Mean Frequency of Compensation as a Critical Sample Descriptor for Studies using the Personality Assessment System

D. R. Saunders
MARS Measurement Associates

The concept of "compensation" plays a central and distinctive role in the Personality Assessment System (PAS). According to Winne & Gittinger (1973, p. 18), compensation is simply "the tendency to acquire the orientation and attributes of opposite primitive tendencies." They go on to observe that, "obviously some compensation is necessary for adequate functioning" of the individual. Operationally, when PAS interpretations are derived from the Wechsler subtest battery, compensations are inferred from the patterning of scores on Arithmetic, Similarities and Picture Completion, in relation to Normal Level, Block Design and Picture Arrangement, according to rules already spelled out in sufficient detail for computer programming. When this scoring process is complete, an individual may be characterized (in part) by the presence or absence of compensation in each of the three major dimensions of personality employed by the PAS. A very rough measure of the potential adequacy of this individual may be obtained by simply counting the number of these compensations tat are present; this count must yield either 0, 1, 2 or 3. When such a count is average across a sample of subjects, we will refer to the result as the "mean frequency of compensation," or simple the MFC of the sample.

It is not expected that an individual's personal "frequency of compensation" will add anything to the PAS interpretation that could be made of his/her Wechsler profile without it; obviously, an individual FC contains no new information and confounds old information. At the sample level, however, MFC may be a useful statistic just because it is still closely relevant to the PAS point of view and does not require the sample to be subdivided for analysis. No other simple statistic possesses both of these properties. Moreover, it is relatively easy for novices in the PAS to appreciate the potential import of MFC, so that essentially equivalent indices have been (re)invented by several investigators.

Our purposes in this paper are (1) to place on record some representative empirical values of MFC, based on large samples, and (2) to illustrate the utility of MFC through critical examination of two recent studies that intended to provide critical tests of the PAS.

Method and Results

Over the course of many years we have collected Wechsler subtest data representing over 34,000 individuals. We have administered some of these tests, but the bulk have been acquired from other investigators, who gathered them originally for a wide variety of purposes. It has been possible, by storing all these data as a single computer file, to search efficiently for other examples of any give Wechsler profile configuration, and thereby to generate descriptive statistics which suggest behavioral implications for the given profile. The analysis to be reported here is merely a by-product of this file, and is far less complex.

Each record in the large data-base already includes a computed value for NL29 (Krauskopf & Saunders, 1994), and a computed PAS profile

classification based on the pattern of subtest deviations from this NL. For this study, a simple program was written to count the number of compensations present in one profile at a time, to tally these counts across various samples pre-defined by the file structure, and to calculate MFC and its standard error for each such sample.

Table 1 reports the results for 14 samples of general interest, each of which includes at least 200 cases. This table is arranged according to the magnitude of MFC in the next to the last column. It should be noted that "all hospitalized" includes alcoholics, neurotics and psychotics, together with other hospitalized cases irrespective of diagnosis. Similarly, "all criminals" includes burglars, drug users and violent criminals, together with other criminal cases irrespective of crime committed. Otherwise, the samples reported in Table 1 are non-overlapping.

Discussion

Almost all of the possible group comparisons deriveable from Table 1 are "statistically significant." In vies of the relatively large samples, this observation may overstate the case for "practical significance." However, it is perfectly clear that MFC tends, as expected, to reflect some aspect of the typical personal-social adequacy of members of these groups.

Perhaps the most fundamental norm in Table 1 is provided on the third and fourth lines. These data are derived from age and occupationally stratified quota samples of the American and Japanese populations, respectively, and do not differ statistically from each other. Treating this common norm as the psychologically neutral point or zero, higher values of MFC can be interpreted as effects of positive selectivity for adequacy, and lower values as effects of adverse selectivity. A review of the table from this perspective should cause relatively little cognitive dissonance.

In particular, we have no reluctance in applying the indicated interpretation to the small "liberal arts college" reported on line 10 of Table 1. This is virtually a 100 percent sample of this student body accumulated over several consecutive years. The data were collected precisely because the college administration perceived a "high" proportion of problems among their students and sought preventive strategies. The data are no longer typical of this school, which shall remain nameless.

On the other hand, we are definitely hesitant to apply this *interpretation* to the female data on line 6, although the *numbers* shown there appear entirely reasonable. The difficulty is that there is a distinct sex difference in the proportions of "high" and "low" Block Design scores (females have more low scores) *and* actually it is generally socially preferable for low BD scores to remain uncompensated. Thus, a lower MFC for females may easily represent the same level of social adequacy as a slightly higher MFC for males. Except for lines 1, 6 and 10, the date are predominantly male.

An Implication for Dees' Study

In his dissertation Dees (1977) sought an explicit test of the PAS through multivariate comparisons of a normal control group (N=1500) and a hospitalized group (N=400). Both samples were drawn from pre-existing files. Dees' hospitalized sample seems typical enough; scoring his cases with our program yields MFC = 1.430. On the other hand, Dees' control sample yields MFC = 1.396, which is far below the appropriate norm and is even below Dees' own hospitalized sample. All of the cases in this control sample were volunteers tested for practice by graduate students learning to administer the WAIS. Thus, we cannot even be sure that this sample is representative of the school from which the volunteers were drawn. However, whatever else may be said, Dees' control sample is obviously deficient by comparison with general

norms in well-compensated test protocols of the sort that might be easiest to distinguish from hospital patients. We are not surprised that Dees reported negative results.

An implication for Turner's Study

Turner, Willerman Horn (1976) also sought explicit tests of the PAS, through correlational and discriminant analyses against the MMPI and 16PF. Their data were obtained through the Texas Adoption Project (Horn, Loehlin & Willerman, 1976), using a sample of 215 prospective adoptive parents seen as part of an application process. Turner did not respond to our request for raw data, but he has reported enough numbers (Turner, et al, 1976, p. 639) to permit a calculation of MFC; their result is 2.019 -+ 0.042. In the context of Table 1, this can only be called spectacularly high. No matter what we take to be the norm, the PAS implication is that this sample is strongly *over*compensated.

As Winne and Gittinger have already noted (1973, p. 20), When the intensity of compensation is great, acute defensiveness, operating at an unconscious level, is likely to result. This is precisely what Turner, et al., have unexpectedly observed (1977, p. 639) in correlating the 16PF with the PAS. Turner's predictions as to which 16PF scales should correlate with the PAS measure of compensation were essentially correct, and were confirmed by his own F-tests. (Of course, these F-tests are equivalent to *two*-tailed t-tests of the same hypotheses.) Turner's conclusion that these results did not support the PAS obviously reflects his feeling that the observed highly significant differences were in the wrong direction, even though one-tailed tests were not conducted. Our conclusion, in view of the obtained MFC for this sample, would have been that even the signs were correctly predicted by the PAS. The fundamental difficulty, of course, is the assumption that a sample of prospective adoptive parents is representative of the general adult population; MFC makes it clear that it isn't.

References

Dees, J. F. (1977) Gittinger's Personality assessment System: An empirical analysis. Doctoral dissertation, University of Southern Mississippi. *Dissertation Abstracts International, 38B,* 2345.

Horn, J. M., Loehlin, J., & Willerman, L. (1976) Texas Adoption Project, *Behavior Genetics, 6,* 109. (Abstract)

Krauskopf, C. J. & Saunders, D. R. (1994) *Personality and Ability: The Personality Assessment System.* Lanham, MD: University Press of America.

Turner, R. G., Willerman, L. & Horn, J. M. (1977) A test of some predictions from the Personality Assessment System. *Journal of Clinical Psychology, 32,* 631-643.

Winne, J. F, & Gittinger, J. G. (1973) An introduction to the Personality Assessment System. *Journal of Clinical Psychology,* Monograph Supplement, No. 38, 1-68.

Table 1

Mean Frequency of Compensation (MFC) for Selected Samples

	Compensations						
	0	1	2	3	N	MFC	s
A state university	140	661	735	247	1783	1.611	.019
A city civil service	109	479	529	158	1275	1.577	.023
WAIS male norms	74	338	329	109	850	1.556	.028
Kodama-WAIS males	50	225	235	78	618	1.552	.033
Alcoholics	71	157	172	64	464	1.494	.042
WAIS female norms	105	331	318	96	850	1.476	.029
Neurotics	82	228	219	73	602	1.470	.036
All hospitalized	395	1101	1000	305	2801	1.434	.016
Psychotics	124	371	337	85	917	1.418	.028
A liberal arts college	97	310	271	54	732	1.385	.030
All criminals	218	467	364	117	1166	1.326	.026
Burglars	76	114	112	28	330	1.279	.050
Drug users	48	104	73	21	246	1.272	.056
Violent criminals	63	131	85	30	309	1.265	.051

Note: MFC = Mean Frequency of Compensation; s = standard error