IS PSYCHIATRIC TERMINOLOGY A DISTINCT WAY OF CONSTRUING?
A NEW LOOK USING MULTIPLE REPERTORY GRID TECHNIQUES.

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Introduction

In 1973 Agnew and Bannister published a paper in which they used grid methodology to examine the relative merits of the use of psychiatric versus lay terminology by psychiatrists. They argued from their results that psychiatric terminology had neither the stability over time nor the stability between users to qualify as a technical terminology. This result has been used more generally and has lead to powerful criticisms of the language of psychiatry. Citing this paper Bannister and Franscella in their book "Inquiring man" (1986) say:-

"Broadly, what was shown by the study was that diagnostic psychiatry is a pseudo-specialist system. It has the style of a well defined and stable technical language which is agreed between professionals, but when its structure is examined it has all the ambiguities and imprecision of the ordinary language which we use to make psychological judgements about other people"

We report on an experiment that looks at this issue again with special reference to the use of psychiatric terminology by medical students.

Our aims have been twofold. First we will show that although in our design the lay concepts used by Agnew and Bannister are in fact less stable than psychiatric ones there are also other constructs not originally used by them that are as stable as psychiatric ones. Secondly we have used these "live" data sets to demonstrate various methodological issues that arise in the problem of analysing multiple repertory grids. We argue that there are now a large number of more sophisticated techniques available to the analyst of multiple grids (Tschudi, 1989) and that these may be more useful than those available at the time.

Method

Agnew and Bannister asked consultant psychiatrists to use as elements patients that they knew and to rate them on two sets of supplied constructs. A month later they asked the psychiatrists to repeat the ratings on a different set of patients.

Our grids were collected from medical students who were introduced to psychiatry by receiving a week long lecture course followed by an eight week period of clinical experience. We presented the students with a grid of supplied elements and constructs at four key points during their training. The elements used were ten clinical vignettes. Each element represented a case of a recognised psychiatric illness and was presented in lay terms.

The grids were presented at the end of the lecture course and successively at one, two and three weeks of clinical experience. In each case the order of presentation of the elements and constructs in the grid were randomly permuted so that no student received the same order of presentation of elements and constructs as any other student or as at any other time of presentation.

These modifications to the original design were introduced so that we could be sure that the elements were the same on all occasions. We were also interested in the process of acquiring psychiatric terminology and used a student group for this reason but the results relating to acquisition over time are not reported here since it was not easy to see any clear pattern in them.
The constructs were the eight psychiatric and lay constructs used by Agnew and Bannister, and eight further constructs that dealt with both the personal reaction of the student to the cases and with lay conceptions of madness and health. Each grid was thus composed of three subgrids which can be thought of as comprising psychiatric, lay, and personally oriented constructs respectively. An original raw grid is given below. The elements have been labelled with the main psychiatric diagnosis applicable to each vignette.

(table showing grid – page1)

**Data analysis and results**

The method of data analysis replicates and extends that of the original Agnew and Bannister paper using the program Multigrand produced by one of the authors (Finn Tschudi).

First the matrix of intercorrelations is calculated for each subgrid using the Pearson Product Moment correlation and then the correlations are rank ordered and Spearman’s Rho is calculated between intercorrelation matrices. An arguably better statistical method than that used in the Agnew and Bannister paper is to compare whole grids rather than the matrix of correlations.

**TABLE SHOWING INTERJUDGE STABILITY**

<table>
<thead>
<tr>
<th></th>
<th>Agnew and Bannister (Spearman)</th>
<th>Our data (Pearson)</th>
<th>whole grids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatric</td>
<td>0.261</td>
<td>0.320</td>
<td>0.303</td>
</tr>
<tr>
<td>Lay</td>
<td>0.396</td>
<td>0.247</td>
<td>0.232</td>
</tr>
<tr>
<td>personally oriented</td>
<td>-------</td>
<td>0.310</td>
<td>0.353</td>
</tr>
</tbody>
</table>

We find that the psychiatric terminology is more stable than the lay terminology in our students both using the original method and using that of whole grids. However, this may well be due to the difference in methodology between the studies. In our study the students were given written vignettes in which the text was may be said to be biased towards psychiatric details. Furthermore the assessment of the lay constructs depended largely on what the students "read in" to the vignettes. However in our case equal stability was found in the personally oriented constructs which embodied the idea of the personal impact on the student of the cases. This finding therefore is in broad agreement with Agnew and Bannister’s contention that other terminologies can be found that are equally consistent than that of psychiatry even under conditions that would tend to maximise the agreement of psychiatric terms.

Next the stability of the constructs over time was examined.

**TABLE SHOWING INTRAJUDGE STABILITY**

<table>
<thead>
<tr>
<th></th>
<th>Agnew and Bannister</th>
<th>Our Data correlations</th>
<th>whole grids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatric</td>
<td>0.40</td>
<td>0.534</td>
<td>0.736</td>
</tr>
<tr>
<td>Lay</td>
<td>0.41</td>
<td>0.367</td>
<td>0.471</td>
</tr>
<tr>
<td>Personally oriented</td>
<td>-------</td>
<td>0.633</td>
<td>0.777</td>
</tr>
</tbody>
</table>

Again both the method of correlations and the method of whole grids reveal the same pattern, and the difference in values is substantial. Looking at whole grid comparisons the mean over all pairs of occasions (reported above) is slightly greater than the comparison using only
occasions 1 and 4 in almost all cases. Otherwise no clear pattern emerges across occasions.

Interrelationships Between Terminologies (subgrids)
In the original paper the relationships between subgrids could not be evaluated from the perspective of time because of the cross over design of their study. They report average relationships as follows:

<table>
<thead>
<tr>
<th>TABLE OF INTERRELATIONSHIPS BETWEEN TERMINOLOGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>lay</td>
</tr>
<tr>
<td>A&amp;B  ours</td>
</tr>
<tr>
<td>Psychiatric A&amp;B  ours</td>
</tr>
<tr>
<td>Personally oriented A&amp;B ours</td>
</tr>
<tr>
<td>personally oriented ours</td>
</tr>
<tr>
<td>Lay</td>
</tr>
<tr>
<td>0.48  0.36</td>
</tr>
<tr>
<td>Psychiatric</td>
</tr>
<tr>
<td>0.34  0.30</td>
</tr>
<tr>
<td>Personally oriented</td>
</tr>
<tr>
<td>-----  0.29</td>
</tr>
<tr>
<td>oriented</td>
</tr>
<tr>
<td>----  0.31</td>
</tr>
<tr>
<td>0.37</td>
</tr>
</tbody>
</table>

Our data repeats the pattern of the original paper but the correlations are slightly smaller. For the personally oriented constructs no clear pattern to the interrelationships is found but the intercorrelation of these constructs to themselves is in general highest as in the case with the lay and the psychiatric terminologies.

Stability of Individual Constructs
In their paper Agnew and Bannister do not examine the stability of the individual constructs separately. This can be done by computing the intraclass correlation of the constructs (comparing the between elements versus the within elements variation). This is perhaps more statistically relevant in our paper because we have a greater number of occasions to consider. Using this method constructs with particularly high or low stabilities are:

<table>
<thead>
<tr>
<th>TABLE OF STABILITIES OF INDIVIDUAL CONSTRUCTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High stability (0.55–0.73)</td>
<td>Low stability (0.06–0.139)</td>
</tr>
<tr>
<td>neurotic depression</td>
<td>obstinate</td>
</tr>
<tr>
<td>schizophrenia</td>
<td>unreliable</td>
</tr>
<tr>
<td>anxiety</td>
<td>hysteria</td>
</tr>
<tr>
<td>obsessional neurosis</td>
<td>like someone I know</td>
</tr>
<tr>
<td>brain damage</td>
<td>like me</td>
</tr>
<tr>
<td>likely to be mad</td>
<td>like I would to be</td>
</tr>
<tr>
<td>likely to recover</td>
<td></td>
</tr>
</tbody>
</table>

A more sensitive method of examining interrelations between subgrids which also allows individual constructs to be examined is the plot of the whole grid, and this is reported below.

Correlations Between Constructs in the Whole Grid
Agnew and Bannister examine the average matrix of correlations between constructs to discover any significant patterns in construct correlations. The correlations in our data are somewhat different. We find as they do that the correlations within psychiatric and within lay terminology tend to be higher than those between the two sets and this holds for our additional constructs as well. However there are some differences between the correlations that we find and theirs. They report high negative correlations between psychotic depression and personality disorder, and between psychotic depression and hysteria which are not found by us. Also they find negative correlations between brain damage and considerate and between brain damage and generous which we do not find. Furthermore we find some other interesting correlations in our data most notably:
Positive correlations
obstinate and personality disorder
schizophrenia and likely to be mad

Negative correlations
considerate and personality disorder
unreliable and like me
brain damage and likely to recover

Agnew and Bannister comment that there is a general polarisation of the data so that in general the major evaluative dimensions are "good, bad" and "neurotic-psychotic" with neurotic tending to be seen as good and psychotic as bad. To some extent this is born out by the correlations reported above.

However a better method of inspecting the data for such patterns is to use a full PCA analysis and produce a plot of the major dimensions. This may be done in a number of different ways. A plot of the mean grid may be produced or a plot of the means of the constructs in a grid strung out by elements. Clearly it would also be possible to plot the means of the constructs in a grid strung out by elements but since in this case the elements are held constant this is less likely to be valuable. In fact in this case the plot that is most informative is that of the mean grid. This is presented in a cut down form so that only the most important constructs are included.

(plot 1)

The plot shows that there are two major axes of construing. The first component is formed of the ideas "schizophrenic", "likely to be mad" and "unreliable" at one end and "like me", "like I would like to be", "anxious" and "likely to recover" at the other. The element representing a schizophrenic patient is at one end and the element representing normal bereavement at the other. This dimension appears to be equivalent to the neurotic psychotic dimension described by Agnew and Bannister. It does include evaluative constructs but these are not really "moral" but rather with predictions of likely behaviour, likelihood of recovery and relative undesirability of the state.

The second dimension is more overtly moral. It is composed of "most personality disordered" and "most obstinate" at one end and "most generous", "most likeable" at the other. The personality disordered patient is at one extreme of this construct and the demented patient at the other. This dimension is therefore concerned with the concept of responsibility for illness behaviour and "morality" It is worth noting that the construct "most needs to pull themselves together" contributes both to the "well" end of the first component and to the "responsible" end of the second.

The important methodological point to be drawn from this plot is its extreme usefulness in allowing one to tease out the dimensions of construing used by the subjects in a far more subtle fashion than a simple examination of the matrix of correlations. It is even possible to discern a third component (not represented here) that may be related to the concept of introversion and extroversion.

Discussion

In this paper we have attempted to show how the use of more
sophisticated techniques of analysis can now be applied to data collected in grid form and we have shown the application of these techniques to an extension of a design used by Agnew and Bannister.

It is clear from our data that the lay constructs are used less consistently than the psychiatric ones. However we have found a set of constructs that are used as consistently and those are the ones that we have termed "personally oriented". Nevertheless examination of the use of these constructs reveals that even these are not entirely satisfactory and this raises the issue of the method of eliciting them. A future project would centre on eliciting a different set of lay\personal constructs possibly using the element set and a standard triadic elicitation system on lay persons or using interview techniques (Stewart and Stewart 1981)

Looking at the stability between raters and over occasions in our data it is worth noting that the intra individual differences are substantially greater than the inter individual differences. This implies that there are real inter individual differences in usage that will be explored at a later occasion.

There are many other analysis options in the multigrid package that we might have used and some of these offer interesting possibilities for future research. It should be possible to look at the different stabilities of the elements over all or selected constructs and to subject the grids to the method of analysis called Sociogrds.

We have concentrated on comparisons between whole grids strung out but there are other methods of stringing out grids either by elements or by constructs. If the grids are strung out by constructs it is now possible to produce joint plots of the grids showing the contribution either of individuals to the whole grid or of occasions to the whole grid. Indeed Agnew and Bannister comment in their paper that the correlations between constructs on the mean grid hid a large amount of interindividual variation in construing that might have been significant.

A relatively unexplored option in comparing multiple grids centres not on the idea of stringing them out but of rotating them into a mutual space using the procrustes method (Cliff, 1966). This method might reveal interesting patterns in the data and also give some leverage on the vexing problem of the appropriate number of dimensions to be considered in analysing data.

Clearly then there are many further avenues to be explored. We are already able to conduct a much more thorough analysis of the data than was possible earlier. The development of sophisticated packages for analysing repertory grids on small easily affordable PC computers has made it possible at last to expose and exploit the full value of this technique. However it has also brought in its wake a whole host of methodological issues which it is now possible to attempt to resolve using real data sets. An example of this is current work on comparing the approach to multiple grid analysis embodied in the multigrid package with three mode factor analysis (Eckblad and Tschudi in preparation).
References


<table>
<thead>
<tr>
<th>CONSTRUCT</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>most generous</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>most obstinate</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>4</td>
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</tr>
<tr>
<td>most considerate</td>
<td>3</td>
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<td>4</td>
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<td>2</td>
<td>2</td>
<td>2</td>
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<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>most unreliable</td>
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<td>2</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>most likeable</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>most nature</td>
<td>7</td>
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<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>most submissive</td>
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<td>4</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

- **most neurotic depression**: 9 | 4 | 4 | 4 | 1 | 1 | 2 | 2 | 2 | 4
- **most personality disorder**: 10 | 4 | 4 | 2 | 1 | 2 | 2 | 2 | 4 | 2 |
- **most schizophrenia**: 11 | 1 | 1 | 2 | 5 | 2 | 4 | 2 | 2 | 1 |
- **most anxiety**: 12 | 4 | 5 | 4 | 1 | 4 | 2 | 1 | 4 | 1 |
- **most psychotic depression**: 13 | 4 | 4 | 1 | 1 | 5 | 1 | 1 | 1 | 1 |
- **most hysteria**: 14 | 3 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 1 |
- **most brain damaged**: 15 | 1 | 1 | 2 | 1 | 1 | 4 | 1 | 1 | 3 |
- **most obsessive**: 16 | 3 | 3 | 4 | 1 | 4 | 3 | 1 | 5 | 1 |

- **most likely to be mad**: 17 | 2 | 1 | 2 | 5 | 4 | 5 | 5 | 2 | 1 |
- **most needs help**: 18 | 4 | 2 | 4 | 5 | 4 | 5 | 2 | 4 | 1 |
- **most likely to recover**: 19 | 3 | 3 | 3 | 1 | 2 | 3 | 3 | 5 | 4 |
- **most likely to be ill**: 20 | 4 | 3 | 4 | 5 | 4 | 4 | 4 | 2 | 2 |
- **most pull together**
- **most like someone I know**: 22 | 4 | 2 | 2 | 1 | 2 | 4 | 4 | 4 | 2 |
- **most like me**: 22 | 4 | 4 | 3 | 1 | 3 | 2 | 1 | 4 | 4 |
- **most like I want to be**: 24 | 3 | 2 | 3 | 1 | 2 | 3 | 2 | 4 | 4 |

- **personality disorder**
- **bereavement reaction**
- **obsessional neurosis**
- **dementia**
- **hysteria**
- **psychotic dementia**
- **schizophrenia**
- **anxiety syndrome**
- **neurotic depression**
- **alcoholism**
PLOT OF MEAN GRID NONROTATED RESULTS
GRID title: ches all grids (MEAN GRID)
PLOT - unrotated results 10 s picked as an IDEAL. Reflection of axis 1
only contrasts

19 most likely to recover
21 most pull together
10 most pd
5 most unreliable
2 most obstinate
12 most anx
23 most like me
24 most like to be

COMPONENT 2

2: J Personality disorder

23, 24 E

-------------------------------

I H

18, 11 E psychotic dem

F

D

H obsessive

17 F hypomania

1 E

6

6 most likeable

1 most generous

15 most dbamage

11 most scn

18 most needs help

17 most likely to be mad

20 most likely to be ill

*******************************************************************************