

# A FRAME OF REFERENCE IN THE OBSERVATION OF INSTITUTIONALIZED SUBNORMALS

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## Introduction

As the result of his social experiences every individual develops a certain frame of reference. He accumulates in this model of thinking his knowledge of men. It serves as background in his evaluation of the behaviour of other people.

This frame of reference is even more striking in people from whom — for various reasons — statements about other people are expected; for example, the teacher who judges his pupils according to a certain perspective, the manager who judges his personnel according to certain intrinsic standards, etc. The use of such a subjective and for the most part unconscious frame of reference is the source of much vagueness. For this reason, it is sometimes rejected. One then tries to think in objective categories, for instance in the sense of the “interaction process analysis” of Bales (1951).

An alternative possibility is to try to make the subjective frame of reference explicit. It is possible, for instance, to look for the dimensions in which an individual — or a group — thinks about others. This method has at least the advantage that it makes clear “what is happening in reality”.

## The Problem

This paper is concerned with the question of which factors play a role in the institutional staff's judgements of — and therefore the education of — institutionalized subnormals. The problem is how to determine the staff's frame of reference.

## The Subjects

The population used in this research comprised 100 slightly feeble-minded children (39 girls, 61 boys) aged 8 to 21. Most of these children came from an asocial background. They were residents of an institution sometimes for a period of years.

## The Sample of Items

Behaviour characteristics of the children were recorded, to the extent that they were expressed in interviews with the staff of the institution. This proved to be far from easy, because the members of the staff had not previously realized what characteristics played a role in the behaviour of the children.

Finally, however, a list of 67 items was obtained. This list included besides behaviour characteristics, a number of items regarding the children's appearance as well as their age and sex.

## The items (1)

- |   |                              |
|---|------------------------------|
| 1. sex                                    | —7. defective speech         |
| 2. age                                    | —8. thumb-sucking            |
| —3. abnormally short                      | —9. enuresis                 |
| —4. uncommon posture or manner of walking | —10. epileptoid              |
| —5. uncommon physical proportions         | 11. no sense of time         |
| —6. awkward locomotion                    | —12. bad memory              |
|   | —13. bad spatial orientation |

- |  |   |
|--|---|
| 14. persevering                              | 40. aggressive                                |
| 15. insensitive                              | 41. manual facility                           |
| 16. easily aroused sexually                  | 42. slow to adjust                            |
| —17. greedy about food                       | 43. afraid in new situations                  |
| —18. desire for luxuries                     | —44. difficulty in teamwork                   |
| 19. desire for ornaments and make-up         | 45. discontented                              |
| 20. excessive urge to smoke                  | 46. unmanageable                              |
| 21. covetous                                 | 47. dependent                                 |
| 22. active                                   | 48. spontaneous                               |
| 23. takes initiative                         | 49. friendly                                  |
| 24. lazy                                     | 50. attracts attention deliberately           |
| 25. apathetic                                | 51. obliging                                  |
| 26. interested in sports                     | 52. thieving                                  |
| 27. inventive, creative                      | 53. lying                                     |
| 28. slow in doing jobs                       | —54. sadistic                                 |
| —29. slow in becoming accustomed to new work | 55. careless                                  |
| 30. willing to listen to reason              | —56. depressive                               |
| —31. unrealistic                             | 57. cheerful, gay                             |
| —32. awareness of own handicap               | —58. tattler                                  |
| 33. no self-criticism                        | 59. clinging                                  |
| 34. no independent opinion                   | 60. limited in social relations               |
| —35. exaggerated self-esteem                 | —61. autistic                                 |
| 36. inability to see things in perspective   | 62. limited interests                         |
| 37. suggestible                              | —63. infantile interests                      |
| 38. rapid changing of mood                   | 64. interested in animals                     |
| 39. no self-control                          | 65. interested in music                       |
|  | 66. unreliable about transmitting information |
|  | 67. not self-reliant                          |

(1) The items preceded by a dash were noted but could not be incorporated into the analysis (see below).

### Factor analysis

The items which were investigated refer to definite behaviour characteristics. It is possible to detect a certain underlying basic structure among these characteristics existing in a limited number of dimensions or factors.

The supposition is that these factors, taken together form a model, a frame of reference, which accounts for the behaviour of the children. Each factor represents a piece of homogeneous behaviour.

For example, a child who is good in arithmetic (1), can easily and fast solve abstract problems (2) and manifests a certain activity and creativity in reasoning (3).

Suppose furthermore that it can be said that the child is depressive (4), emotionally unstable (5) and sensitive (6).

Thus we have six statements about the child. In reality however only two things are said, namely that the child is intelligent (1+2+3) and neurotic (4+5+6). In our example intelligence and neuroticism are the two basic dimensions or factors which account for the six behaviour characteristics of the child.

Each factor can be considered as having two poles.

Every child can be placed between those poles according to the behaviour to which the factor refers. On the factor intelligence a bright child can be placed nearer the "intelligent pole", a feeble minded child nearer the "dull pole".

By describing the factors (via their poles) insight can be gained into the etiology of behaviour.

## Procedure

The children were rated on the items for presence or absence of the particular behaviour. At least three staff-members rated each child, and agreement was reached by simple majority decision. From these ratings the relations between the items were computed.

Since the items were dichotomized, tetrachoric coefficients of correlation were computed ( $\cos\pi$ ). Because the reliability of this coefficient decreases as the skewedness of the distribution increases, a maximum skewedness of 30-70 was fixed as a limit. For this reason, several items could not be incorporated into the analysis.

The relations between the items were less important than the basic pattern of dimensions underlying. To detect these basic dimensions the correlations between the items were factor analysed.

A principal component analysis (communalities 1) was followed by varimax rotation. We found orthogonal dimensions which were statistically independent; whether they are psychologically independent remains a matter for discussion.

According to the eigenvalues four factors, which account for 66.30% of the total variance were rotated. In addition six factors were rotated; the percentage of variance that is accounted for then increases to 78.90%. The pattern of the first four factors does not alter in this case. The two extra factors are rather specific and difficult to describe.

It is believed that this method has succeeded in detecting a basic pattern of dimensions, i.e. a frame of reference consisting of four basic dimensions. Two extra dimensions will be described separately.

## The Dimensions

The located dimensions will be described in three phases as follows:

- A: The factor pattern will be reproduced, limited to the items having a load of .50 or more.
- B: A verbal description of the dimensions.
- C: A brief comment.

### I. *Intelligence* (24.42%)

- A: 12. bad memory .89
- 36. inability to see things in perspective .86
- 34. no independent opinion .86
- 67. not self reliant .80
- 11. no sense of time .79
- 41. no manual facility .78
- 62. limited interests .76
- 47. dependent .73
- 23. takes no initiative .70
- 19. no desire for ornaments and make-up .68
- 28. slow in doing jobs .66
- 60. limited in social relations .65
- 25. apathetic .65
- 42. slow to adjust .64
- 14. not persevering .63
- 33. no self-criticism .60
- 22. inactive .58
- 51. obliging .55
- 27. not inventive, creative .53
- 43. afraid in new situations .53

- B: This dimension concerns children with relatively bad memory in whom the sense of time is underdeveloped. They are unable to see things in perspective, have no opinion of their own, they are not self-reliant.

These children are inactive and not creative, they have very little perseverance and self-criticism. They are apathetic and slow in doing jobs. They have no desire for ornaments and make-up. Their interests are limited and they lack manual facility. Their social contacts are limited, they are slow to adjust and afraid in new situations. On the whole, they are obliging.

C: This dimension is called **intelligence** (dullness). It agrees with the factor intelligence which Cattell (1957), for instance, located in ratings. Initiative, activity, and wideness of interests are among its inherent characteristics.

II. *Vital and egoistic needs* (13.28%)

A:	53. lying	.90
	20. excessive urge to smoke	.82
	66. unreliable about transmitting information	.77
	37. suggestible	.74
	16. easily aroused sexually	.68
	52. thieving	.65
	59. clinging	.58
	65. interested in music	.54
	33. no self-criticism	.53

B: This dimension refers to children who lie easily and who are not very reliable in transmitting information. They steal, show an excessive urge to smoke and are easily aroused sexually. These children are suggestible and clinging. In general they do not show self-criticism. They are interested in music.

C: This dimension assembles items with regard to vital and egoistic needs. It concerns items especially studied by Heymans and Wiersma (1909).

III. *Agreeableness* (13.67%)

A:	57. cheerful, gay	.92
	48. spontaneous	.87
	49. friendly	.77
	22. active	.62
	42. not slow to adjust	.60
	25. not apathetic	.59
	16. not easily aroused sexually	.52

B: This dimension describes the cheerful, gay, spontaneous, and friendly child that is active and ready to adjust to a situation. These children are less easily aroused sexually.

C: The dimension agrees in many aspects with the factor **agreeableness**, located by Tupes and Christal (1958). It also has some resemblance to the factor **surgent** (Cattell, 1957). There is some agreement with **extraversion** and factor "c" of Garnett (1918). See also Richards and Simons (1941).

IV. *Excitability* (14.93%)

A:	46. unmanageable	.93
	39. no self-control	.81
	40. aggressive	.76
	50. attracts attention deliberately	.67
	38. rapid changing of mood	.66
	51. not obliging	.64
	45. discontented	.64
	15. insensitive	.55
	64. interested in animals	.53
	1. boy	.50

- B: The type of child characterized by this dimension is the unmanageable, aggressive child lacking self-control. These children attract much attention and are not very obliging. They are insensitive and unstable. They are interested in animals. This dimension plays a more important role in the behaviour of boys than in the behaviour of girls.
- C: The term excitability for this dimension is employed in the usual sense (Cattell, 1957).

The two extra dimensions are the following:

V. *Age*

- A: 30. willing to listen to reason .89  
 59. not clinging .54  
 43. afraid in new situations .51  
 2. older children .51

B: These children listen to reason more readily; they do not show the tendency of feeble-minded children to cling but are afraid of new situations. This dimension concerns older children.

C: Interpretation can only be very speculative and will therefore be omitted.

IV. *Sex*

- A: 1. girl .94  
 64. not interested in animals .71  
 26. not interested in sports .61

B: Tentatively called "sex"

C: No interpretation

**Conclusions**

We have illustrated how it is possible to detect the observers' frame of reference, by analysing their statements.

Each subject in a population or a sample of it receives a score on a sample of items. In our case this was done by rating. By taking these scores as a starting point, it is possible to compute the relationship between the items. By factor analysing relationships between scored items it is possible to detect underlying patterns of dimensions which could account for these relationships.

This underlying pattern seems to serve as a frame of reference which is of an explanatory and, perhaps, even causal kind with respect to these observations.

The frame of reference we detected in an institution for mental subnormal children consists of four dimensions: intelligence, vital and egoistic needs, agreeableness, and excitability.

**Remarks**

It must be stressed that the frame of reference discussed above is related to the way in which the staff of the institution judges their children. It does not refer primarily to real characteristics of the children but rather to characteristics as seen through the eyes of the staff.

To obtain some idea of the real characteristics, the rating procedure can be amplified by questionnaires and objective tests. Another refinement consists of intercorrelations of the raters followed by a cluster analysis. A factor-analysis can then be applied to each cluster, possibly followed by canonical analysis.

### **Relation of our findings to clinical practice and practical work**

It is common in clinical practice and practical work that everyone who has to do with feeble-minded children uses his own theories, experiences and prejudices in describing their behaviour which moreover he describes in his own words.

It is clear that this practice is not a sound basis for the development of educational and therapeutic procedures.

This research has set up a frame of reference which refers to the opinions of the staff of the institution as a **group**. In other words we have detected the **communis opinio** with regard to the children's behaviour.

As a result a simple frame of reference was obtained consisting of four (or six) items, which can be used instead of the original 42 items. These four (or six) items account for a great deal of the children's behaviour.

The model is easily conveyed and could be a basis for the development of theories and for diagnostic, pedagogic and therapeutic activities. If in comparable institutions comparable models can be found, it would be of interest to compare these models. Out of these comparisons further conclusions can be drawn with regard to theories and the treatment of mentally subnormal children.

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