axe cérébro-spinal. L'une des méthodes classiques suivie dans ce but consiste à opposer l'anticonvulsivant nouveau à une série de convulsivants connus, dont le lieu électif d'action se trouve assez bien précisé. Nos recherches poursuivies dans cet

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