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Book review

N.J. Mackintosh (Ed.), *Cyril Burt: Fraud or framed.* Oxford University Press, Oxford, 1995.

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As is probably known to most readers, shortly after the death in 1971 of Cyril Burt, one of Britain's most eminent psychologists, a heated public debate started with accusations that he had fabricated data on the heritability of intelligence. The issue seemed to be settled in 1979 when the historian Leslie Hearnshaw published the official biography of Cyril Burt, the major conclusion of which was that there was every reason to believe that Burt had indeed committed fraud. However, after a period of silence the affair was reopened around 1990 by Joynson and Fletcher who both wrote books that questioned Hearnshaw's conclusions and maintained that Burt should be given the benefit of the doubt. Now, another prominent British psychologist, N.J. Mackintosh, has published/edited what seems to be the most detailed examination thus far of the issues that have been raised in previous books and articles.

Given the prior history on this subject, one would have expected the book's conclusion to be somewhere in the middle. Although a superficial reading may indeed seem to be consistent with such an expectation, a closer examination of the book (especially Mackintosh' final chapter) reveals that all the material together paints a picture of a very intelligent person that could not tolerate being proved wrong, not even by the data.

In the initial chapter Jensen reviews the history of the Burt affair. This chapter is similar to, but less partisan, an earlier review by the same author in Miller and Hersen's *Research fraud in the behavioural and biomedical sciences.* Clearly, Jensen is aware of the problems surrounding the data presented in various papers by Burt. However, Jensen (and other 'defenders' of Burt) believes that these problematic aspects may be explained by simple carelessness on Burt's side. However, the other chapters in this volume show that things may not be that simple. Jensen also holds the opinion that it all does not make much difference: Burt's conclusions still stand, even if his own data are suspicious. However, this is a rather curious position. Jensen previously described these data as the 'most satisfactory attempt' to estimate the extent to which individual differences

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in IQ are genetically determined. Given the almost incredible vagueness of Burt's description of what he (or his mystery assistants) had actually done, it is surprising that this escaped the attention of experts such as Jensen. Moreover, as discussed by Mackintosh in the final chapter, the data of other and newer studies do significantly deviate in this respect, leading to substantially lower estimates of the genetic component (50% instead of 80%).

In four thoughtful, detailed chapters, various aspects of the Burt affair are discussed in what to the outside observer seems an objective, impartial manner, although in some cases the discussion becomes so detailed and technical as to be only understandable for real 'Burt'-watchers.

S. Blinkhorn considers the early history of factor analysis and shows that Hearnshaw's (and others') claim that Burt falsified that history and exaggerated his own role, is incorrect. If anything, others (such as Thurstone) incorrectly minimized his contributions, trying to exaggerate their own, something that must have (justifiably so) annoyed Burt. Blinkhorn argues convincingly that this led Burt to 'rewrite' in later years his own contributions, in an attempt to 'document' his contribution to the early development of factor analysis. Understandable as this may be, it also shows that he was quite willing to 'adjust' the facts to make them conform to what he saw as the truth, a theme that is recurring in all the other controversies surrounding his work.

Two crucial aspects are discussed by Mackintosh himself. Mackintosh makes it clear that the hypothesis (proposed by his 'defenders') that Burt was not very careful in his later papers (including the ones published under the name of his 'associate' Miss Conway) and that this carelessness is probably responsible for some of the errors in copying numbers from one table to another, is probably correct. However, the fact that some of the figures were copied from older tables is not made clear in these papers and in fact, it seems as though Burt deliberately tried to conceal the details of where these numbers came from.

However, Mackintosh makes it clear that there is more to these data than just carelessness. Combining evidence from various sources, he presents a strong case for the conclusion that there really has been fraud, in agreement with the earlier conclusions of Kamin, Hearnshaw and others. Of course, it might be true that these data did, at some time, exist but were later lost and that for some reason Burt could not bring himself to admit this publicly. One can only wonder why Burt would have found this so terrible to admit.

Equally disturbing, to me at least, is the fact that so little information is presented about how these crucial data were collected. What tests were used and why is there talk about 'final assessments' of the IQ's? One sometimes gets the impression that the scores were adjusted in accordance with subjective impressions.

A similar point comes up in a chapter by Mascie-Taylor on Burt's paper on 'Intelligence and social mobility'. In this paper, the IQ's of parents (fathers) and children are compared and related to social mobility. In this case, it seems clear that the fathers' IQ was really obtained through subjective assessment. If the issue wasn't so serious, it would be rather amusing to see how these data were rescaled, transformed, corrected etc. into something that can hardly be described as 'data' anymore. One wonders through what type of editorial process this paper went and why it took so long

before anyone noticed the vagueness in the description of the procedures that were followed to arrive at the published tables.

Mackintosh discusses a further paper of Burt (dated 1969) in which he tried to show that educational standards (or better IQ scores) were declining. Here again, it is quite unclear how the data were obtained. Moreover, as argued by Mackintosh, if these data had been really collected, then it should have been evident to Burt that a comparison of scores based on a 1914-test to scores based on a 1965-test, doesn't make much sense. Moreover, these data are rather at variance with other data, from various investigators and various countries, that show that IQ scores have shown a steady increase instead of a decline. It seems as though the analysis was based more on Burt's political views than on actual data.

All in all, the various chapters (and the new analyses) make a very strong case for the conclusion that Burt really did commit fraud and on a more widespread scale than assumed before. This really is a black page in the history of psychology and the fact that many prominent researchers in this area have so long uncritically accepted his data (even though the description of the data collection and analysis procedures must have been pretty puzzling) is perhaps even more disturbing. The suggestion by some of Burt's defenders that this type of sloppiness was not uncommon at that time, is preposterous (as can be seen from even a cursory glance at, say, the Journal of Experimental Psychology of 1961 or thereabouts). Not surprisingly, Mackintosh in his final chapter draws the conclusion that the evidence is best explained by the hypothesis that Burt really did commit fraud and fabricated essential parts of his data.

Perhaps the most interesting chapter is the one written by Hans Eysenck, a former student of Burt. Eysenck, who once believed that the allegations against Burt could not be true, later changed his mind and admitted that it might be true. However, this is not the reason why this chapter is interesting. The interesting part is the many examples given by Eysenck of Burt's rather dubious scientific ethics and his uncalled-for hostility towards his most brilliant students. Apparently Burt suffered from an extreme case of what might be called 'crown-prince paranoia', the pathological fear that one's former students may become more successful than oneself (a personality trait not uncommon among high-ranking scientists). Eysenck's chapter is also interesting for his account of the many instances in which Burt acted in ways that were not quite ethically acceptable. All of this makes the conclusion that Burt also committed real fraud, more probable.

In sum, although the editor doesn't think so, this book might be the final word on the Burt affair. The conclusions reached seem to be hardly contestable. This book should be of interest to anyone interested in the Burt affair or the history of psychology, even though at times one would have wished the presentation to be less technical and more accessible to those less familiar with the details of the issues involved.