

# Reply to Lorr and Reanalysis

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In response to an earlier paper by Blashfield and Morey (1980), Lorr (1980) noted that an error had been made in using Lorr's (1966) method. He correctly noted that the value of the inclusion parameter should exceed the value of the exclusion parameter. Blashfield and Morey (1980) had incorrectly set the values of the exclusion parameter greater than the value of the inclusion parameter. Lorr (1980) suggested that the use of correct values would have affected the solution. This comment briefly describes the results from the correct use of the parameters.

When the inclusion parameter for Lorr's (1966) method was set at .74 and the exclusion parameter at .60, five clusters were found in the original data set. Clusters 1 and 4 contained only members from the 4-9 sample. The Welsh code for these two clusters were 49'78' ( $n=11$ ) and 4K9' ( $n=4$ ). The second and fifth clusters were from the 1-3 sample with mean profiles of 1\*3'28' ( $n=5$ ) and 31K' ( $n=4$ ). Cluster 3 was from the 8-6 sample with a mean profile of 867F\*2'049' ( $n=7$ ). There were no profiles assigned to a cluster that predominantly contained profiles from a different sample (i.e., no misclassifications). It is worth noting that the mean profiles for the first three clusters were distinctly

more elevated (exaggerated) than the mean centroids of the samples they represented. Since 59 of the 90 profiles were not assigned to any cluster, the coverage was 34%.

The second run using Lorr's method had parameters that were increased to .80 (inclusion) and .70 (exclusion). The result had three clusters, each only containing members from one sample. Thus, there were no misclassifications. However, the coverage became very small at 21%.

When lower parameters were used in a third run (inclusion = .60 and exclusion = .40), the coverage was increased to 54%. Again, only three clusters were found. However, the large first cluster contained 16 profiles from the 8-6 sample and 12 profiles were from the 4-9 sample. Therefore, 12 of the 50 profiles assigned to a cluster were misclassified (24%).

## Conclusions

The correct use of the inclusion and exclusion parameters did affect the solution. Blashfield and Morey (1980) had stated that if high parameter values were used, Lorr's (1966) method would overestimate the number of clusters but make few misclassifications. In this reanalysis, it was found that the use of high parameter values did result in no misclassifications, but the coverage was very low. When low parameter values

were used, coverage was better (54%), the number of clusters were correctly estimated, but misclassifications occurred. In short, Lorr's (1966) method was sensitive to variation in inclusion/exclusion parameters. Also, coverage and the rate of misclassifications appeared to vary inversely.

### References

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