

article

## **Personality Differences Between the Players of String, Woodwind, Brass and Keyboard Instruments, and Singers**

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Although a kind of folklore persists within the music profession concerning temperamental differences between various types of instrumentalists, no study has been set up to empirically test these claims. Several researchers engaged in other questions have, in passing, shown that personality differences do exist, although in some cases their samples were dangerously small (Cooley, 1961; Kaplan, 1961; Kemp, 1971; Sample and Hotchkiss, 1971; Krueger, 1974; Martin, 1976; Davies, 1978).

The brass player emerges as the one with the most clearly defined pattern of traits. Kaplan (1961) showed them to be 'turbulent' (Profile A of the Manifold Interest Schedule, Heil, 1959), a type characterized by aggression and lack of sensitivity. Furthermore, he showed that high achievement in brass playing was dependent upon self-confidence, whereas high sensitivity proved to be counterproductive. Davies (1978), using the Eysenck Personality Inventory (Eysenck & Eysenck, 1964) found adult brass players to be extroverted, and identified polarized sets of attitudes between brass and string players in a professional orchestra. As far as string players are concerned, Kemp (1971) and Martin (1976) identified introversion as the most important element within their personality profiles. On the other hand, Davies considered anxiety to be their most salient characteristic.

Perhaps because of the greater diversity a less consistent picture has emerged for woodwind players. Davies found the woodwinds to be the most introverted and adjusted of the three groups, and Martin, while confirming their introversion, coupled it with weaker moral upbringing (G- and Q3-). On the other hand, Kaplan made the opposite claim, finding high levels of control.

These three orchestral groups, while displaying intergroup differences, may possess common traits when compared with nonorchestral musicians. The kind of control and discipline to which the orchestral musician is subject may, for example, reveal itself in conservatism. Keyboard players and singers might be expected to reveal traits such as radicalism, imagination, and sensitivity due, perhaps, to the retention of their musical autonomy in interpretative matters. Kemp (1971) found these very traits in a group of student pianists, but suspected that the profile has been influenced by the number of composers included in the sample.

Singers are unique, being required to project their own personalities rather than that of an instrument. Peter Pears (1978) referring to Kathleen Ferrier,

made this point. "A violin is played by a person; a piano is played by a person; but a voice is a person." For success in situations in which s/he may feel particularly vulnerable, the singer may prove to possess a somewhat extroverted and independent temperament. Indeed, Cooley found student singers to be self-confident and at a level higher than for any orchestral group. Several traits (A, F, H and Q2-) with high loadings on extroversion were identified in Martin's similar sample but not at such high levels as in his brass players.

Interesting though these results are, they must be viewed with caution. Drawing together results emerging from the use of different inventories is a dubious activity, and besides the restricted size of some samples, some of the data were not tested statistically.

## METHOD

**Subjects:** Six hundred thirty full time music students from twenty British colleges and universities completed forms A and B of the 16PF questionnaire (1968 Anglicized Edition). Subjects, between 18 and 25, were assigned to one of five groups (strings, woodwind, brass, keyboard, and singing) based on their principal instrument.

**Procedure:** The raw scores of the 16PF (A and B scores aggregated) were subjected to the Multivariate Analysis of Covariance program of SPSS (Nie et. al., 1975). In accordance with the view expressed by Eysenck and Eysenck (1969), age, sex, and educational level were entered into the analyses as intervening variables. The MANOVA program of the SPSS constructs a vector variable for a set of dependent variables like those of the 16PF. The locations of groups of subjects are then compared on this vector and in these terms the discriminating power of the whole set of dependent variables can be identified. Wilks' Lambda ( $\Lambda$ ) is the statistic used to describe the ratio of within-group variance to total sample variance, its size being inversely related to its significance. Using Rao's F approximation, the level of probability can be determined. Having established the degree of confidence in the discriminating power of the whole battery, the univariate levels of significance for the individual 16PF primary traits can be given consideration.

Separate analyses were carried out in which each group was contrasted with the residue of the whole sample.

## Results

Where significant group differences were restricted to a small number of primary factors, as with the string and woodwind players (see the table), the large numbers of nonsignificant variables clearly militated against the emergence of a significant F ratio at the multivariate level. Nevertheless the string player's aloofness (A-), one of the key primary factors involved in introversion, supported the earlier findings of Kemp (1971) and Martin (1976). The consistency of these results, which were also confirmed in a sample of school

children (Kemp, 1979), suggests that this particular trait of detachment and critical awareness is important in the development of string playing skills. Some further analyses showed that aloofness was particularly apparent in cellists and that viola players tend to be more emotionally stable (C) than other string players.

The group of woodwind players lent some support for the claim of Martin (1976) and Davies (1978) in displaying shyness (H-) and self-sufficiency (Q2), traits closely linked with introversion. The apparent disagreement between Kaplan (1961) and Martin (1976) concerning control in woodwind players was unfortunately not resolved by these results. However, radicalism (Q1), a key factor in the second order factor of subjectivity, was a significant trait. Some evidence of further subjectivity was found in the flautists who showed high levels of imagination (M).

As expected, a very distinctive pattern of differences emerged for brass players. Their somewhat lower intelligence (B-) and lower sensitivity (I-), traits which have been established as important in most groups of musicians at the opposite pole (Kemp, 1979), would seem to be the basis of the polarized set of attitudes between Davies' (1978) brass and string players. Although no overall trend towards extroversion of the kind claimed by Martin (1976) was apparent, nevertheless the traits of surgency (F) and group-dependence (Q2-) did emerge. In the light of the present results, Kaplan's (1961) description of brass players as uninhibited and insensitive would appear to be particularly appropriate.

The profile of keyboard performers showed that Kemp's (1971) earlier results were indeed contaminated by a "creativity" profile. Here, the profile featured several creativity traits at their opposite poles including extroversion (A and Q2), adjustment (Q3 and Q4-), good upbringing (G and Q3) as well as conservatism (Q1-) and submissiveness (E-). The suspicion that keyboard musicians may be naturally temperamentally suited to composition can be dismissed in the light of these results. Any connection between the two criteria would appear more likely to be cognitive than temperamental.

The extroversion of the keyboard musicians is consistent with their frequent solo performing situation. However, their conservatism and submissiveness suggest a different side of their personality and one rather more difficult to interpret. It is conceivable that these qualities, in combination with tranquility (Q4-) and the controlling influence of factors G and Q3 describe an admirable temperament for accompanists. This more subservient role in music-making would clearly be facilitated by a dependable, responsible, and relaxed temperament. The shrewdness (N), perhaps suggesting a more competitive disposition, appeared to be rather more linked with organists than pianists.

The singers' profile clearly upheld Cooley's (1961) and Martin's (1976) findings in featuring all the primary traits of extroversion (A, F, H and Q2-) although it did not substantiate Martin's claim that the level was lower than

that of brass players. In a similar way, the present sample revealed more evidence of independence (E, F, H and L) than had been identified by Martin. The singers' high levels of sensitivity over and above that of instrumentalists, provides some empirical support for Cleall's (1979) claim that singing makes for a more sensitive musician.

Interestingly, we also found from our small sample of professional singers that they were extroverted (A, F and H).

## CONCLUSION

It must be remembered that these patterns of differences are deviations which occurred within a large sample of music students which itself had displayed a number of significant differences from a group of nonmusicians (Kemp, 1979). The whole sample's pattern of introversion (A-, F- and Q2), anxiety (C-, O and Q3), pathemia (I and M), intelligence (B), and good upbringing (F- and G) when viewed against the British Undergraduate Norms (Saville and Blinkhorn, 1976) was generally retained by these various instrumental subgroups. Only in terms of surgency (F) did both sexes of the brass players emerge at higher levels than undergraduates. However, both male and female singers proved more outgoing (A), emotionally stable (C), and surgent (F) than undergraduates of mixed disciplines.

The results suggest that introversion may be generally linked with the development of instrumental skills. At the same time introversion may differ in level and degree of primary traits in the four groups. That brass players' and singers' personalities deviate significantly from the composite profile shows the extent to which these activities may attract into music very different temperamental types. Persons of lower intellectual capacity and sensitivity may have a greater chance of success on brass instruments than on others. This is not to suggest that these traits actually facilitate development, but that their occurrence at the opposite pole may lead to poor adjustment later, especially in professional life.

The singers' unequivocal extroversion clearly helps to confirm the notion that introversion may be linked with the capacity to pursue rigorously the development of instrumental skills, rather than aspects of aesthetic response.

These results are important for music education. Apart from the physical and cognitive aspects of instrumental playing, temperamental misfitting may be responsible for some, at least, of the drop out rate of the kind described by Mawby (1973). At the more theoretical level, this research demonstrates the existence of only a few of probably several subprofiles existing within the structure of the musical personality which was once thought to be homogeneous.

Summary of results of group comparisons using the 16PF carried out to identify the personality profiles of string, brass, and keyboard players, and singers

Groups	Group Numbers		Significance of Multivariate F Ratio	16PF Primary Factors (Positive pole description)																(Negative pole description)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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Univariate levels of significance  
\* p .05  
\*\* p .01  
\*\*\* p .001

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