

NST Part II, History and Philosophy of Science

Senior Examiner's Report, 2012

The HPS Pt II Examination was sat by 37 students this year, a similar number to the 39 sitting the exam in the previous two years. This may indicate a consolidation of HPS's raised Pt II numbers compared with the 22 students who sat the examination in 2009. As has been the case for several years, a choice was offered between option A and option B (the latter including an extra examination paper, but no dissertation), and 14 students chose option B. 2 further candidates took Paper 2, and 1 took Paper 5, as part of BBS Pt II. 2 Classics Tripos students took Paper 1. The final results for the HPS Pt II comprised 16 Firsts overall (43%), 19 Upper Seconds (51%) and 1 Lower Second (3%). A further candidate was deemed to have deserved honours. Two candidates withdrew. This represents the highest proportion of firsts in recent years by some margin, although in many cases the marks were low or borderline firsts. Once again, the Part II examiners were charged with examining the BBS History and Ethics of Medicine (HEM) paper. 33 students sat this examination, of whom 5 were awarded firsts, 26 upper seconds, and 2 lower seconds. Again, the overall candidate numbers are in line with last year's figure (32), itself a significant increase on the 21 candidates who took the exam in 2010.

This was the first year of a significantly restructured Pt II HPS Tripos. Three entirely new papers were introduced—paper 7, on Ethics and Politics of Science; paper 8, on History and Philosophy of Physical Sciences; and paper 10, on History and Philosophy of Social and Psychological Sciences. The content of many other papers was significantly altered. The new papers enjoyed conspicuous success in terms of student enrolment: indeed, papers 7 and 10 were the most popular options among Pt II students. Performance on these new papers was also strong, although examiners did express some worries about the questions set in some of these examinations.

Class and mark distributions

12 out of 23 HPS Pt II dissertations were awarded firsts. Some dissertations received exceptionally high marks, and overall performance was very impressive. Only 3 dissertations received lower seconds. The students taking option A (i.e. those choosing to submit a dissertation) had a mean mark of 68, compared with a mean of 67 for those choosing option

B. 17 students were awarded firsts for their combined performance in the primary source essays, once again indicating particularly strong performance in this element of the course. While examiners were content to use the full range of marks, into the 80s, for dissertations, such high marks were rarely awarded for examination papers. As has been the case in previous years, lower marks in individual examination papers were sometimes due to very short answers, or missing answers, to single questions. Candidates should therefore be encouraged to ensure that they have adequate breadth of coverage over the syllabus, and that they divide their time equally between questions.

17 women took the HPS Pt II examination and 20 men. 8 of the 17 women were awarded firsts, and 8 of the 20 men. The mean mark for men was 67, the mean mark for women was 68.

Examining Practices

Examination questions were set at the examiners' meeting in Lent Term, following consultation with supervisors, lecturers and paper managers. The External Examiner (Staffan Müller-Wille, serving in his first year) also provided valuable comments on the draft papers.

As is always the case, all elements of the course (dissertations, primary source essays and examination papers) were blind-double-marked. In cases where examiners' independent marks diverged considerably (and this year there were rather more such cases than in previous years), a third internal examiner was initially asked to propose a resolved mark, and these marks were ratified by the External Examiner. The External Examiner was also asked to review the marks awarded to individual candidates in cases where (i) the candidate's overall mark fell close to a class boundary or (ii) one of the candidate's marks was out of line with their more typical performance on other elements of the course. The External Examiner was also asked to comment on the general calibration of examiners to each other, and to national standards.

The examiners reported several problems associated with the conduct of examinations. In some cases examinations began late, leading to knock-on problems for candidates with additional examinations later in the day. On several occasions question papers had not been distributed to all candidates at the beginning of the exams. The overall impression was that staff overseeing the conduct of exams were being stretched more thinly than in usual years.

The move to place the HPS Pt II examiners in charge of examining the History and Ethics of Medicine (HEM) paper continues to work well. All the examiners—and especially the external examiner—should be thanked for their extremely efficient and diligent work this year.

General Comments

The overall number of lower seconds was very low this year, and has been low in several other recent years. While the external examiner was confident that appropriate standards were being observed in classing, it will be important for internal examiners to ensure that marks are used appropriately not only at the top end of the range, but at the bottom end too.

Examiners remain concerned about extremely poor handwriting in some scripts, which is exceptionally hard to decipher. It would be useful to have clearer guidelines about how, if at all, such poor handwriting can be penalised. Candidates should be encouraged to practice writing under exam conditions, in order to ensure that their work is legible.

The examiners also reported that their workload was very demanding this year: if candidate numbers continue to be this high, additional examiners should be recruited. The HPS Board might also consider making more extensive use of assessors, recruited to examine particular elements of the course where they have specialised expertise.

Examiners praised performance on dissertations. Some of these pieces of work were of an exceptionally high quality, and as a result of this they sometimes had the effect of raising the student's overall mark by a class. As is usually the case, narrowly focused dissertations tended to receive higher marks than more expansive endeavours. There were, however, concerns expressed regarding the approval of at least one dissertation topic, which seemed peripheral to the usual area covered within HPS.

The most successful primary source essays showed a detailed reading and analysis of the sources in question and brought them into conversation with other texts and topics. Poorer essays showed little engagement with the sources themselves. Some of these essays showed evidence of significant independent (e.g. archival) research as well as seminar attendance.

Comments on Specific Examination Papers

Paper 1: Classical Traditions in the Sciences

Only 6 candidates took this paper, along with 2 from the Classics Tripos. The examiners felt that the performance on this paper was rather weak, as was reflected in the marks. (No firsts were awarded, and several of the upper seconds were around the 2i/2ii borderline.) The examiners noted that the question on mercury sat oddly within the paper, and also that material on *Silent Spring* could not easily be connected with the rest of the course. Examiners should give further thought to these matters when questions are set next year.

Paper 2: Early Medicine

11 candidates took this paper, of whom only one received a first class mark. Many of the answers to these questions were fairly uniform, sticking closely to lecture material. As a result many answers received good marks, but few were awarded very high marks. There was a fairly good spread of answers to the different questions in the paper. Every question was answered by at least one candidate, and questions 6 (on dissection in Greek and Roman medicine) and 8 (on patient choice in the Middle Ages) were especially popular, both receiving 9 responses. In section A, question 3 (on Galenism) was only answered by one candidate.

Paper 3: Natural Philosophies: Renaissance to Enlightenment

9 candidates sat this paper. Performance was highly varied, with 3 candidates gaining firsts and 2 gaining thirds. There were some rather disappointing performances on this paper, especially given the nice range and types of questions included, which clearly opened up key areas of debate in the field. In particular, the recurrence of a (very) few key figures/examples was noted: candidates should be encouraged to look beyond the familiar names and cases.

Paper 4: Science, Industry and Empire

16 candidates sat this paper, of whom only 3 were awarded firsts. Several questions were overwhelmingly more popular than others, and had obviously been covered in detail in either the lectures or supervisions. Question 1 (on the spaces in which nineteenth-century scientific practitioners interacted with the public) received 11 answers, while question 8 (on German

support for scientific research) and question 11 (on mapping practices) both received 10 answers. Only 1 candidate answered question 4 (on French, British and German attitudes to evolutionary ideas).

Paper 5: Modern Medicine and Biomedical Sciences

11 candidates sat this paper, and 3 were awarded firsts. There was a very even spread of answers to the different questions on this paper: no question was conspicuously popular, and no question was completely ignored (although only 1 person chose to answer question 7, on the 'strength' of images). As is quite often the case, students performed best on questions that were tied to one or two lectures: they struggled to join together material that ran across several courses, and there was little evidence of reading that ranged beyond a narrow set of recommendations from lectures.

Paper 6: Metaphysics, Epistemology and the Sciences

13 candidates sat this paper, of whom 7 were awarded firsts. The examiners noted that the questions were clear and focused, with good coverage of the course. Answers were well spread across the whole paper. Question 10 (on essentialism in biology) was the most popular, and only question 7 (on interpretations of probability) received no answers. In retrospect this probably happened because of the fairly swift coverage of probability in the lectures.

Paper 7: Ethics and Politics of Science, Technology and Medicine

25 candidates sat this paper, making it the most popular of the Pt II papers. 11 firsts were awarded. In spite of the fact that this was a new paper, the examiners felt that the questions were clearly expressed and that they covered the range of topics addressed by the paper well. The section A questions—especially the question on value-freedom in the sciences—were answered well, although sometimes there was a tendency to unreflective endorsement of prominent theorists' conclusions without adequate critical scrutiny of their arguments. Answers to section B questions were typically clear and systematic, and the question on gender/sex testing in sports received some especially impressive responses. In all, the examiners felt that this paper had got off to a very good start.

Paper 8: History and Philosophy of Physical Sciences

Only 6 candidates sat this paper, and 3 of them were awarded first. This was another entirely new paper, and it is unusual in requiring a blend of historical and philosophical skills. It was clear to the examiners that students typically had a preference for one discipline or the other, and that they sometimes struggled to achieve a balanced historico-philosophical treatment as a result. Even given the small number of students involved, answers to examination questions were well spread across the paper. Only question 10 (on the transition from Newtonian physics to special relativity) received no responses.

Paper 9: History of Philosophy of Science

Only 6 candidates sat this paper, and all received upper seconds. No one answered question 1 ('Was logical empiricism more Kantian or more Humean?'), but this was perhaps not surprising. The question made considerable synthetic demands on the candidates, who had had no explicit comparisons between logical empiricism and Kant/Hume spelled out in lectures. In section B, three questions received no responses: namely question 7 (on Kant's notion of experience), question 9 (on the Kantian treatment of organisms), and question 10 (on Comte and the Vienna Circle). Happily, Kant was not avoided altogether: question 8 (on geometry and the synthetic a priori) was answered by 4 of the 6 candidates.

Paper 10: History and Philosophy of Social and Psychological Sciences

19 candidates sat this paper, of whom 8 received first class marks. This was another entirely new paper this year, and again it was very popular. In retrospect it appears that too many of the questions asked for responses to quotations, and in the case of question 5 (on Bataille on Kinsey) and question 10 (on Freud on psychology as a science), the examiners felt that rewording would have produced better responses. In section A, question 1 (on interpretation) received responses from 10 of the 19 candidates. In section B questions 7, 8 and 9 (on the psychological reality of utility maximisation; sex as the truth of our being; and the need for laws in social science) were especially popular.

BBS Part II, History and Ethics of Medicine

33 students sat this examination, of whom 5 were awarded firsts, 26 upper seconds, and 2 lower seconds. As has been the case in previous years, the great majority of responses

consisted in very competent regurgitations of lecture material. This made it very hard for examiners to award anything other than good upper seconds, and the range of marks was closely bunched in this area. As has also been the case in recent years, there was a tendency for most students to answer 3 of their 4 questions on ethics, rather than history. The examiners also suspect that by allowing students to answer up to three questions on one half of the syllabus, students are encouraged to revise strategically, in a way that ignores large parts of the course content, and discourages synthesis from different areas of the course. Future examiners may wish to consider rectifying this situation, even at the risk of producing even fewer first-class marks.

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