

Comment

From these results it is clear that patients with alcohol/drug related problems and personality disorder are more likely to present and be admitted "out of hours". This pattern has already been recognised in studies of emergency clinics (Lim, 1983) and may in part reflect licencing hours (Mendelson, 1987). Police referrals are also more likely "out of hours". This might be partly explained by delays in securing the attendance of police surgeons and approved social workers, a problem highlighted by Dunn & Fahy (1987).

Blaney & West (1987) found that 94% of their sample were already known to the hospital which contrasts with 47% in this study. In fact, re-admissions were evenly distributed throughout the 24 hour period. Similarly, the patients detained under the Mental Health Act were as likely to be admitted during "routine hours" as "out of hours".

Conclusions

In this service, patients with alcohol/drug problems and personality disorder tend to be admitted as "out of hours" emergencies as do police referrals. They form a large proportion of the emergency work load. The reasons behind this need clarification in order to provide appropriate and accessible psychiatric

services for these groups. Only a small proportion of such cases are admitted from emergency clinics. It is likely that this service admits unnecessarily in some cases instead of diverting into more appropriate channels. However, the relatively low rate of re-referral suggests that a traditional service may not foster the same degree of dependency as do the walk-in clinics. Nonetheless, mounting pressure on beds is likely to make the latter an increasingly attractive option as a more discriminating and accessible filter into available resources.

References

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Personal columns

Pseudo-science?

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Our countrymen, including ourselves, share numerous prejudices.

We are sexist, racist, ageist, chauvinist (an unreasonable patriotism), and classist (by birth, wealth or education). We also share that fear, dislike and rejection of the mentally disordered, which I would like to call the prejudice of 'psychiatrism'. Not only those who suffer are stigmatised – but so are their carers.

The prejudice 'psychiatrism' is widespread in the field of healing in general and in the medical profession in particular. We hear, therefore, that psychiatry is a primitive, less well developed speciality

than other branches of medicine. This view is based on a compelling lack of evidence. When you look at the scientific basis of psychiatry it is remarkable how much is known. In this respect it is second to none when compared to its sister specialities. Equally remarkable is how little of this knowledge seems to be transmitted to many medical students and doctors in training. For instance, textbooks of physiology present a view of the nervous system that is many years out of date. You can only comprehend those things that you know about and can intellectually and emotionally accept.

Auguste Comte, the 19th century French philosopher, perhaps unwittingly, laid a ground for a justification of the prejudice in psychiatry (Comte, 1929). It was Comte who coined the term 'sociology'.

Comte argued that there were three stages in human intellectual development. In the first stage natural events are ascribed to forces comparable to those we seem to see in ourselves – the Greek gods, for example. In the second stage natural events could be seen to be attributed to more abstract concepts such as 'nature' or 'God' as first cause. Lastly, we have the positive or scientific stage when we observe phenomena as discrete entities and discover the links between them.

In these stages he saw the transformation of thought from a theological, through a metaphysical to a positive or scientific age.

So far I would agree with Comte. Much of our thinking in medicine, and indeed in psychology and psychiatry, is based on the metaphysical concept of a mind outside of time and space interacting in a quite mysterious way with the scientific subject, our body, inside time and space.

The positive, or scientific view, is that our mind – the way we think, feel and act – reflects our brain in action. Not merely motor actions but of course those other energetic activities of our cells. If we hold the metaphysical view of behaviour, then a psychiatrist is a metaphysician at best (ie not a "real" doctor), or a charlatan at worst.

Comte believed that not all sciences went along the road from theological to metaphysical to scientific explanation at the same pace. Some sciences always had scientific features but some continue in the metaphysical stage. His hierarchy of sciences from the most to the least scientific were mathematics, astronomy, physics, chemistry, biology, and finally sociology.

However, in my view, Comte fell into error when he considered that according to this hierarchy, mathematics was the most scientific branch of knowledge and that a science was only further along the road from metaphysical to scientific explanation the more that science could be described in mathematical terms. Surely, mathematics is not a science but a specialised language. We must be aware of the nature of this language.

We can suppose that the first shepherdess learnt to count when making a simple census of her sheep. She learnt of length when she wove the wool into cloth and to weigh when she came to exchange the beast's flesh. But it was the greatest conceptual leap of mankind when she went from one sheep plus one sheep equals two sheep to $1 + 1 = 2$.

The mathematics of experience passed into pure mathematics, the language derived from definition or axiom.

Until about 200 years ago our artifacts were created by craftsmanship. This is a compound of the use of simple tools, simple measurements, great

manual dexterity, practical knowledge of materials and a lore of practices passed on by a system of apprenticeship. While craftsmanship survives, we now see our artifacts created by other artifacts and the language we use to model these processes is not now the relatively simple technique of counting, measuring and weighing (though this still plays a critical role) but that language we know as pure mathematics.

Where the world is not open to the direct observation of our senses we rely on our artifacts to see this 'hidden' world. We may believe what we 'see' as with the telescope and microscope, is merely our unaided senses writ large and small.

The more complex and sophisticated our artifacts, the closer does their design model approximate to the language of pure mathematics. Correspondingly the results of these artifacts need must be interpreted by the language of pure mathematics. The thought can intrude, therefore, that all scientific experiment using artifacts is, to some extent at least, self-fulfilling prophesy.

It also then follows that where observations do not require such artifacts it will not be possible to describe these phenomena in the language of pure mathematics. So much of the biological sciences including psychology, sociology, and psychiatry may therefore never be able to justify themselves as fully scientific in Comte's eyes. I argue that Comte's view is based on a misunderstanding of the nature of pure mathematics.

I know it can be said that statistics can be used to study behaviour and other biological phenomena that are open to direct observation.

The everyday observation that a coin comes down heads – roughly as often as it does tails, gives rise to an axiom that embodies these observations and that in an ideal world heads will (eventually) equal tails. We embody these axioms in the language of pure, or idealised, mathematics of statistics. Then we judge reality by how close it comes to a theory derived from reality – this is a form of tautological thinking.

We have, by following Comte, come to need the comfort of the apparent certainty derived from mathematics and will accept anything as long as it looks mathematically, rather than logically, sound. Often such mathematic manipulations act as spuriously rational and objective rationing devices, such as double blind controlled trials and scholastic tests designed to separate out academic sheep from academic goats.

This need for an apparent mathematical certainty leads to errors, such as a false 'quantification'. For example, we can look at a behaviour such as a 'depressive' response, because we use the metaphor 'depth' we naively assume that we can quantify the unquantifiable.

In everyday life we measure depth in fathoms or metres. We can have no units for metaphorical depth

TABLE I

Category	Code I	Code II	Code III
Absent	0	4	-2
Slight	1	3	-1
Moderate	2	0	0
Severe	3	1	1
Very severe	4	2	2

Symptom	Symptom Train					
	A	B	C	D	E	
Code I	1	3	2	4	0	=10
Code II	3	1	0	2	4	=10
Code III	-1	1	0	2	-2	=0
Code I	3	4	3	4	3	=17
Code II	1	2	1	2	1	=7
Code III	1	2	1	2	1	=7

but, undeterred, we use an ordinal scale such as 0 1 2 3 4 to give an illusion of quantity.

These symbols 0 1 2 3 4 can represent: 0 = Absent; 1 = Slight; 2 = Moderate; 3 = Severe; and 4 = Very Severe.

Of course, the symbols 0 1 2 3 4 are not, in this context, natural numbers that can be manipulated mathematically but ideograms or parts of a code standing for a given number of adjectival statements.

If I wished to send messages to a Martian colleague who, while studying depression in earthmen, could not read but understood a symbolic code – it might be appropriate to use a simple code such as that above. Each symptom in a symptom 'train' would be described always in the same order by one of the symbols 0 1 2 3 4, with the meanings I have described. It would quite destroy the sense and purpose of the code if I were silly enough to 'add up' those symbols as if they were natural numbers – to give a score. The score being 0 to $N \times 4$, where N is the number of symptoms described.

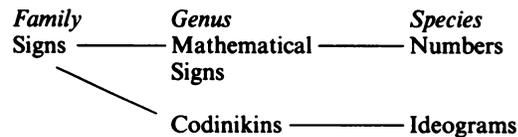
The absurdity of such use of a code is clearly seen in Table I. There I have made up three codes, all of which are equally valid but showing the foolishness of our unselfconscious assumption that whenever we see the symbols, or sign, 0 1 2 3 4 we can treat them as natural numbers when, in fact, in this case they are ideograms in a code!

In rating scales the signs 0 1 2 3 4 . . . are not part of the language of mathematics.

Perhaps we should cast our net a little wider when considering signs. The tyre on my motor vehicle has a 'code' or 'serial number' on it so that we can identify the size, make, type etc. of that product. A unique identity is given to my motor vehicle by its 'number plate'. We could as well use Greek letters and Roman numerals $\alpha\beta\mu\text{ccc}\Delta$, or indeed a musical notation – each car identified by its own melody.

(On occasion a 'serial number' is a true reflection of an order of production but when so used as a serial number it is outside the language of mathematics.)

The reason why we use signs from the written and mathematic languages is that the majority of us can recognise these signs, reproduce them accurately and communicate them unambiguously. I would like to call serial numbers, car number plates, 'identifiers' and the signs that make up such 'identifiers', 'codinikins' or 'codins' for short. Our new classification might be:-



It is not the language of pure mathematics, including statistics, that I quarrel with. I would in no way disparage the beautiful and powerful language we call pure mathematics, a language that provides us with the tools and models to order much of our world beyond direct observation. However, we must not fall into the positivist trap of supposing a science escapes from the appellation 'primitive' only in so far as its findings can be cast in the language of pure mathematics. If we have been so confused by the misbelief that we are only scientific if we use pure mathematics, that we must resort to pseudo-quantification, then we have a sad state of affairs.

If I am right, then an enormous part of the output in psychiatry, psychology, sociology and sister biological sciences is invalid. A great waste of time, effort, resources and talent – the result of trying to outshine a prejudice. Even if I am right, the vested interest in both the prejudice and the work already done could long prevent us shaking off the chains and fetters so ably fixed on us by Comte.

Reference

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