endorphin in mentally handicapped persons are enhanced and may be associated with high intensity of stereotypies. In addition, some beneficial effects on self-injurious behavior and/or aggression have been reported with serotonin-modulating compounds like the azapirone buspirone and the selective serotonin reuptake inhibitor fluoxetine.

Data from our research are indeed suggestive for the potential therapeutic efficacy of 5-HT_1 agonistic compounds, including buspirone and eltoprazine.

DIAGNOSTIC BACKGROUNDS OF SEVERE BEHAVIORAL DISORDERS IN PERSONS WITH LEARNING DISABILITIES

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Although the application of the DSM classification system seemingly delineates psychopathological entities in general psychiatry, the nosological status remains clouded. The same holds a fortiori for persons with learning disabilities in whom a high prevalence of classical psychiatric diseases is established without a clear scientific base. It can be postulated that this group of subjects has a general, presumably biologically determined, vulnerability for anxiety-driven psychiatric symptoms as well as an increased risk for the development of psychopathological disorders with atypical presentations or related to epilepsy, organic brain dysfunction and specific syndromes.

In our survey, including 70 persons with mostly moderate to profound mental retardation, a substantial number was referred for behavioral abnormalities associated with aggressive spectrum disorders, mood disturbances and anxiety. For the classification of psychopathological features, the ICD-10 criteria were applied since this classification system includes easily understandable diagnostic guidelines and is more differentiated than the quite rigid DSM.

In this group of patients, a high prevalence of mood related disorders was diagnosed and, to a lesser extent, psychotic disorders including transient or cycloid psychoses.

Concerning the etiology of mental retardation, in 53 percent no causal factors could be discovered. Interestingly, in about one third of the patients, severe adverse drug reactions had occurred in their recent history, including delirium, neuroleptic malignant syndrome and serotonin syndrome.

S68. The best and worst of academic psychiatry — Part I

Chairmen: D Goldberg, A Hamid Ghodse

Abstracts not received.

S69. Philosophy, neuroscience and the mind

Chairmen: KWM Fulford, P Mullen

POSITIVE MELANCHOLIA AND THE PHILOSOPHIC TEMPERAMENT

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Already Aristotle noticed that all men outstanding in philosophy, poetry, or arts, e.g. Plato and Socrates, are melancholics. An association between bipolar illness and the artistic temperament has recently been outlined [1].

An association between unipolar melancholia and the philosophic temperament seems evident when the concept of positive melancholia is applied to the philosophers of mind. Positive melancholia is a state of less than major depression with a score between 1 and 2 of the Hamilton suicidal item; the brooding: is life worth living? This melancholic brooding has produced philosophic insight into works of Hume, Kant, Schopenhauer, Kierkegaard, James, Eliot, Wittgenstein and Camus.

Recent research [1] has shown that observations and beliefs produced in mildly depressed states are closer to reality than are normal mood states. Positive melancholia is a combination of less than major depression and personality dimensions such as ego strength and self-actualizing [2] or quality of life.

[1] Jamison KK (1993) Touched with fire. New York, Free Press.
[2] Maslow AH (1968) Toward a psychology of being. New York, Van Nostrand.

INTERPERSONAL PROCESSES AND BRAIN SCIENCES — A NEW ANTHROPOLOGY

R.J. McClelland.

'We are fascinated by all forms of rivalry, by so-called love, by fighting, by violence, by chaos. These are all aspects of the mimesis of desire which is all around us and in us.' [1].

This paper introduces a new anthropology developed by Roel Kaptein and Rene Girard [2] and examines its relevance for mental health. For all living forms existence is only possible when we have a place. For the rest of the animal Kingdom, dominance patterns provided that place. For emerging human kind because of the strength of rivalry, the dominance pattern failed. Culture with its scapegoat mechanism, its rituals, rites and prohibitions, provided a solution. The solution was never perfect and again it failed. The winner in the rivalries got their place. The losers eventually fall ill. In the mimetic model, all therapy has the task to bring the loser out of her/his position, out of the results of the rivalry which made them ill.

[1] 1 Kaptein R. Freedom in Relationships. Queen's University, Belfast. 1986
[2] 2 Girard R. Things hidden since the foundation of the world. Athlone Press, London. 1987

NEUROPSYCHIATRY AND THE UNCONSCIOUS FREE WILL

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Traditional notions of Free Will appear to equate choice with consciousness. However, a number of strands of evidence clearly support the contention that willed action is initiated out of consciousness,

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and, that 'possession' of an action is potentially phenomenologically distinct from such initiation. Evidence taken from the psychotic symptomatology of 'passivity', delusions of alien control, and of thought insertion; the neurological literature on the 'alien' limb; and that on the neurophysiological correlates which precede 'willed' action, leads to the conclusion that 'willed' activity is initiated out of consciousness, and *prior to* phenomenological awareness. Referring to original functional imaging data obtained from schizophrenic subjects the author will demonstrate that the misattribution of 'willed' actions to 'alien' entities is itself associated with aberrant *spatial* distribution of neuronal activity within the motor system. Thus, neurological time and space may potentially characterise the experience of Free Will.

NEUROCOMPUTAL MODELS OF PSYCHOPATHOLOGY: WHAT CAN WE LEARN?

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Neural network simulations of psychopathological syndromes and symptoms have been proposed for almost a decade. Given their impact on other fields (as diverse as psychology and engineering), the reception on neural network models by psychiatrists appears to be slow, although their potential as a tool for understanding psychopathology is enormous. To make this point, the principles of parallel distributed processing are introduced briefly and simulation examples relevant to psychopathology are discussed. (1) Some aspects of autism have been modeled using a hidden layer with too many neurons, giving rise to a lack of abstract thinking and an increased capacity to memorize rote facts. (2) Hallucinations and delusions have been modeled either with Hopfield networks or with Elman networks. (3) The interaction of the hippocampus and the cortex in learning and memory has been modeled by interacting networks, one for short-term storage and another for long-term storage. The effects of dementia and of age have been simulated. (4) Finally, even affect has been modeled using neural networks. It is shown that network models of psychopathology are not just a recent fad, but an increasingly important branch of psychopathological study. This is highlighted by the fact that each of the models which are going to be discussed has therapeutic implications.

"BRUTE FACTS"

Kathleen V. Wilkes.

This paper complains about the unwillingness of philosophers to turn their attention to the use of non-human animals as models for human intellectual capacity. Psychologists have, to some small extent, realised the need to examine the "Comparative Assumption" ("CA") in psychology — whether, and when, we can use data from animals to generate hypotheses about human abilities — but much more needs to be done.

This paper — which will be pursued by other (linked) papers about the Comparative Assumption in physiology and psychophysiology, and about the weaknesses of computer models — mainly emphasises the *difficulties* of the CA. The author hopes to turn, in a follow-up paper, to the way in which the CA is vastly superior to other models of the human mind. The negative tenor of the paper should not be taken to suggest that the CA is not in fact the best hope for progress in the endeavour to understand human cognition.

S70. Perspective on schizophrenia: personal and professional

Chairmen: J Gerlach, R Murray

THE PHARMACO-ECONOMICS OF SCHIZOPHRENIA: NEW HORIZONS

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The treatment of the 300,000 affected with schizophrenia in the UK annually costs the NHS at least £300M [1], 80% of this comprising inpatient hospital costs. Any treatment which leads to a clinical improvement sufficient to cause a significant decrease in percentage of time spent as a hospital inpatient would be expected to result in a pharmacoeconomic gain.

Clozapine is an example of an atypical agent which appears to have such a result in treatment-resistant schizophrenia. Between 30% to 60% of previously unresponsive patients appear to derive significant clinical benefit from clozapine [2]. Studies based in the USA show a $10,000–$30,000 savings per year per patient by the second year of clozapine treatment [3], as a direct result of the decreased need for hospitalisation. In a UK clinic-based cost-effectiveness study (n = 26), comparing the 3 years prior to commencing clozapine with the period following establishment of clozapine treatment (mean 36.4 months), we have shown that the cost-effectiveness of clozapine in this group was about twice that of conventional neuroleptics, with a mean net cost saving of £3,000 per patient per annum. The increase in service costs (including the pharmacy and monitoring costs) and accomodation costs on clozapine was more than offset by the reduction in costs attributable to inpatient stays.

Further studies to compare the efficiency of other pharmacological approaches to the treatment of schizophrenia are required. Risperidone has been reported to be clinically efficacious in short-term studies [4], but data regarding long-term outcome are not yet available. New agents (eg olanzapine or sertindole) may likewise prove to be superior to typical neuroleptics, and, furthermore, appropriate as first-line therapy if proven to be safe. The identification of correlations between clinical heterogeneity and pharmaco-economic outcome could further advise prescribing practice and resource allocation.

[1] Smith K, et al. Brit J Psychiat 1995, 166, 9–18.
[2] Kane JM. Brit J Psychiat 1992, 160 (suppl 17), 41–45.
[3] Meltzer HY. Eur Psychiat 1995, 10 (suppl 1), 19s–25s.
[4] Chouinard G, et al. J Clin Psychopharmacol 1993, 12, 25–40.

ANTIPSYCHOTIC DRUGS: THE CURRENT LIMITATIONS AND FUTURE PROMISES

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The advent of neuroleptic drugs was one of the great breakthroughs in pharmacotherapeutics by biomedical science in the 20th Century. Antipsychotic drugs have proven efficacy in alleviating psychotic symptoms and preventing their recurrence in idiopathic and drug induced psychotic disorders. However, more than 40 years of experience with these compounds have clearly revealed the limitations of their efficacy. These include the fact that: 1) neuroleptics are not effective in all patients with schizophrenia; 2) they do not exert

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