18 Pliny the Elder. Nat Hist. XXV: 23, 58.
19 Coraccioli C. Chiron: or, the Mental Optician. 2nd ed. J Robinson: London, 1958.
20 Sherwin-White SM. Ancient Cos, Hypomnenata, Hft. 51 Gottingen, 1978: 261.
21 Panher RCT. Miasma: Pollution and Purification in Early Greek Religion. 1st ed. Oxford, 1983: 249.
22 Pliny the Elder. Natural Hist. XXIX: 2.
23 Griffith A. Democedes of Croton: A Greek doctor at the court of Darius. In: Achaemenid History, II: The Greek Sources. Leiden, 1987: 37–51.
24 Dicks DR. Thales. *Classical Quarterly* 1959; **9:** 294–309.
25 West ML. Three Presocratic Cosmologies. *Classical Quarterly* 1963; **13:** 154–76.
26 Perrin B. Plutarch's Lives. Vol I. Cambridge: Harvard University Press, 1946–55.
27 Classen JC. Anaximander. *Hermes* 1962; **90:** 159–72.
28 Klowski J. Ist der Aer des Anaximenes als seine substanz konzipiert. *Hermes* 1972; **100:** 131–42.
29 Solmsen F. Anaximander's Infinite: traces and influences. *Archiv fur Geschichte der Philosophie* 1962; **44:** 109–31.
30 Thesleff H. An introduction to the Pythagorean writings of the Hellenistic age. Acta Academiae Aboensis Humaniora. 1961; XXXIV.3.
31 Dorrie H. Der nachklassische Pythagoreismus. *Realenkyklopädie der Klassischen Altertumswissenschaft* 1963; **24:** 268–77.
32 Morrison JS. Pythagoras of Samos. *Classical Quarterly* 1958; **8:** 198–218.
33 Van der Waerder BL. Pythagoras. *Realenkyklopädie der Klassischen Altertumswissenschaft suppt* 1965; **10:** 843–64.
34 Wachtler J. De Alcmaeone Crotoniata. 1st ed. Leipzig, 1896: 45–89.
35 Harris CRS. The Heart and the Vascular System in Ancient Greek Medicine. 1st ed. Oxford, 1973: 5.
36 Burnet J. Early Greek Philosophy. 4th ed. London, 1930: 193.
37 Guthrie WKC. A History of Greek Philosophy, vol I. 1st ed. Cambridge, 1962: 341.
38 Vlastos G. Isonomia. *Am J Philology* 1953; **74:** 337–66.
39 Jouanna J. Presence d'Empedocle dans la collection hippocratique. *Bulletin de l'association Guillaume Bude* 1961; 452–63.
40 Galen. De elem. sec. Hipp. I: 9.
41 West ML. Notes on newly-discovered fragments of Greek authors. *Maia* 1968; **20:** 195–205.
42 Von Wilamawitz-Moellendorf U. Die *Katharuoi* des Empedokles. *Sitzungsberichte der preussischen Akademie* 1929; 626–61.
43 Guthrie WKC. A history of Greek Philosophy, vol III. 1st ed. Cambridge, 1969: 62.
44 Cornford FM. Principium Sapientiae. 2nd ed. Cambridge Press, 1952: 42.
45 Burnet J. Early Greek Philosophy. 4th ed. London, 1930: 330.
46 Barnes J. The Pre-Socratic Philosophers. 1st ed. Routledge and Kegan Paul, 1979: 224–5.
47 Pohlenz M. Nomos und Physis. *Maia* 1953; **81:** 418–38.
48 Lesky E. Die Zeugungs und Vererbungslehren der Antike. *Wiesbaden* 1951; 1294–7.
49 Diels H, Kranz W. Die Fragmente der Vorsokratiker. 8th ed. Berlin, 1956: 283.
50 Solmsen F. Tissues and the Soul. *Philosophical Review* 1950; **59:** 435–68.
51 Hildesheim M. Love and strife in Empedocles' cosmology. *Phronesis* 1968; **10:** 109–48.

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Book of the Quarter

SEARCHING FOR THE CAUSES OF SCHIZOPHRENIA

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'Tell us a story Grandad'
The bunny rabbits implored
'About the block of concrete
Out of which you clawed.'

Trance-formed now by memory
His voice was close to tears
But the story he was telling
Was falling on deaf ears.

There was giggling and nudging
And lots of 'ssh—he'll hear'
For it was a trick, a game they played
Grown crueller with each year

'Poor old Grandad' they tittered'
As they one by none withdrew
'he's told it all so often
He now believes it's true.'

Young rabbits need fresh carrots
And his had long grown stale
So they left the old campaigner
Imprisoned in his tale

Petrified by memories
Haunting ever strong
Encased in a block of time
Eighteen inches long.

Roger McGough[1]

After reading Professor Johnstone's book I feel like that rabbit as I recall the to's and fro's of the schizophrenia story during my professional life time. My own personal block of psychiatric time commenced in 1958 at St Luke's Hospital, Middlesbrough. My welcome there was warm and genuine, but my initiation was brief. I was given a list of wards in which I was expected to work and a big key. Changes were occurring everywhere, the new Mental Health Act was round the corner. At the end of this first appointment, some two and a half years later, the key was almost redundant. Rauwolfia, which had been introduced to western medicine in 1955, was being supplanted by chlorpromazine as a the treatment for schizophrenia.

During my early days in psychiatry insulin induced coma therapy for schizophrenia virtually disappeared from the British psychiatric scene. Its disappearance was used as a subject for instruction and debate on the diploma course I was attending. The lesson we were intended to learn was of the value of a proper clinical trial.

The story we considered started in 1953 with the publication in the Lancet of a paper, *The Insulin Myth*[2] by Harold Bourne. He argued that there was no scientific evidence that insulin treatment affected the course of schizophrenia. It is to the credit of the Lancet that Bourne's article was published because at that time he was a junior hospital medical officer (JHMO) working in a mental subnormality hospital. In 1953 a JHMO was barely allowed to see the ladder to becoming a consultant, let alone set his foot on the bottom rung.

Over the next few weeks the correspondence columns festered with resentment as many of the Who's Who (whom you needed to know) in 1953 psychiatry pointed out to Dr Bourne his lack of experience, his junior status and the error of his ways. Soon afterwards he emigrated. In 1957 and 1962 not only was insulin coma therapy demonstrated to be different to barbiturate coma therapy in the short term, but that in the long term those treated with insulin had a worse outcome than those treated with barbiturates.[3,4] We learnt the official lesson and pondered the behaviour of our betters.

With the advent of chlorpromazine, theorising about the cause of schizophrenia flourished. Then, as now, the clinician had to practice without really knowing. To avoid the anxiety of not knowing, some sought refuge in mediocrity thus avoiding the need to think about treatment protocols. It requires courage as well as willingness to bear the anxiety of accepting one's ignorance and to want to probe for each patient why they are as they are. We can accept the limits of our block of time or we can continually try to escape.

Daily we run the risk of being entombed by the models we use, as we get on with the business of treating individuals. Particularly when we are anxious we take comfort from regarding the model (metaphor) we use as an account of reality. When we do this we are reifying the metaphor. The Oxford dictionary tells us that reify means: To convert mentally into a thing; to materialise. Webster's dictionary has it: to convert into something concrete ... So we are, after all, very like the rabbit, with the difference between us and the rabbit being that there are significant consequences for others when we are in the concrete.

Some of my most painful memories, as a consultant working with a treatment team, are of times when it became apparent that our best endeavours had failed, and where the patient's relatives fears that we were impotent were realised. Those moments were endured as we resorted to faith in the concrete and not what we knew.

When Professor Johnstone, on page 5 of her book, discusses the importance and validity of the criteria we use when making a diagnosis she quotes Wordsworth to remind us of what we are really up to:

> ... that false secondary power
> By which we multiply distinctions, then
> Deem that our puny boundaries are things
> That we perceive, and not that we have made.[5]

It seems to me that we should also take these lines to heart whenever we embark upon treatment or research that manipulates other people:

> ... to thee
> Science appears but what in truth she is
> Not as our glory and our absolute boast,
> But as a succedanuem, and a prop
> To our infirmity.

There are literally scores of models, each with its champions, which aid our thinking about mental illness and human behaviour. This multitude can be subsumed under four categories. There are the biological or medical models which direct our thinking to some kind of offensive fluff in the synapse, foreigners in the cells or to brain rot of one kind or another; models which are concerned with intrapsychic events ranging from the mystical to the measurable, with events that occur between people or with behaviour in groups. There are research benefits to be gained from a strict application of a single model to clinical problems but there is, as we shall see, a price to pay. Even as rabbits we and our patients need more nourishment than just our favourite carrots.

Professor Johnstone confesses her faith in the biological basis for schizophrenia. She writes, (page 107):

> Although I am trained as a clinical scientist, I am aware that my views concerning the basis of schizophrenia are based on faith as well as reason. I certainly believed that schizophrenia was a disorder with a biological basis (which I hoped and still hope to see unravelled in my own lifetime) before it was widely agreed that there was evidence that this was really so. This probably impairs my ability to assess the current state of the evidence in any appropriately objective way but I think it is reasonable to claim that the accumulated burden of evidence from imaging, genetic, neuropathological, neuropsychological, and other biological studies makes it difficult to conclude that this is not a biological disorder even if the nature of this biological disorder is yet unclear.

I am reminded that St Paul[6] wrote: 'Faith gives substance to our hopes, and makes us certain of things we cannot see. It is for their faith that men ... stand on record'. Professor Johnstone's record can be found in *Searching for the causes of Schizophrenia.*

Her book records research work which was conducted over 20 years at Northwick Park Hospital where she was principal clinical investigator. Because it reports the work of 20 years it is almost unique since few of us have the courage to be so open. The book is an enigma since it is unclear for whom it is intended. It contains edited summaries of extensive reports in the medical literature. The form of the book would seem to indicate that it is a collection of papers which, perhaps, have been presented elsewhere. There are repetitions of descriptions of samples and locations, and one sentence appears on pages 45 and 57. There are a host of unexplained abbreviations, particularly in tables, which only the cognoscenti are likely to understand. Not being sufficiently well informed, I had to resort to the original journal articles in which the research was more fully set out. While I enjoyed most of these diversions I found, to my chagrin, that of the eight references I looked up three were inaccurate or misleading. Allman in the text referred to Altman in the references. The reference Johnstone *et al.* 1991b, which is attached to Table 9-1, on page 100 is not in the Supplement 13 of the British Journal of Psychiatry 1991. The interaction between EE and neuroleptic treatment in relation to relapse is given three references, only one of which considered the issue. I concluded that those who want an introduction to a biologically based approach to the causes of schizophrenia could make a beginning with this book if they were prepared to overcome its stylistic and editorial short comings.

The book's strongest point is that it demonstrates, despite its author's beliefs, that the causes of schizophrenia remain as elusive as ever. The exploration of the mechanism of action of the medication which deals with the positive symptoms of psychosis does not lead to an understanding of a cause. Physical abnormalities in the brains of schizophrenics demonstrated by the state of the art techniques have not advanced our understanding of cause beyond 1969 when Davison and Bagley produced their review.[7]

In the reports of the investigators there are some observations which cannot be thought about if thinking is limited to Professor Johnstone's preferred model. They have discovered that patients whose illness had been present for more than one year before admission, did far worse in terms of relapse than those admitted sooner, whether or not they had received a placebo or active compound. Just as this was a problem for Professor Johnstone, so was the observation that patients, who after discharge received active medication did worse in occupational terms than those on placebo. She twice writes: 'This finding suggest the disquieting conclusion that the benefits of active neuroleptics in reducing relapse may exert a price in occupational terms'. The book became alive for me when she emerged as a person from the text. On the social consequences of schizophrenia she writes:

> I think all of us involved in the home visits found this a disturbing study to conduct and I think that the details of some of these interviews will be etched in my mind for ever ... I

> well remember a policeman in his thirties who described his wife (the mother of his sons age 11 and 8 years) as managing not too badly, laughing wryly when I asked him how his wife would react if he asked her to make him a coffee or a cup of tea while he was watching TV in the evening. He explained to me, clearly surprised by my lack of understanding, that such a request would put his wife into a state of indecision and uncertainty that would last ... Many of them felt that the services had been less than helpful and, while some of the problems may well have resulted from issues, such as the difficulty of the relatives in coming to terms with the prognosis of the illness, some of their more bitter remarks did have the ring of truth. We were repeatedly told that the services were keen to be involved with the patients when they first became ill, but that they lost interest when time passed and the patients did not become well. The relatives did not think that those concerned realised how great a burden was being placed on families when patients were discharged. One man spoke for many when he said: 'You people don't know what you're doing when you let these folks out, looking after them is a full-time job—a full-time job done by amateurs with damn all help from anyone'.

Given the model which determined the form of the search for causes, it is not surprising that there is no account of any systematic interest in the nature of the schizophrenic experience of the patients. There is a very moving record of conversations with patients who had attempted to kill themselves,

> I learned that while sometimes such attempts are driven by psychotic experiences other attempts, in the same individuals, result from a realisation, while relatively well, of their own limitations, of how much they have lost and of how little the future holds for them.

Although the incidence of schizophrenia in the population is thought to be about 1 per cent, the number of people whom it affects is much larger. Therefore the need for treatment, care and support is enormous. Since this group has few advocates, it is not surprising that the resources devoted to the research and treatment of schizophrenia is unlikely ever to be adequate. The 'safe in our hands' sound bite of Margaret Thatcher is an insult to those who have discovered the mirage of community. It is for this reason I would be very apprehensive to recommend that the present generation of NHS managers should read this book since it could be so easily used as a reason to limit resources rather than the reverse. It would be clear to many managers that if the natural history of the condition for most patients is an inexorable deterioration with just some having their decline temporarily delayed by expensive efforts, then the cheapest care and containment is all that is required.

I think it a great pity that Professor Johnstone appears to want to continue the sectarian dispute which should have been left in its own block of time years ago. If we insist that we alone have the concrete which is real the dispute continues. She takes issue with other people's concrete, citing the distressing effects on relatives of those who think differently from her. She writes on page 83,

> The relatives of schizophrenic patients have sometimes been harshly treated by the psychiatric services. At one time, concepts of 'schizophrenic mothers' (I believe she is wrong to talk about 'schizophrenic mothers' since the phrase, coined by Fromm–Reichmann,[8] was 'Schizophrenogenic mother',) and 'double-bind' situations in the home received uncritical support. More 'fashionable' concepts of the role of high expressed emotion can be interpreted in a similar light and I have met many parents who rightly or wrongly have gained the impression that the staff caring for their schizophrenic child thought that the family's behaviour and attitude was in some way responsible for the patient's illness. It is very sad that the families of schizophrenic patients continue to feel that they are criticised in these ways...

I believe that the understanding and care of patients and their relatives is far too important to be trivialised by implying that it is only the inappropriate use of

other peoples' models which add burdens to those whose burdens are already enormous. I can cite examples of relatives and patients who could not bear the burden of being told that the illness was a permanent chemical imbalance in the brain, and others who had been told it is an inherited condition. We should be united in trying to ensure that the nature and quality of the relationships between those who suffer and those who would help is never destructive. The exchanges in those relationships need to be the subject of our concern.

Important as the findings in this book are, more important are the issues it raises incidentally regarding how we think about schizophrenia. How we think is central to what we teach. I fear that the lesson of this book is not liberating.

I have rejected the practice of reification, and of limiting our thinking by confining ourselves in just one model. At the risk of invoking some giggling and nudging, I want to recall a way of thinking developed by von Bertalanffy with his general systems theory.[9] Bertalanffy suggested that systems of any kind, physical, biological, psychological and social, all operate in accordance with the same fundamental principles. This approach enables us to bring together the observations which have been made using all other models. This is not an easy task. It is clear that someone needs to undertake this responsibility. I believe this is the responsibility of the psychiatrist. We divide the care of our patients amongst a team of professionals, each with their own model, and unless we accept our responsibility of seeing the whole patient he remains in a divided state. We need a vision as W. B. Yeats, in his poem, *The Seven Sages*, says when commenting on Whiggery.

> ...But what is Whiggery?
> A levelling, rancorous, rational sort of mind
> That never looked out of the eye of a saint
> Or out of a drunkard's eye.[10]

Given the protean nature of schizophrenia the educational experience offered to our trainees bears testimony more to sectarian interest than it does to the needs of patients and their relatives. We offer them a whirl round a theme park where they have no time to stand and stare. Their visit to each department is so short that they only have time to see other people's mistakes and not their own. If their experience in any one department causes them anxiety they know that within weeks they will be elsewhere and an opportunity to learn is lost. For what, I wonder, are they equipped? Too often they remind me of the Second World War GIs who were given a German phrase book; amongst the phrases was, 'Are they enemy?'[11]

REFERENCES

[1] McGough R. Waving at trains. London: Jonathan Cape 1982.
[2] Bourne H. The insulin myth. *Lancet* 1953; **2:** 964–8.
[3] Ackner B, Harris H, Oldham AJ. Insulin treatment of schizophrenia. *Lancet* 1957; **1:** 607–11.
[4] Ackner B, Oldham AJ. Insulin treatment of schizophrenia. *Lancet* 1962; **1:** 504–6.
[5] Wordsworth W. 1850. The prelude. Book II. lines 216–9 and 212–4.
[6] St Paul. New English Bible. Hebrews, Chapter 11 verse 1.
[7] Davison K, Bagley CR. Schizophrenia-like psychoses associated with organic disorder of the central nervous system: A review of the literature. Current problems in neuropsychiatry. London: Headly Bros. 1969, 113–84.
[8] Fromm–Reichmann F. Notes on the development of treatment of schizophrenia by Psychoanalytic therapy. *Psychiatry* 1948; **11:** 263–73.
[9] von Bertalanffy L. General systems theory. Braziller 1968.
[10] Yeats WB. The seven sages. The winding stair and other poems. 1933.
[11] German Phrase Book. War Department, Washington 1943.