research and primary care. A multi-axial version has also been developed and is currently undergoing field trials. Three centres in Australia and New Zealand have participated in these trials, using the preliminary version of the instrument.

Methods: Pairs of raters independently scored 12 case histories provided by WHO and 10 patients interviewed jointly for diagnoses, disabilities (using the WHO disability assessment schedule) and environmental and circumstantial factors (using a specially developed list). They also coded the applicability of the scales, and the overall ease of use of the multiaxial system.

Results: The levels of agreement on diagnoses were similar to those previously reported. The intraclass correlation coefficients for the 4 subscales of the Disability assessment schedule ranged between 0.41 and 0.51 for the written case histories and 0.52 and 0.60 for the jointly interviewed patients. The values for kappa for the 11 subcategories of environmental and circumstantial factors ranged from 0.03–0.55 for the case histories and 0.35–0.81 for the patients interviewed in each centre. Agreement in the latter group was best for childhood events, problems related to primary support group, and problems related to housing and the social environment (kappa ≥ 0.67).

Conclusions: There are problems with the reliability of axis II and III of this system and they have been further developed by WHO in response to these and similar concerns. Case histories used in reliability exercises need careful selection to avoid ambiguities and missing data. Establishing a universal list of environmental and circumstantial factors relevant to psychiatric disorders is a challenging task.

MAGNETIC RESONANCE IMAGING IN ALCOHOLIC KORSAKOFF'S SYNDROME: EVIDENCE FOR AN ASSOCIATION WITH ALCOHOLIC DEMENTIA

R. Emsley, R. Smith, M. Roberts, S. Kapnias, H. Pieters, S. Maritz. *Department of Psychiatry, University of Stellenbosch, PO Box 19063, Tygerberg 7505, South Africa; Department of Radiology, University of Stellenbosch, PO Box 19063, Tygerberg 7505, South Africa; Department of Statistics, University of Stellenbosch, PO Box 19063, Tygerberg 7505, South Africa*

A magnetic resonance imaging study of 19 alcoholic Korsakoff patients, 17 non-amnesic alcoholics and 23 non-alcoholic controls was undertaken. Several measures of ventricular size and interhemispheric area were significantly greater in the Korsakoff patients. Interhemispheric fissure size was greater in the non-amnesic alcoholics than the non-alcoholic controls. Cortical grey matter T1 values were essentially the same for the three groups, while the deep grey and the white matter T1 values for the Korsakoff patients were significantly greater than the non-alcoholic controls. These results indicate widespread cerebral atrophy in alcoholic Korsakoff patients, which is largely subcortical and does not develop independently of the diencephalic pathology. Alcoholic dementia may be a more severe form of alcoholic Korsakoff syndrome, aetiologically related to the nutritionally induced diencephalic pathology rather than the neurotoxic effects of alcohol on the cortex.

A CONNECTIONIST MODEL OF SEMANTIC DEGRADATION IN ALZHEIMER'S DISEASE

T.M. Gale, R.J. Frank, D.J. Done, S.P. Hunt. *Hertfordshire Neurosciences Research Group, the collaborative research programme between QEII Hospital and University of Hertfordshire, Hertfordshire, AL10 9AB, England*

Neuropsychological studies of patients with dementia of Alzheimer's type (DAT) would suggest that specific semantic information is more susceptible to neuropathology, than general semantic information. For example, patients are better able to recognise an item as an instance of a superordinate category, than they are to name the item (Chertkow and Bub, 1990). They are also better at verifying properties which are true of many items in a category, than those which are specific to few members (Done and Gale, submitted). Such findings have previously been cited in support of hierarchical models of semantic memory (e.g. Collins and Quillian, 1969; Rosch, 1975), in which knowledge is specified at levels ranging from the most general (e.g. animal) to the most specific (e.g. humming-bird). Such models assume discrete levels at which properties are true (e.g. the property 'has wings' is stored at the 'bird' level because it is true of all birds). However, it is rare that properties are true of all members or only one member of a category; rather, they vary between these levels (Komatsu, 1992). This is at odds with the assumptions of hierarchical models, but is better accounted for by neural network models in which the difference between general and specific features, is one of frequency within a training set. We have designed a modular neural network system to simulate the experiments we have run with DAT patients. The network is presented with real images and is trained to construct a semantic representation and then to name each image. We investigate the performance of the model, when connections have been randomly deleted to simulate the neuropathology of DAT. We find that general features are more robust to the effects of 'lesioning' than specific features, and that this has implications for picture naming. We argue that our model provides a more plausible account of the semantic degradation in DAT.

DIFFERENCES OF DYNAMIC EYE MOVEMENTS IN SCHIZOPHRENIA AND AFFECTIVE DISORDERS — A LABORATORY INVESTIGATION USING ELECTROOCULOGRAPHY

I. Gerdsen [1], J. Pinkert [2], R. Foetzsch [3], L. Oehme [2], U. Neumann [4], O. Bach [5], W.G. Franke [3]. [1] *Dept. of Psychiatry, Heidelberg University, Vossstr. 4, D-69115 Heidelberg, Germany;* [2] *Dept. of Nuclear Medicine, Dresden University of Technology, Fetscherstr. 74, D-01307 Dresden, Germany;* [3] *Dept. of Neuroophthalmology, Dresden University of Technology, Fetscherstr. 74, D-01307 Dresden, Germany;* [4] *Dept. of Radiology, Dresden University of Technology, Fetscherstr. 74, D-01307 Dresden, Germany;* [5] *Dept. of Psychiatry, Dresden University of Technology, Fetscherstr. 74, D-01307 Dresden, Germany*

Background: Smooth pursuit performance varies considerably among individuals and is affected by many factors such as the properties of the stimulus, attention, age and neuropsychiatric disorders. In schizophrenia and affective disorders increased rates of saccadic intrusions have been observed during smooth pursuit. The aim of our ongoing study was to compare various dynamic measures of smooth pursuit and saccadic eye movement among depressive and schizophrenic subjects to evaluate a possible diagnosis related specificity.

Methods: 20 schizophrenic and 20 depressive patients were diagnosed according to DSM-IV criteria. Psychopathological symptoms were assessed on the BPRS, SANS, SAPS and Hamilton Depression Rating Scale. All patients underwent a neuroradiological examination comprising also functional imaging. Pursuit was measured during tracking of a predictable, sinusoidal target motion using the Nicolet Nystar oculomotor standard testing protocol.

Results: Both groups showed an elevated rate of inappropriate saccades which was clearly higher for schizophrenic subjects. Also differences in performance of patients peak velocity to peak stimulus was observed. Mean gain values were 0.69 for depressive patients and 0.96 for schizophrenics. A significant difference was found in asymmetry ($p < 0.01$) and DC Offset values ($p < 0.01$) comparing and quantifying left/right symmetry. Other measures including delay and accuracy failed to reach significance.

Conclusion: Our preliminary data show that by oculomotor testing significant diagnosis related differences in eye tracking pattern

between both groups can be identified. In addition, impaired DC Offset values could indicate functional abnormalities in one cerebellar hemisphere or in ocularmotor centers of the parieto-occipital region.

THE EFFECTS OF ALCOHOL WITHDRAWAL ON SIMPLE AND CHOICE REACTION TIME IN ALCOHOL DEPENDENT INPATIENTS

A.H. Günthner, V. Heuer-Jung, H. Schmid, K. Mann. Universitätsklinik für Psychiatrie und Psychotherapie, Addiction Research Center, Osianderstr. 22, D-72076 Tübingen, Germany

Twenty alcohol dependent inpatients were tested five times over the course of their 3-week detoxification treatment, measuring their visual and auditory simple reaction times as well as their choice reaction times.

The average results showed a highly significant improvement ($p < 0.001$) in all measures. Simple reaction time performance improved most in the beginning and at the end of detoxification treatment, with a plateau in the middle of treatment, whereas a constant improvement over time was seen in choice reaction time performance, irrespective of sensory mode. The results were independent of age, duration of alcohol dependence and average or maximum alcohol consumption one month before treatment.

Although the average results showed a clear improvement of performance in all measures, analyses of individual performance over time revealed highly different and variable patterns, indicating that linearity of improvement in performance might be a statistical phenomenon rather than an adequate description of individual performance during withdrawal.

ALTERED STATE OF CONSCIOUSNESS OF HEALTHY VOLUNTEERS AND PSYCHOTIC EXPERIENCE: AN EMPIRICAL COMPARISON WITH THE SELF-RATING SCALES APZ AND OAV

E. Habermeyer, E. Gouzoulis-Mayfrank, E.M. Steinmeyer, L. Hermle, H. Sass. Institute of Psychiatry, Technical University of Aachen, Pauwelsstrasse 30, D-52057 Aachen

Dittrich et al. developed the two self-rating scales APZ (altered states of consciousness) and OAV (oceanic boundlessness, dread for ego dissolution, visionary restructuralisation) for the reliable and valid assessment of altered states of consciousness, which are induced by hallucinogenic drugs or sensory deprivation in normal subjects. We examined 100 patients who suffered from acute endogenous psychosis with these self-rating scales. The aim of this study was to find out the differences and similarities between the experience of patients with acute psychosis and the altered states of consciousness of healthy volunteers: Are the questionnaires APZ and OAV suitable tools for the assessment of psychotic experience? Is there a correlation between the patients symptomatic answers and the clinical state? Which items are appropriate for the examination of psychotic patients, which are not? The results support the assumption that acute endogenous psychotic states have strong similarities with altered states of consciousness of normal subjects. Our data add an argument to the utility of the model-psychosis paradigm as a tool for psychiatric research.

AUTOGENES TRAINING UND FUNKTIONELLE ENTSPANNUNG: EIN VERGLEICH VEGETATIVER STEUERUNGSPROZESSE

D. Hager, P. Joraschky, T. Loew, M. Mück-Weymann. Abteilung für Psychosomatische Medizin und Psychotherapie der Universität Erlangen-Nürnberg an der Psychiatrischen Universitätsklinik mit Poliklinik, Schwabachanlage 10, D-91054 Erlangen, Deutschland

Während beim Autogenen Training (AT) ein trophotroper Erholungszustand über die Beeinflussung des Parasympatikus herbeigeführt wird, werden durch die Funktionelle Entspannung nach Marianne Fuchs (FE) Dynamisierung, Rhythmisierung und dadurch Normalisierung vegetativer Prozesse induziert. Um für Therapiebeginner das geeignete der beiden Entspannungsverfahren herauszufinden, haben wir eine Kassette erstellt, mit der 52 Probanden, die weder im AT noch in der FE geübt waren, nacheinander AT- und FE-Instruktionen vorgespielt bekamen. Nach dem Versuch wurden ein Spannungsfragebogen und Befindlichkeitsfragebögen zum Versuchserleben ausgegeben. Versuchsbegleitend wurde der Laser-Doppler-Flux — als Äquivalent der Hautdurchblutung — jeweils an Stirn und Mittelfingerkuppe rechts aufgezeichnet; ausserdem Herz- und Atemfrequenz (HF bzw. AF).

In der Auswertung wurden die Probanden entsprechend des Spannungsfragebogens in eine entspannte (GI), mässig verspannte (GII) sowie stark verspannte, symptomatische Gruppe (GIII) unterteilt.

Insgesamt wurde bei allen 3 Gruppen die HF nut durch das AT im Sinne einer Abnahme beeinflusst. Die AF nahm bei GI im AT leicht ab, in GII und GIII unter FE. An der Stirn nahm die Hautdurchblutung bei allen Gruppen über beide Übungen hin zu. Am ausgeprägtesten war dieser Effekt bei GI und GII. Die Hautdurchblutung am Mittelfinger stieg unter AT am stärksten bei GI, unter FE bei GIII an.

Bisher scheint das AT als dämpfendes Verfahren einen leicht stärkeren Einfluss auf die entspannten Probanden zu haben, auf die FE als dynamisierendes Verfahren reagieren dagegen eher die sehr verspannten Probanden. Die Selbstbeurteilung zeigt eine für AT und FE schlechtere Einschätzung durch die verspannten Probanden als durch die entspannten.

Zusammenfassend beurteilt sollte für besonders verspannte Patienten bevorzugt die Funktionelle Enspannung das Therapieverfahren der Wahl darstellen, für entspannte Patienten das Autogene Training gewählt werden.

PSYCHOPATHOLOGIC ADVERSE DRUG REACTIONS DURING TREATMENT WITH GYRASE INHIBITORS. METHODOLOGICAL PROBLEMS AND RESULTS OF A RETROSPECTIVE STUDY

M. Hollweg, H.P. Kapfhammer, M. Krupinski, H.J. Möller. University of Munich, Psychiatric Hospital, Nussbaumstr. 7, D-80336 Munich, Germany

Objectives: Psychopathological and neurological adverse drug reactions (ADR) during treatment with gyrase inhibitors have been repeatedly reported. Results of former studies indicate a high risk for ADR especially in the elderly with high dosage medication, psychiatric history and renal dysfunctions. The pathophysiological mechanisms involved in the development of adverse CNS-effects are not completely understood. GABA-ergic and monoaminergic mechanisms might play a major role. The aim of our study was to identify characteristic risk factors for psychopathological ADR.

Methods: 4189 reports of consultant psychiatric examinations were analyzed. Possible risk factors as psychiatric history, severe somatic diseases or social stress factors were evaluated.

Results: In 29 patients the suspicion of psychopathological ADR during treatment with ofloxacin or ciprofloxacin was documented. Psychopathological findings included delirious states, paranoid, de-