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## **RECTOR'S DECISION REGARDING THE HELMUTH NYBORG CASE**

## DECISION

In the letter to you dated 25 August 2006, the rectorate explained the legal basis for dealing with Dean Svend Hylleberg's report of 7 August 2006. You had received a copy of this report (including appendices) at the same time as it was sent to the rector. (In the following, references are made to these appendices to the report).

In sending this letter, the rectorate gave you an opportunity to produce a written statement.

The university has now received a letter dated 8 September 2006, written on your behalf by the Danish Association of Masters and PhDs (DM). In this letter, DM emphasises that DM does not wish to comment on the expert committee's report or the dean's evaluation of it.

The Danish Association of Masters and PhDs subsequently concentrates on two aspects.

Firstly, the dean's report on you for having committed an offence against your obligation of loyalty to the University of Aarhus by distributing letters in connection with the Faculty of Social Science's investigations, by which act you put the university in an unreasonably bad light by using incorrect information.

Documentation for your conduct – which the Danish Association of Masters and PhDs has requested – appears in appendices K–S to the dean's report. It appears that in e-mails and letters to colleagues and a number of forums on the Internet (<u>http://www.jerrypournelle.com/</u>, Human Bio-Diversity Group, International Society for Intelligence Research, International Society for the Study of Individual Differences and Behavior Genetics Association), you among other things wrote the following:

- "Consequently, a 'Committee for Proper Research' reprimanded me for what they saw as 'premature publication' – i.e. reporting in the media before a full publication in a peer-reviewed journal was at hand";
- "I am asking if you will write me a letter of support.If so, please address it 'To Whom it may Concern', use official paper with your professional affiliation stated, and send it to me at [helmuthnyborgt@msn.com-R] or to my private address ---.Please feel free to comment any aspect of the academic freedom and scholarship issues raised that you find relevant.I will then assemble the letters and use them in a defence of my academic freedom".

Your appeals were formulated in such a way that they could give the recipients the impression that the investigation of the quality of your research instigated by the Faculty of Social Sciences was not impartial, but was an attempt to suppress your academic freedom. The criticism from the university's Research Practices Committee in February 2004 actually concerned the circumstances in which – in a published, scientific work – you referred as documentation to a paper written by yourself 2 years earlier, which was neither published nor could be released by you. After a meeting in January 2006, attended by the dean and the head of the Department of Psychology, as well as a representative from DM, you subsequently sent e-mails to the relevant Internet forums requesting them to withdraw your document from their web sites.

I agree with the dean's evaluation (letter of 16 March 2006 to the Danish Association of Masters and PhDs, appendix S[a]), according to which you have not been loyal to the university, as you have used an incorrect basis to give the impression that the university does not live up to its central value of ensuring freedom of research. In agreement with the dean, I find that what has taken place is extremely regrettable, but I have noted the dean's assessment that the matter of disloyalty is less serious than the research matter (cf. minutes of the meeting on 7 June 2006, page 1, foot of the page [appendix I]).

With this background in mind, I have decided not to pursue the question of disloyalty.

Secondly, DM states that you have expressed to DM your wish that the Danish Committees on Scientific Dishonesty (DCSD) investigate the scientific status of your research regarding sex-related intelligence. On the basis of this, DM requests that the University of Aarhus should suspend this case until DCSD has produced a statement. My assessment is that the dean of the Faculty of Social Sciences has carried out a thorough, professional evaluation of your undertaking of the research project "Sex-related differences in general intelligence". This evaluation was conducted by an expert committee (as you yourself previously suggested). I therefore find no basis for suspending the preparation of this case until a statement has been produced by DCSD.

My decision in this matter is made on the basis of Dean Svend Hylleberg's report of 7 August 2006 with appendices; among which, first and foremost, the expert committee's report of 16 March 2006 (appendix B).

I share the dean's assessment that you have not lived up to basic requirements for scientific integrity and good research practice, as you have displayed grossly negligent behaviour that includes an unjustifiable misrepresentation of your own scientific efforts and results.

You have thus displayed grossly negligent behaviour in carrying out your duties:

- by publishing results of a study based on a completely insufficient description of the study's design;
- by very inadequate monitoring of a study;
- by describing the basis of published studies that are not only inadequate, but also incorrect in a number of places;
- and by documenting a completely insufficient knowledge of the application and limitations of the statistical methods used.

This assessment is based on the documentation submitted, which is included in the report in the form of 10 specific points.

These decisive points are quoted below:

1. Nyborg has not displayed the required attention to detail in his monitoring of the Skanderborg project. Among other things, Nyborg has indicated for several years that the analysis of adults was based on 52 persons and not 62 persons. Nyborg asserts on page 1 in appendix C and page 1 in Appendix U that the use of N=52 is a misprint in the conference contribution (2001). An error that was corrected in the final published article from 2005. For several years, however, Nyborg believed that 52 was the correct extent of the random check. In the edition of Nyborg's article that was submitted to PAID on 5 January 2004 (see appendix A, sub-appendix 4), Nyborg writes on pages 6–7: "The present analysis is based on the subsample of an equal number of all males and females that had been tested only once and for whom WAIS and all the other data were available (see below). This subsample consisted of 26 females (mean age 17.34, SD 1.87) and 26 males (17.45, SD 1.78)". In the same article Table 2, the statement "26 male and 26 female adult subjects on 20 tests" is repeated. In the published article from 8 June 2005 (see appendix A, sub-appendix 22) page 500, it says: "The first part of the present analysis is based on the sub-sample of 31 males (mean age 17.4, SD = 1.8) and 31 females (mean age 17.3, SD=1.9) for whom WAIS and all other test data were available. Later analysis included children as well (Section 5)". As the calculations of mean value and standard deviation are not altered apart from reducing the number of figures, while the 26 females and the 26 males are altered, Nyborg has thus believed for several years that the 52 persons accounted for the correct extent of the random check, which is why the committee writes: "It seems that Nyborg does not monitor

the activities of these assistants closely enough to be sure which data set is being analysed at each particular time" (appendix B, page 6).

- 2. There are a number of places in Nyborg's accounts where there are statements that are not correct. In chapter 10 of "Sex differences in g", written by Helmuth Nyborg and published in the book "The Scientific Study of General Intelligence. Tribute to Arthur R. Jensen", which was edited by Helmuth Nyborg, it says (see appendix A, sub-appendix 3, page 208): "Data on children participating in the cross-sectional parts of the study were included in the present analysis". This is incorrect, as children from the first cross-sectional study in 1976 contribute no data whatsoever, cf. minutes of meetings with Nyborg (see appendix A, subappendices 11 and 14). This sentence continues: "as were data on children participating in the longituditional part of the study, but who had been examined only once". However, the frequent use of repeated measures in the longitudinal study reveals that, contrary to what is stated, data stemming from repeated studies of the same children are also included. In addition, "The particular selection procedure resulted in a total of 376 children and adults". This is also incorrect because the data included amount to 62 + 219 at the most, i.e. 281 persons. And "All subjects were exposed to a large and varied battery of 20 or 21 ability tests". If one confronts this information with the large blank areas in the data matrices used (appendix A, sub-appendix 9) it is seen that this statement is not correct either.
- 3. Another sign of negligence is the repeated use of a number of abbreviated formulae for "the point biserial correlation coefficient". [see the committee's report (appendix B)]. Furthermore, the committee does not find that Nyborg has at any time accounted for the design of the study to a satisfactory extent.
- 4. In spite of a very significant dropout problem in the study, possible reasons for this and the consequences of it regarding the analysis carried out are not discussed in Nyborg's publications about the study, apart from one single sentence that is repeated in the book from 2003 (appendix A, sub-appendix 3, page 208) and in the published article (appendix A, sub-appendix 22, page 500), where it says, "No particular pattern of reasons for refusing to participate could be spotted in retrospect". However, in Nyborg's comments of 9 May 2006 on the committee's report (see appendix C), it says: "The loss of subjects in the present study was perhaps primarily due to a growing resistance to blood sampling (for hormone measurement) and nude photography (to establish Tanner-Whitehouse pubertal stages)". That such a conjecture should first arise after the book and the article had been published seems unlikely, and in this light, it is guite remarkable that the conjecture regarding the reasons for the significant dropout was not both investigated and made the subject of an indepth discussion in the published works. As the committee states (see appendix B, page 9), "It is standard in investigations with dropout that care must be taken to ensure that the dropouts does not introduce bias. We have not registered any indication that Nyborg is aware of this basic problem, and the reader is never alerted to the mixed and unsatisfactory composition of the data set".
- 5. In the light of the considerable dropout rate and the long period the study took, Nyborg's repeated assurances that the data collection is still taking place also contribute to the impression that the design of the study is confusing and inadequate, cf. the committee's comments (see appendix B, page 7).
- 6. Finally, the committee would like to see a discussion of the extensive use of "mean substitution" because "the use of the N=325 data set for children involves mean substitution to such a degree as to make the results strongly questionable" and regarding "repeated measurements on some of the children" (see appendix B, page 9).
- 7. Nyborg's continued refusal to allow other researchers access to his data is a breach of both common good practice and the regulations set out by the Danish Social Science Research Council (DSSRC). It states in these regulations that: "The researcher shall not only publish his results, but shall also make it possible for potential critics to verify whether the results are based on the underlying information material. This should therefore be kept for a reasonable period of time and be made accessible to scientific assessors ... Publication of conclusions or partial results before the study has been completed and is accessible as stated should only take place in exceptional circumstances".
- 8. As a further indication of the inadequate documentation and lack of attention to detail on the part of Nyborg, the committee states (appendix B, page 14), that it has not been possible to reproduce Nyborg's results precisely, but that the same qualitative results are

nevertheless achieved. In addition, it is pointed out that Nyborg uses the classic test that a correlation is zero even though a "factor loading" is not a correlation, so that the classic test is inapplicable.

- 9. Factor analysis and hierarchical factor analysis in particular account for a significant part of Nyborg's analysis apparatus. In spite of this, Nyborg's understanding of this analysis apparatus appears to be completely insufficient and so limited that the committee can write that the factor analysis used is altogether unable to provide the answer to the questions asked. The committee states (see appendix B, page 15): "One cannot tell if the differences in the means of the 20 test variables are due to a difference in the q-factor or due to a difference among the primary factors" and page 16: "The committee finds that a sex difference in the q-factor cannot be identified using the hierarchical factor model. The committee furthermore finds that the measure used by Nyborg is of the same nature as previous measure of general ability (a weighted average of effect sizes) and therefore flawed in the way described by Nyborg himself". The fact that Nyborg's knowledge regarding factor analysis must therefore be regarded as being extremely limited is emphasised by his comments on the committee's report (see appendix C, page 4), where he writes: "Nowhere do I claim that my version of the g-factor method avoids the inherent unidentifiability problem nor that it avoids the problem. What I claim is rather that this approach minimises the contamination problem relative to other types of factor analyses". To assert that an estimate of an unidentified parameter is better, less contaminated, or worse than another estimate of an unidentified parameter is the same as asserting that, when the only thing we know is that x+y=12, then x=4 is a better solution than x=2, even though the solution for x is all the points on the line x=-y+12. One cannot, of course, identify x in the basis of the only information that x+y=12. That this inadequate identification should be a controversial and very technical argument, as asserted by Nyborg (see appendix H, page 2), also seems extremely remarkable, as the identification problem is part of the basic curriculum of a number of bachelor degree programmes in social sciences.
- 10. The fact that Nyborg either has not understood the limitations of factor analysis or ignores them and fails to discuss them causes the committee to also state: "that since the hierarchical factor analysis involves a number of choices it is good scientific practice to discuss robustness of the results under various choices" (see appendix B, page 17).

I find that you have not lived up to the obligations set out in the Statute relating to civil servants, Section 10 by, as stated, exhibiting grossly negligent behaviour in connection with preparing and monitoring the study concerned, and with using its results.

I thus find that you are guilty of official misconduct. Certain of the disciplinary punishments that can subsequently be applied, cf. the Statute relating to civil servants, Section 24, demand the implementation and completion of an official investigation. However, I regard this case as having been thoroughly examined and, for this reason, therefore find no need for further investigation.

In addition, I find that the matter raised concerns a clearly defined area of your duties as a professor, and that the report does not include any part of your other scientific production or other activities (teaching, etc.)

My decision regarding disciplinary punishment is therefore to issue you

## a severe reprimand.

The university hereby regards this matter as concluded.

My decision is final, made pursuant to the Danish University Act, Section 45(3), and a complaint cannot be made to any other administrative authority.

The conclusion of this case means that your suspension from duty is also revoked. The practical questions regarding your resumption of service should be arranged with Per Henriksen, Head of the Faculty of Social Sciences Secretariat. Kindly contact Per Henriksen to arrange a meeting about this.

Kind regards Lauritz B. Holm-Nielsen Rector Comments on content: Søren Hansen Revised 29.09.2006 © Comments to webeditor

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