2. *Phonation time vs pause time.* The separate measurement of phonation time and pause time yielded the information that pause time is elongated while the patient is depressed compared to a non-depressed period, whereas phonation time remains constant throughout the period of observation. This is important, since in Parkinsonism, where hypokinesia (or retardation) is one of the prevailing clinical features, both pause time and phonation time change. The pause time itself is probably elongated; this, however, is often obscured by an apparent increase in phonation time due to 'slurring' of the speech (Mawdsley and Gamsu, 1977).

3. *The constancy of both speech measures in healthy volunteers.* We have shown that both phonation times and pause times are constant in healthy volunteers over longer periods, and thus the shortening of pause time with clinical improvement in the depressed patients cannot be due to a 'practice effect'.

4. *Sensitivity of the tests.* The comparison with other tests for motor retardation showed that the measurement of pause time was the most sensitive test, and it could reveal a degree of retardation in clinically non-retarded patients.

In conclusion, we believe that the analysis of the structure of 'automatic speech' in depression can provide information about psychomotor retardation which has not been available so far.

E. Szabadi
C. M. Bradshaw

Department of Psychiatry,
University of Manchester,
West Didsbury, M20 8LR

J. A. O. Besson

Royal Edinburgh Hospital,
Edinburgh

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ANOTHER STYLE OF PSYCHOGERIATRIC SERVICE

Dear Sir,

I read the letters referring to the paper on 'Another Style of Psycho-Geriatric Service' (*Journal*, February 1977, **130**, pp 123–26) with interest. Many of the points made require an answer and further consideration. In attempting to keep the paper short, we did leave out information about the other services in Gloucestershire, which I understand are as follows. Gloucester District, with about 300,000 population, has two geriatricians, 317 in-patient beds and 42 day places. Cheltenham District, with a population of about 200,000, has one geriatrician, approximately 200 in-patient beds and 10 geriatric day places. In Gloucestershire residential homes there are 1,180 places, and some of these take in day residents.

There is a significant shortage of geriatric beds in Gloucester District, and in both Districts there is a significant shortage of geriatric day places and psychogeriatric places.

I meet regularly with the Local Authority Social Services, Home Help Organizers and Matrons of Part III Homes, and the maximum effort is given to helping old people live in their own homes, not just for sentimental or social reasons but because moves to institutional care makes most dementing patients worse. I would like to confirm the valuable work done by the Home Help and District Nurse service in many cases. All the Part III Homes contain a significant number of frail and dementing elderly patients, and the staff of these homes, too, manage many of them remarkably well, sometimes, indeed, better than we have done in hospital. Liaison between psychiatric hospital staff and Part III Homes is encouraged and many patients from Part III Homes attend the Day Hospitals.

Why is it assumed that there is a high degree of selectivity because plans for discharge are made before admission? The alternative is to admit without having any plan for discharge, which is demoralizing for the patient and can lead to misunderstanding with relatives.

Unfortunately, I have been unable to meet my three geriatric colleagues regularly on ward rounds and other occasions and am well aware of differences of opinion between us. However, two of the geriatricians were not in post as consultants when I came to Gloucestershire, and at that time I found that all the psychogeriatric beds were 'blocked', there was a waiting list for admission, and patients were admitted from geriatric services and Part III accommodation by 'swapping'. Quite contrary to the opinions expressed by the geriatricians, I am sure that as long as I have been at Coney Hill Hospital I have been helping the geriatricians by admitting seriously physically ill patients, simply because of their bed shortage. I find it difficult to believe that they are admitting many elderly patients with dementia but without significant physical disease (see H.M.(72) 71, paragraph 25).

The more resources that are locked up in institutions, the less will be available in the community. Is there any hard evidence that would predict the best service to a given community? I hope this debate will continue. May I suggest that we need more facts, more careful comparisons and more research. We can all express opinions and provide horror stories of the failures of other psychiatrists, geriatricians, social workers, etc. We shall make more progress from modest letters, such as that in the *BMJ* (16 April 1977, p 1030) than from Dr Bergman's emotional protests.

Perhaps the most important question is 'Are we trying to provide a medical (and medical institutional) solution to a problem which is primarily social and domestic?'

A. A. BAKER

Coney Hill Hospital,
Coney Hill,
Gloucester GL4 7QJ

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OPERATIONS AND DEFINITIONS: A BRIEF ANALYSIS

DEAR SIR,

Hasenfus and Magaro (1976) explore the possibility that what is operationally defined as the schizophrenic 'deficit' is in some instances equal to what is operationally defined as creativity. I want to explore their use of the concept of operational definition—especially in light of the philosophical tradition which gave it currency.

The original purpose of an operational definition was to give quantitative, measurable meaning to concepts which were otherwise totally intangible. In the face of a philosophy of science which demanded experienced or at least experiencable objects, it was an obvious necessity to tie such terms as gravity, magnetic field and gene to the very objective via measurement. Since my purpose is no more historical than what I have already said, I shall not pursue operationism to its roots (very likely Berkeley).

One of the advantages of an operational definition was its neutrality regarding what is real, what exists. So long as measurements could be made, so long as they 'hung together' coherently, operationally minded scientists were happy.

In general, such scientists shied away from the question: why do your measurements cohere? An answer would either force them to postulate yet another intangible and theoretical construct or else force them to see that without postulating something underlying, none of the operationally defined concepts were related. Without some theoretical concepts how can one be sure, for example, that weight (mass) measured by a spring and measured by a trip balance are really the same?

Given this background, I want to suggest the following about Hasenfus and Magaro. The expression 'what is operationally defined' is ambiguous. It can mean the concept, in this case, schizophrenic deficit or creativity. But it can also mean the actual operation, the test performed. Strictly speaking, only if the tests are identical can the concepts be related. Only if one already has a theory with some non-operationally defined terms can one claim that tests are similar; otherwise each test is necessarily different. The two concepts then cannot be equated—even in some instances—unless one has a theory (a non-operational one) relating the two concepts. It is by equating the test with the concept (when the previously mentioned ambiguity is overlooked) that one is seduced into seeing equivalents or similarities.

Consider now Hasenfus and Magaro's statement that 'both the creative, normal person and the overinclusive schizophrenic respond by giving more responses than the normal subject'. A convenient way to symbolize these statements is:

(A) x is more creative than y = def. x lists more round things than y

(B) w is more schizophrenic than z = def. w lists more round things than z

(1) where y is a normal person and z may be normal
(2) x is also normal; or x's responses are not inappropriate.

Riders (1) and (2) are clearly necessary. There is nothing methodologically incorrect here. What they do show is that, taken strictly, (A) and (B) cannot be related without imposing a theory that speaks to what counts as normal and appropriate. If these terms can be operationally defined, then some value judgements will have been washed out of psychology. But the general problem of operational definitions—no relations without at least postulating some underlying characteristics—will still remain.

Now, I do not think that this is all just so much philosophical verbiage. What Hasenfus and Magaro rather clearly mean by operational definition is not really definition, but rather testability, the ability